

Filed on Behalf of: Generac Power Systems, Inc.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

GENERAC POWER SYSTEMS, INC.

Petitioner,

- vs. -

CHAMPION POWER EQUIPMENT, INC.,

Patent Owner

REPLY TO PATENT OWNER RESPONSE IN
INTER PARTES REVIEW OF U.S. PATENT NO. 10,697,398

Case No.: IPR2025-01271

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PETITIONER'S EXHIBIT LIST

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1001	U.S. Patent No. 10,697,398 to Collie et al. ("the '398 Patent")
1002	File History for U.S. Patent No. 10,697,398 ("the '398 File History")
1003	Declaration of Dr. Timothy Morse
1004	JPS61283734A (Original) ("Nakafushi")
1005	Certified Translation of JPS61283734A ("Nakafushi")
1006	Small Engine Technology, Second Edition, Schuster, William A, (1999) ("Schuster")
1007	U.S. Patent No. 5,301,644 ("Olmr")
1008	<i>Reserved</i>
1009	U.S. Patent No. 1,931,698 ("Holzapfel")
1010	<i>Reserved</i>
1011	<i>Reserved</i>
1012	Kubota DF-972-E2 Workshop Manual ("Workshop Manual")
1013	<i>Reserved</i>
1014	Declaration from Mr. James Strepek re Kubota Manuals

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1015	Declaration from Mr. Scott Schlabach re Kubota Manuals
1016	<i>Reserved</i>
1017	<i>Reserved</i>
1018	U.S. Patent No. 5,809,979 (“Tsuda”)
1019	<i>Reserved</i>
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1089	Declaration of Leighton Zhao in Support of Petitioner's Motion for Admission Pro Hac Vice
1090	Sealed Settlement Agreement
1091	Deposition Transcript of William Singhose, Taken on August 4, 2026
1092	Operator's Manual for Champion Model 201508
1093	USPTO, Cooperative Patent Classification: F02D (2026)
1094	Kubota DF752-E2 Workshop Manual
1095	U.S. Patent No. 6,591,817 (“Deutsch”)
1096	U.S. Patent Publication No. 2014/0238340 (“Dunn”)
1097	U.S. Patent No. 5,816,224 (“Welsh”)
1098	Defendant Champion Power Equipment, Inc.’s Opening Markman Brief, <i>Harbor Freight Tools USA, Inc. v. Champion Power Equipment</i> , No. 24-cv-8722, Dkt. 83 (C.D. Cal. Sept. 9, 2025)

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1100	Blackmer, LPG Autogas Handbook (2015)
1101	File History for U.S. Patent No. 11,306,667 (“the ’667 File History”)
1102	U.S. Patent Application No. 61/640,603 (“Collie”)
1103	U.S. Patent No. 5,504,417 (“Kern”)
1104	U.S. Patent No. 8,360,027 (“Sotiriades”)
1105	U.S. Patent No. 7,669,572 (“Jury”)
1106	Leigh Jenison, LinkedIn, https://www.linkedin.com/in/leigh-jenison-3a032b6/ (last visited Aug. 18, 2026)
1107	Kohler CV17-750 Service Manual
1108	U.S. Patent No. 4,691,668 (“West”)
1109	U.S. Patent No. 6,857,515 (“Barron”)
1110	U.S. Patent Publication No. 2011/0017168 (“Gilpatrick”)
1111	Order Giving Leave for Parties to File Supplemental Briefing on Tentative Claim Constructions, <i>Harbor Freight Tools USA, Inc. v. Champion Power Equipment</i> , No. 24-cv-8722, Dkt. 98 (C.D. Cal. Oct. 15, 2025)
1112	U.S. Patent No. 11,143,120 (the “120 Patent”)

Exhibit No.	Description
1113	Declaration of Dr. Timothy Morse, dated August 18, 2026

I. INTRODUCTION

Champion's principal argument in its Patent Owner Response ("POR," Paper 30) is that fuels are classified as "liquid fuel" and "gaseous fuel" based on their phase at certain points in the system. This is wrong. Champion's construction forces it to distort its constructions of "source" and "engine" and is not supported by the intrinsic or extrinsic evidence. Instead, POSAs would have understood that gaseous fuels exist in a gaseous state at standard temperature and pressure. Generac's construction is supported by the specification, the prior art cited in the '398 Patent, and relevant extrinsic evidence. In short, Champion's creative, but wrong argument is based on a failed definition.

The POR does not substantively address claims 23-26, 32-46, 53-54, and 56. These claims are invalid for the reasons explained in the petition, including Grounds 6 and 7, which are not discussed in the POR.

II. BACKGROUND

The '398 Patent is directed to engines operable on liquid and gaseous fuels. EX1001, 1:14-17. The specification teaches that "gaseous fuel" exists in a "gaseous state" at normal temperature and pressure but is stored under pressure in a "liquid state." EX1001, 1:41-52. The specification identifies liquified petroleum gas (LPG) as "gaseous fuel." EX1001, 1:41-44. The '398 Patent does not specify the gaseous fuel's phase anywhere after exiting the fuel tank.

¶¶12-16. The Board adopted Generac's POSA definition. IPR2025-00805, Paper 24 at 11. Regardless, Champion concedes that the level of skill has no impact here.

IV. CLAIM CONSTRUCTION

Champion raises a claim construction dispute by arguing that whether a fuel is "liquid" or "gaseous" depends on its phase at specified locations. POR, 5; *see also* IPR2025-00805, Paper 24 at 19 ("[T]he analysis here turns on claim construction....").

The Board already rejected Patent Owner's claim construction arguments when instituting the related '034 Patent IPR. The Board found that "the phrase 'gaseous fuel source' does not require fuel in a gaseous state upon exiting a storage container (as argued by Patent Owner); rather, that phrase merely requires fuel (such as LPG) in a gaseous state when entering the recited 'engine' prior to combustion," where the fuel is near standard temperature and pressure. IPR2025-00805, Paper 24 at 20-21; EX1113, ¶18.

The Board's prior determination resolves this matter. *Infra* §§V.A, IX.B. Furthermore, Champion's arguments are unavailing even if its construction were correct. *Infra* §§V.A-B, VII.A-B, IX.B.

Champion's claim construction arguments should be rejected. The intrinsic and extrinsic evidence confirm that "gaseous fuel" and "liquid fuel" are immutable

classifications based on the fuel's state at standard temperature and pressure. EX1113, ¶¶21-22.

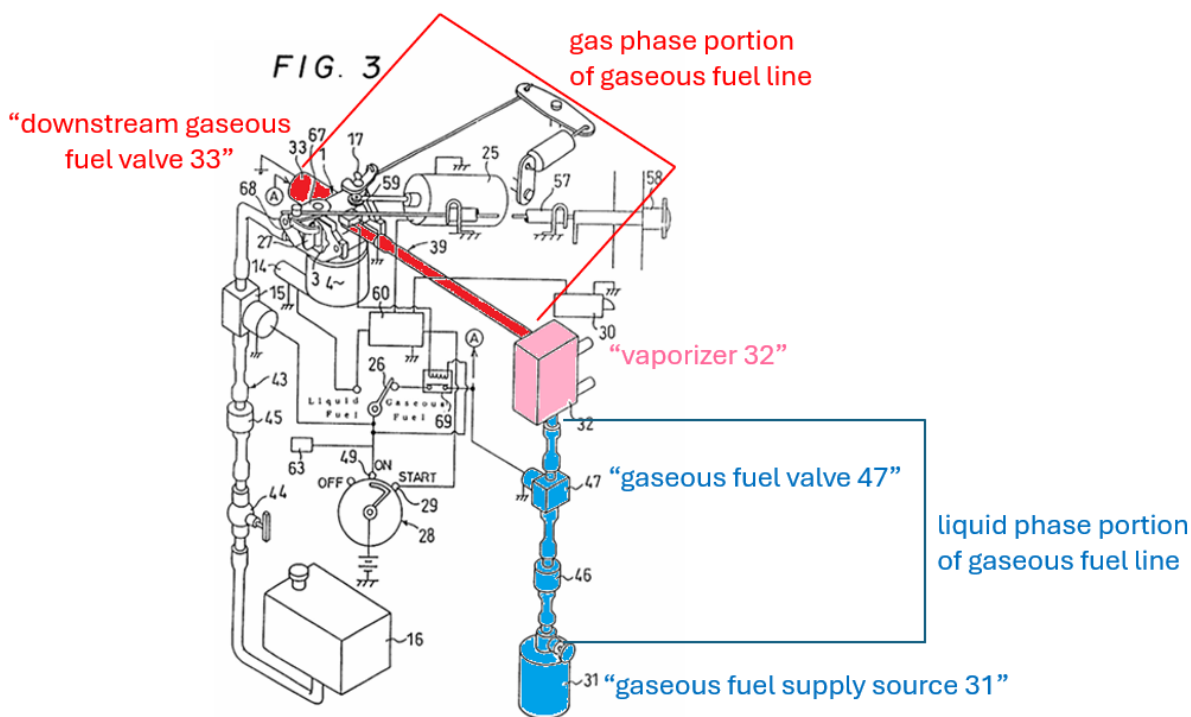
The claims refer to liquid fuel and gaseous fuel without referring to a location where each fuel's phase must be determined. POSAs would have understood that the claims' uses of the phrase "gaseous fuel" refers to *same* fuel, regardless of that fuel's phase at any point in the system. EX1113, ¶¶23-26. For example, Claim 3 states the gaseous fuel is LPG and the liquid fuel is gasoline without specifying location.

The specification states that gaseous fuels "***exist in a gaseous state at normal temperature and pressure*** and can be any one of liquefied petroleum gas, compressed natural gas, hydrogen, or the like." EX1001, 1:36-44 (emphasis added). The specification explains that gaseous fuels "can be conveniently stored under pressure in a ***liquid state***["]." *Id.*, 1:44-47 (emphasis added); *see also* EX2133, ¶73 (Dr. Singhose explaining that "[t]he patent distinguishes the ***types*** of fuel used as either liquid or gaseous" rather than distinguishing between fuel ***phases*** (emphasis added)). The specification describes advantages of gaseous fuel due to its state at standard temperature and pressure. EX1001, 1:24-33; EX2133, ¶75; EX1113, ¶¶27-31.

The prior art cited on the '398 Patent applies Generac's construction. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1317 (Fed. Cir. 2005) (stating that intrinsic evidence

includes “the prior art cited during examination”); EX1113, ¶¶33-36. Deutsch and Welsh both *expressly define* “gaseous fuel” as “combustible fuels which are gaseous at standard temperature and pressure.” EX1095, 1:26-27; EX1097, 2:8-10, 11:39-43.

Likewise, Tsuda, describing the *Workshop Manual's DF972 engine* (Paper 9 at 17), discloses a “gaseous fuel supply source 31” and a “gaseous fuel valve 47” *upstream of vaporizer 32*. EX1018, 3:20-27. Tsuda thus characterizes its fuel source and valve as “gaseous” despite containing liquid phase gaseous fuel.



EX1018, FIG. 3 (annotated).

Extrinsic evidence also supports Generac's construction. EX1113, ¶¶37-41. The EPA defines “gaseous fuel” as combustible material “in the gaseous state at

standard atmospheric temperature and pressure conditions....” 40 C.F.R. § 98.6 (2015). And the USPTO classified the '398 Patent in class F02D 19/0642, relating to “engines working with pluralities of...type[s] of fuels...one fuel being gaseous, the other fuels being gaseous or liquid *at standard conditions*.” EX1001; EX1093, 4-5 (emphasis added).

Champion's incorrect construction is unworkable. EX1113, ¶¶42-44. Champion first states that the relevant location for “engine operable on a gaseous fuel and a liquid fuel” is the engine. POR, 5. But liquid fuels are vaporized into gas phase before the engine at the carburetor. POR, 7-8 (quoting EX1006, 7); EX1113, ¶42. Recognizing its problem, Champion suggests assessing the phase where fuel “reaches the carburetor.” POR, 8. But the '398 Patent states that the carburetor and engine are separate. *See* EX1001, 2:10-11; FIGS. 4A, 4B. Under Champion's alternative proposal, the claimed “engine” is irrelevant and carburetors are required, despite their optionality in engine configurations and the claims. EX1113, ¶44.

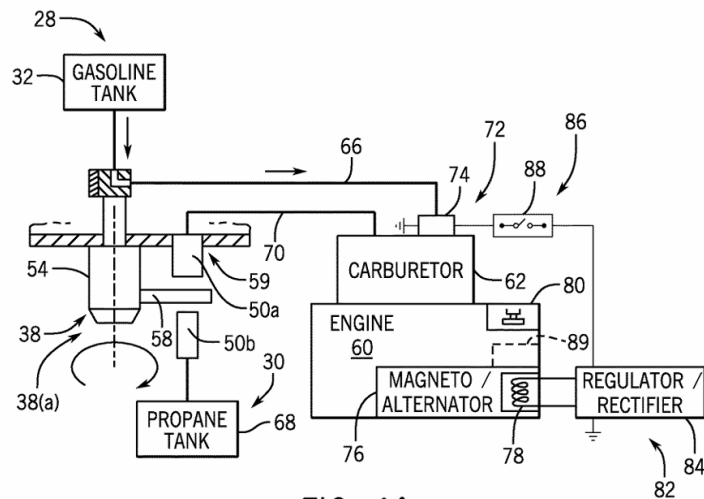
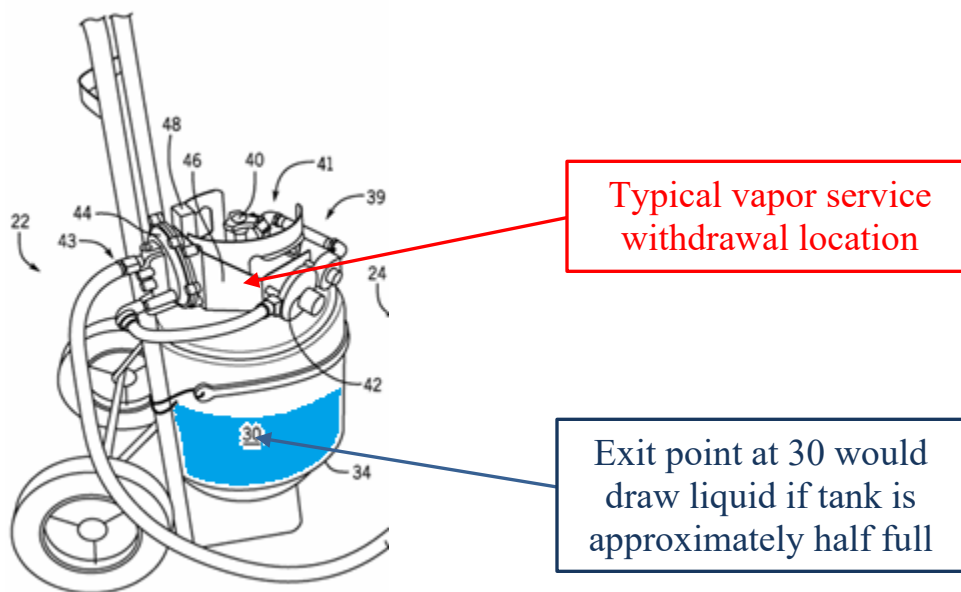


FIG. 4A

EX1001, FIG. 4A.

Similarly, Champion states that the relevant location for “gaseous fuel source” and “liquid fuel source” is “the source of the fuel.” POR, 5. But LPG tanks contain both liquid-phase and gas-phase LPG. POR, 18; EX1113, ¶45. Thus, Champion’s construction makes LPG tanks *both* liquid and gaseous fuel sources.

Champion attempts to avoid this issue by identifying the “source” as the point where the fuel exits the tank. *See, e.g.*, POR, 28. This is contradicted by the specification: second (gaseous) fuel source 30 refers to the entire tank—not the point where LPG is drawn from the tank (assuming vapor service). If anything, the location of reference number 30 suggests that liquid is drawn from the tank. *See* POR, 18; *see also* EX1091 at 90:1-13 (stating that LPG tanks are “pretty full”).



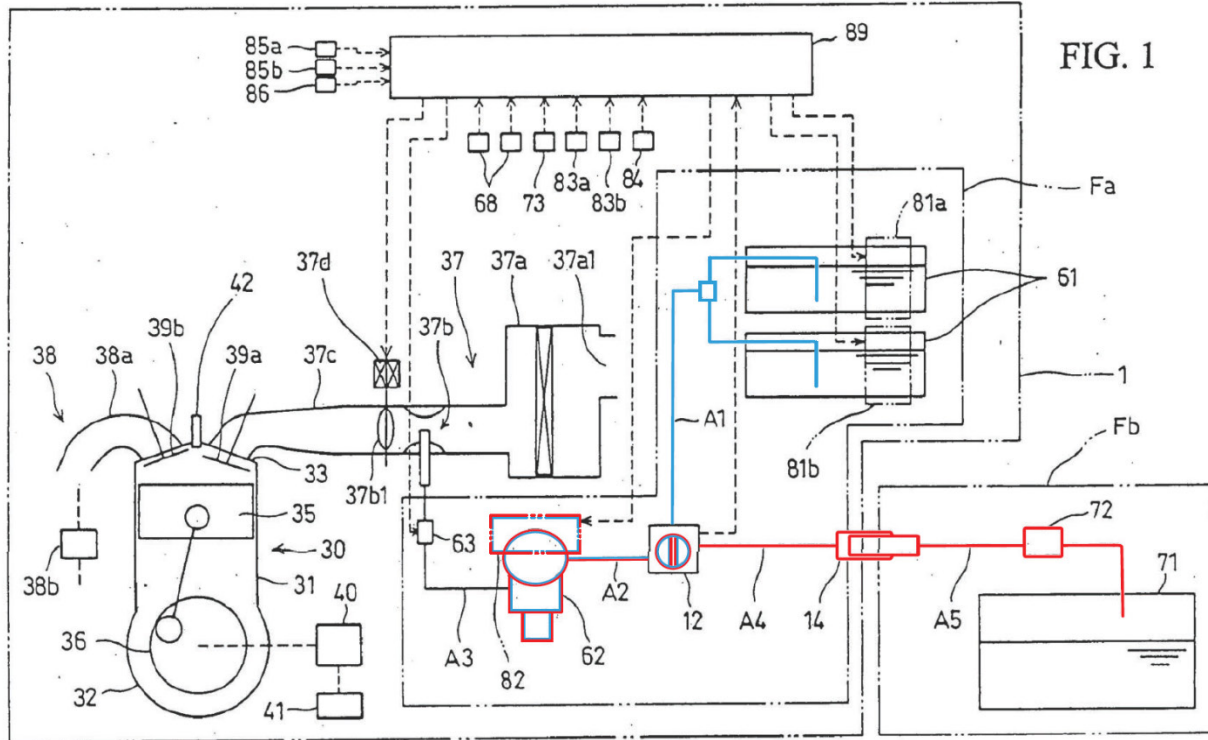
EX1001, FIG. 1 (annotated).

The Board already recognized this inconsistency. Once Champion's relevant location is shifted away from the literal engine and tank, there is no reason to limit that location to the carburetor inlet or the tank outlet. Thus, the Board stated that it would "not exclude supply lines containing LPG in gaseous state from the scope of the phrase 'gaseous fuel source.'" IPR2025-00805, Paper 24 at 22.

Moreover, Champion's alternative position does not resolve the issue, because gaseous fuels in liquid service applications exit the tank and flow through fuel lines as a two-phase mixture of liquid and vapor. *See infra* §§V.A, VII.A, IX.B; EX1113, ¶¶48-51. Champion's construction would result in all such fuel sources/lines/valves being **both** liquid and gaseous fuel sources/lines/valves.

Champion argues that “propane vapor service and propane liquid service are completely different from one another.” POR, 19. The '398 Patent does not make this distinction. The specification neither expressly discloses nor limits itself to “vapor service”—it only mentions fuel phase in “normal” conditions and when stored. EX1001, 1:41-47. The main difference between the liquid (gasoline) and gaseous (LPG) fuel delivery systems in the '398 Patent is the pressure regulators in the gaseous fuel delivery system. EX1113, ¶¶52-55. But pressure regulation is a requirement shared between liquid and vapor service of gaseous fuels. *Id.*

Liquid service and vapor service components for gaseous fuels must seal *pressurized* gaseous fuel in liquid and gas phase. EX1113, ¶54. POSAs would have understood how to *optimize* such components for liquid or vapor service (which simply impacts the rate of fuel delivery). *Id.*; EX1091, 141:12-142:25. Indeed, Sugimoto (EX1039) provides an example where liquid phase gaseous fuel and gas phase gaseous fuel pass through the *same* selector valve 12, line A2, and regulator/vaporizer 62. EX1113, ¶¶56-57.



EX1039, FIG. 1 (annotated).

POSAs would have understood that the terms “liquid fuel” and “gaseous fuel” refer to the state of the fuel at standard temperature and pressure rather than the phase at particular locations.

V. GROUND 1: CLAIMS 1, 3, 22, AND 57 ARE ANTICIPATED BY THE WORKSHOP MANUAL

A. Element 1.3

Champion argues that the Workshop Manual (EX1012) fails to disclose a gaseous fuel source because LPG leaves LPG Tank (14) as liquid. Champion is wrong.

First, the “gaseous fuel” terms refer to components interacting with fuel in gaseous state at standard temperature and pressure. *Supra* §IV. LPG is a gaseous fuel. EX1113, ¶61. Therefore, the LPG Tank is a “gaseous fuel source.” Tsuda—describing the engine embodied by the Workshop Manual (Paper 9 at 17)—describes the Workshop Manual’s LPG Tank as a “gaseous fuel supply source 31.” EX1018, 3:20-27.

Second, even if LPG must exit the tank in gas phase, at least some LPG would be in gas phase upon exiting the LPG Tank due to pressure differentials from the service valve opening. EX1113, ¶63. LPG will flow into gaseous fuel line (c) as a mixture of gas and liquid phase LPG. *Id.* Thus, because the LPG tank supplies LPG in gas phase, it is a “gaseous fuel source.”

Third, even if the “gaseous fuel source” must supply gaseous fuel *only* in gas phase, Champion fails to appreciate that the LPG Tank and vaporizer constitute a “gaseous fuel source.” *See* IPR2025-00805, Paper 24 at 22-23.

B. Element 1.5

Champion argues that LPG Cut Off Solenoid (7) is not positioned “along a gaseous fuel line” because it is not a part of the Workshop Manual’s black elastomeric tubing. But the claim broadly indicates that the gaseous fuel line “coupl[es] the gaseous fuel source to the carburetor.” EX1001, Claim 1. The specification states that the gaseous fuel line “provide[s] a flow path for second

[gaseous] fuel source 30 to carburetor 62.” EX1001, 11:15-19. POSAs would have therefore understood the claimed fuel line to include the entire flow path from the fuel source to the carburetor, which is not limited to tubing. EX1113, ¶¶65-70.

Indeed, the '398 Patent describes fuel inlet 59 (including first end 50a/valve of the quick-connect hose coupling) as part of the gaseous fuel line 70. EX1001 at 8:17-19, 8:1-3, 7:19-20, 10:50-52. Thus, the claimed “gaseous fuel line” refers not only to the conduit forming the second fuel line 70 but includes other structures such as valves and inlets along the way.

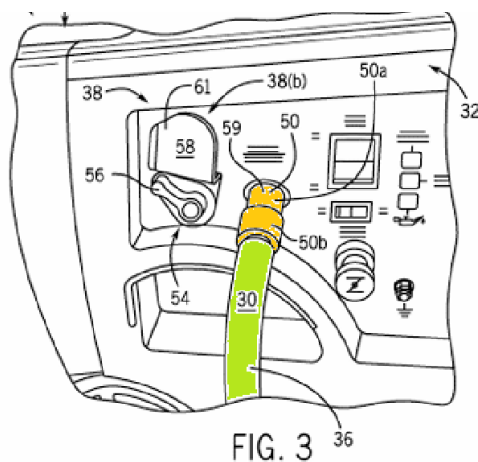


FIG. 3

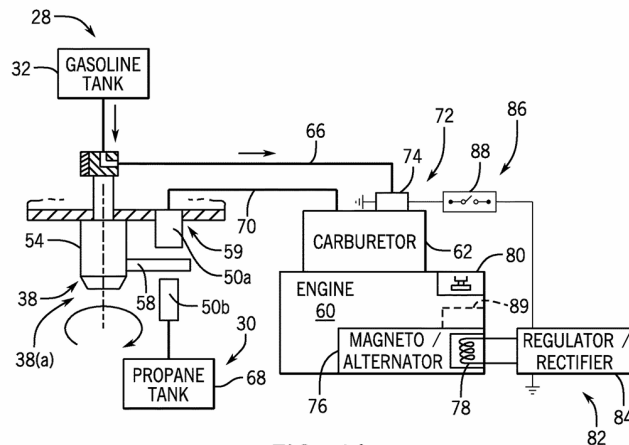
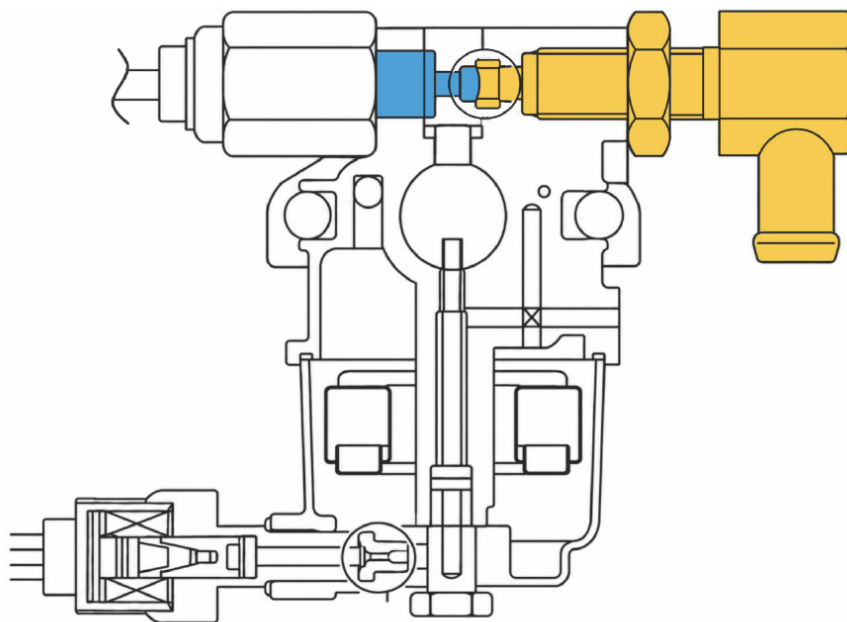


FIG. 4A

EX1001, FIGS. 3, 4A (annotated).

Like the '398 Patent, the Workshop Manual discloses a barb (gold) along the flow path between the gaseous fuel source and the carburetor. An LPG Cut Off Solenoid (7) with a plunger (blue) extends into the opening of the barb to interrupt the gaseous fuel path before the carburetor throat. EX1113, ¶¶71-73. This extension

into the end of the gaseous fuel line results in the gaseous fuel valve being positioned “along a gaseous fuel line.” See EX2127, 156:4-5 (describing the gaseous fuel line as “not just the black hose, but all that bit that then goes into the carburetor”).



EX1012, 68 (cleaned-up and annotated).

Tsuda, describing the *Workshop Manual's DF972 engine* (Paper 9 at 17), describes: “a gaseous fuel supply passage 39 [(gold)] ... feed[s] a gaseous fuel from a gaseous fuel supply source 31 to the carburetor 1.” EX1018, 3:20-22. “A vaporizer 32 and a downstream gaseous fuel valve 33 [(blue)] ... are arranged *in* the ... gaseous fuel supply passage 39.” *Id.*, 3:23-27 (emphasis added).

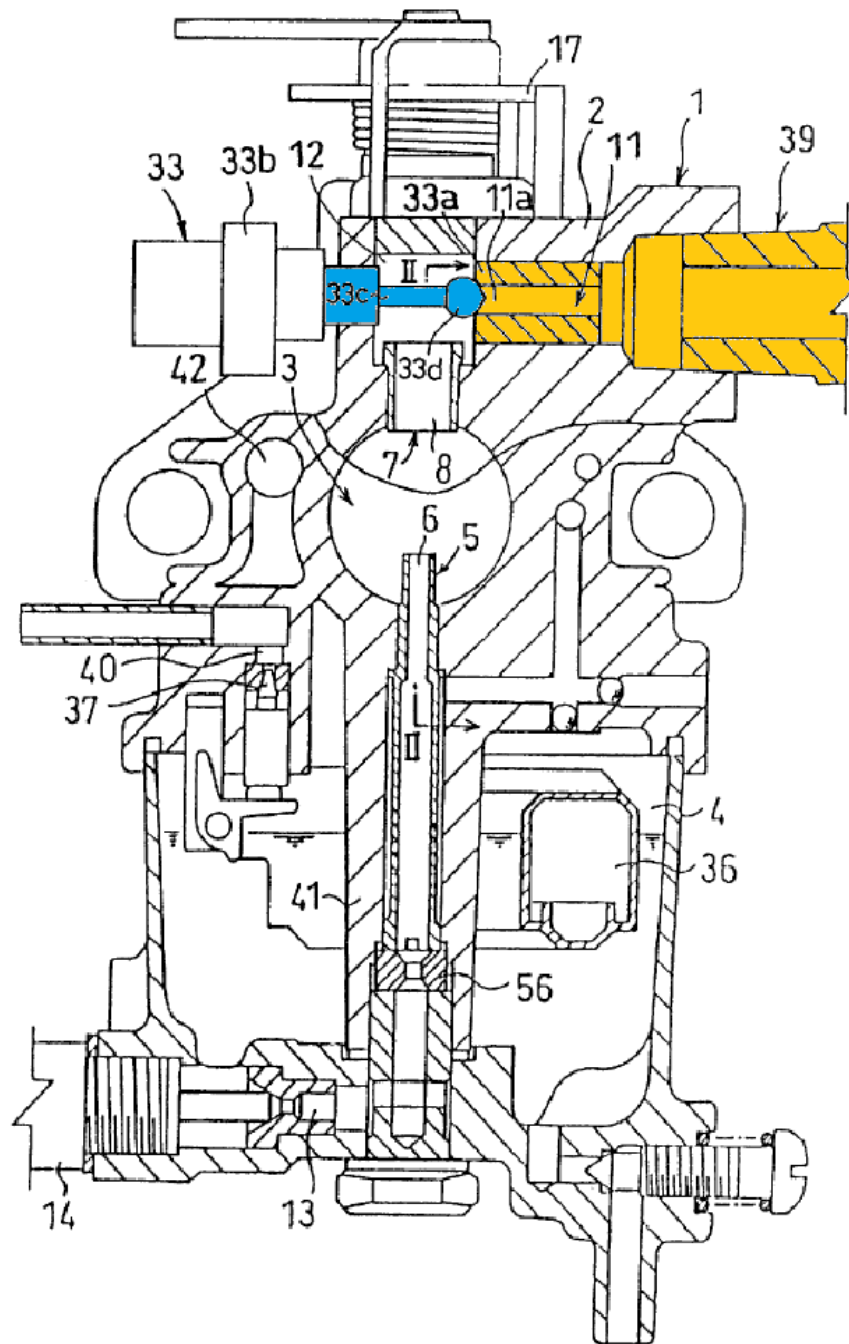
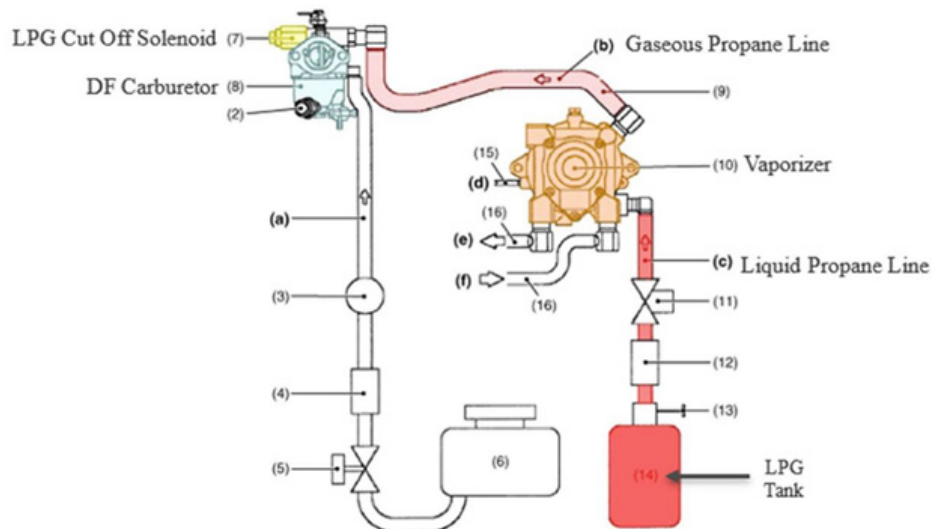


FIG. 1

EX1018, FIG. 1 (annotated).

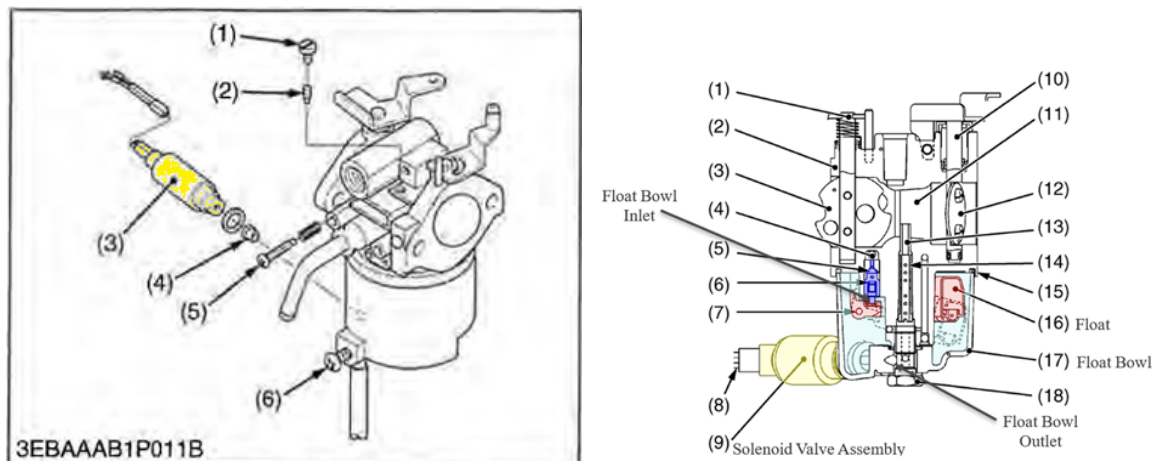


C. Claims 3 and 22

D. Element 57.7

The Workshop Manual discloses a liquid fuel cut-off attached to the carburetor, which necessitated “attaching” the liquid fuel cut-off to the carburetor.

Indeed, the Workshop Manual discloses “[i]nstall[ing] the gasoline solenoid (3)” (EX1012, 104), depicting a “before” figure with the liquid fuel cut-off (yellow) detached from the carburetor and an “after” figure with it attached.



EX1012, 104 (annotated); Pet., 39.

Such descriptions disclose the method of changing between the depicted configurations. *See Prima Tek II, L.L.C. v. Polypap S.A.R.L.*, 412 F.3d 1284, 1290 (Fed. Cir. 2005).

VI. GROUND 2: CLAIMS 2, 4-14, 19-21, 23, 32-42, AND 58 ARE OBVIOUS OVER THE WORKSHOP MANUAL IN VIEW OF MATSUSHIMA, YAMAMOTO, AND OLMR

A. Claim 2

Champion does not contest that Matsushima teaches a pull-start, batteryless engine and instead only disputes that it would not be obvious to implement Matsushima's teaching in a "large" water-cooled engine.

Champion does not explain why the Workshop Manual-Matsushima combination must be a large, water-cooled engine. Neither the size of the engine nor the cooling system are claimed features. "The test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference.... Rather, the test is what the *combined teachings* of the references would have suggested to" a POSA. *In re Keller*, 642 F.2d 413, 425 (C.C.P.A. 1981) (emphasis added). Here, "the question is whether it would have been obvious to [a POSA], working with the [Workshop Manual] and the [Matsushima] references before him, to do what the inventors herein have done" (*id.*), which is to use a dual fuel delivery system with a pull-start, batteryless engine.

The Petition answers this question. Batteries are known to die in cold weather or after long periods of nonuse. EX1113, ¶¶83-84. Incorporating a pull-start engine with the Workshop Manual's fuel delivery system "would improve reliability in cold or remote applications...." Pet., 42. Pull-start components are also less expensive

than battery-based systems. *Id.* The Petition explains “recoil starters w[ere] ubiquitous ... and their installation required only routine mechanical tasks....” (*Id.*, 42-43.)

Even if the obviousness standard required bodily incorporation of Matsushima into the Workshop Manual, which it does not, POSAs would have understood that the force required to pull start the Workshop Manual engine and water pump would approximate the typical force for pull starting an engine. EX1113, ¶¶84-94. Indeed, Champion manufactures a dual fuel 500cc engine with a recoil starter. EX1092. That is not even a single order of magnitude smaller than a 952cc engine, much less *multiple* “orders of magnitude smaller.” POR, 46 (emphasis added). Furthermore, POSAs would have understood that the engine size can be reduced, as Kubota also manufactured a substantially similar “smaller” 752cc engine pre-2015. EX1094; EX2044, 3; EX1113, ¶95.

A POSA would have understood that implementing a batteryless recoil starter would have “simultaneous advantages and disadvantages.” *Medichem, S.A. v. Rolabo S.L.*, 437 F.3d 1157, 1165 (Fed. Cir. 2006). The tradeoff between the advantages of a recoil starter and the difficulty of starting the engine is a design choice (EX1113, ¶96), which does not obviate the motivation to combine. *See Medichem*, 437 F.3d at 1165.

Finally, Champion argues that the Workshop Manual does not teach a system to manually prime or choke the engine. As an initial matter, the Workshop Manual teaches a “choke valve (3) controlled by the choke lever (1).” EX1012, 67. Furthermore, manual priming and choking is not required—Champion acknowledges that pull-start engines merely “often” include priming and choking systems for easier startup. POR, 43; EX1113, ¶98. Even if desired, such systems were well known and would naturally follow from a design choice to use a pull-start. EX1113, ¶98.

B. Claim 4

Champion quibbles over whether the Petition's incorporation of the arguments for Claim 2 requires removing the battery. But the inclusion or exclusion of the battery in the combination is irrelevant. Matsushima teaches that it is desirable to have a generator to power the fuel delivery system even in a system without a battery. EX1029, 1:59-67. Likewise, the Workshop Manual discloses that the generator produces electricity that both “flows through the power consuming circuits [to power load (10)] ... and also charges the battery.” EX1012, 77. Removal of the Workshop Manual's battery would not result in removal of the Workshop Manual's generator. EX1113, ¶100.

C. Claim 8

Champion does not contest that Olmr teaches a normally open valve and instead disputes whether batteryless starting provides a motivation to combine. POR, 46. Champion ignores the other argument made in the Petition. Olmr teaches that it is desirable for electricity to not be required to hold the valve open. Pet., 46 (quoting EX1007, 3:43-52). A POSA would have been motivated to combine the Workshop Manual with Olmr “to allow engine starting if the engine is modified to operate without a battery *or* if the battery is dead.” *Id.* (emphasis added). The Workshop Manual discloses a battery. The battery will not provide power when dead *or* removed. EX1113, ¶101.

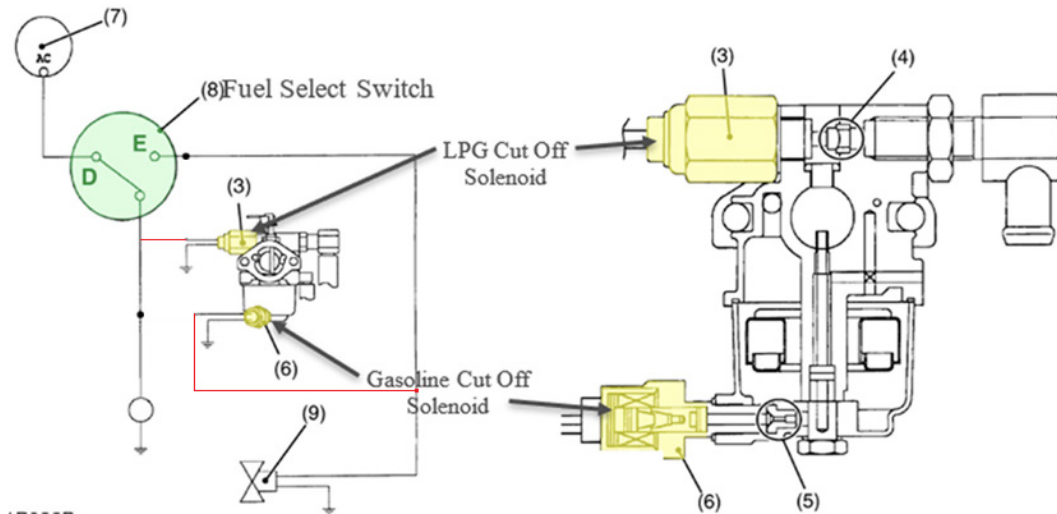
It is also desirable for the valve to “fail in the normally open position.” Pet., 46 (quoting EX1007, 3:43-52). This motivation applies regardless of the size of the engine or the presence of power from a battery. EX1113, ¶102.

Regardless, the fuel delivery system teachings of the Workshop Manual are not limited to small engines or battery-powered engines. *Supra* §VI.A. It would be obvious to use these teachings in a small and/or batteryless engine, and Olmr teaches that it is desirable to use normally open valves in at least such engines. EX1113, ¶103.

Champion also faults Generac for purportedly failing to describe every detail of how to rewire the circuitry to work with a normally open instead of a normally

The wiring diagram below would apply if both valves are normally open.

EX1113, ¶108.



Pet., 25 (citing EX1012, 68) (rewired in red for both normally open valves).

With this wiring, only one fuel valve is on at a time:

	Powered Solenoid	Liquid Fuel Cut-Off Position (Normally Open)	Gaseous Fuel Valve Position (Normally Open)
Switch Position D	Gaseous Fuel Valve	Open	Closed
Switch Position E	Liquid Fuel Cutoff	Closed	Open

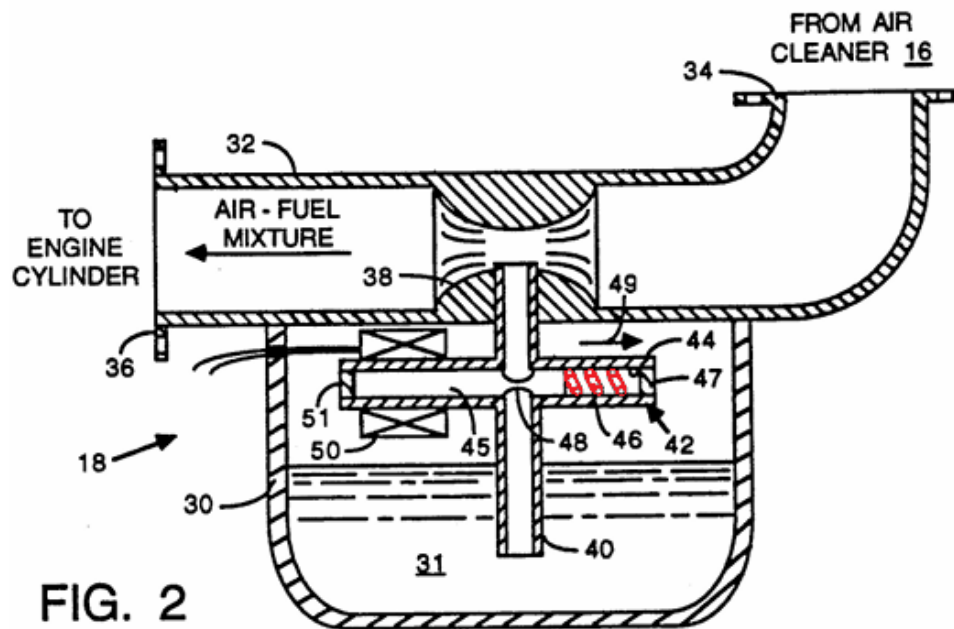
POSAs would have understood these simple re-wirings would easily allow Olmr's normally open solenoid to be used in place of the Workshop Manual's normally closed liquid fuel cut-off. EX1113, ¶110.

D. Claim 20

Champion disputes whether a POSA would have understood that normally closed valves typically include a biasing spring (POR, 54) and argues that bistable solenoid valves (EX2131) do not contain a spring.

Bistable valves are incompatible with the Workshop Manual circuitry. EX1113, ¶¶113-114. Champion acknowledges that bistable valves “require[] a pulse and then remain[] in th[e same] position until a counter-pulse is transmitted to the valve.” POR, 54 (quoting EX2131, 13:64-14:50). In contrast, the Workshop Manual explains that the position of the solenoid depends on whether it is actively receiving power. EX1012, 68. A POSA would have understood that *something* must be biasing the valve position when it is unpowered, which requires consistent power to counteract. EX1113, ¶113. A POSA would have understood that this biasing element is a spring. *Id.*

Even if a bistable valve configuration were possible, that mere possibility does not negate the obviousness of a spring-based normally closed valve. Such valves were common (EX1113, ¶115), and the standard configuration of a normally closed valve is obvious. Olmr expressly discloses a normally open solenoid with spring 46 (Pet., 51; EX1007, 2:47-51, FIG. 2), and inverting the solenoid is a simple design choice that can be accomplished by repositioning the spring. EX1113, ¶115.



EX1007, FIG. 2 (annotated).

E. Claims 5-7, 9-14, 19, 21, 23, 32-42, and 58

Claims 5-7, 9-14, 19, 21, 23, 32-42, and 58 are not separately addressed and invalid for the reasons stated in the petition.

VII. GROUND 3: CLAIMS 1, 3, 22, AND 57 ARE ANTICIPATED BY NAKAFUSHI

A. Element 1.3

Champion argues that Nakafushi fails to disclose a gaseous fuel source because LPG leaves LPG Cylinder 16 in liquid phase. Champion is wrong.

First, the “gaseous fuel” terms refer to components that interact with fuel that is in the gaseous state at standard temperature and pressure. (*Supra* §IV.) LPG is a

gaseous fuel. Therefore, the LPG Cylinder is a “gaseous fuel source.” (*See supra* §V.A.)

Second, Nakafushi does *not* state that liquid phase LPG exits the cylinder. Champion assumes that because Nakafushi's pressure regulator is a vaporizer 14, it receives liquid phase LPG. But Champion acknowledges that Sugimoto's vaporizer alternatively receives liquid phase gaseous fuel or gas phase gaseous fuel. POR, 8-9 (quoting EX1002, 225); *see also supra* §IV; EX1113, ¶119. Nakafushi teaches an LPG Cylinder, which includes an LPG Cylinder from which the LPG exits in gas phase.

Third, even assuming liquid LPG is drawn, some of the drawn LPG would be in gas phase upon exiting the LPG Cylinder. *See supra* §V.A.; EX1113, ¶120. Thus, the LPG Cylinder is a “gaseous fuel source.”

B. Element 1.5

Champion argues that Nakafushi fails to disclose a gaseous fuel valve positioned along a gaseous fuel line because LPG is in liquid phase at these locations. Champion is wrong.

First, the “gaseous fuel” terms refer to components that interact with fuel in gaseous state at standard temperature and pressure. *Supra* §IV. LPG is a gaseous fuel. Therefore, LPG cut valve 18 is a gaseous fuel valve and LPG supplying passage 13 is a gaseous fuel line.

Second, even accepting Champion's argument that the LPG must be in gas phase, Nakafushi does *not* state that LPG is in liquid phase at these locations. *See supra* §VII.A. Nakafushi teaches an LPG cut valve positioned along LPG supplying passage 13, and the scope of that disclosure includes an LPG cut valve and fuel line through which LPG travels in gas phase. *Supra* §VII.A; EX1113, ¶123.

Third, even assuming liquid LPG is drawn, some LPG would be in gas phase in the LPG line (gaseous fuel line) and LPG cut valve (gaseous fuel valve). EX1113, ¶124.

C. Claims 3 and 22

Claims 3 and 22 are not separately addressed and invalid for the reasons stated in the petition.

D. Element 57.7

Champion does not dispute that Nakafushi discloses a fuel shutoff *attached* to the carburetor, as it does not contest this point in Claim 23. Instead, Champion argues this disclosure is insufficient to disclose the method step of *attaching* the liquid fuel cut-off to the carburetor. POR, 62-63.

Nakafushi discloses a liquid fuel cut-off (control valve 23) attached to the carburetor at two alternative locations. The assembly process necessarily includes attaching the liquid fuel cut-off to the carburetor. *Prima Tek II, L.L.C.*, 412 F.3d at 1290.

VIII. GROUND 4: CLAIMS 2, 4-14, 19-21, 23, 32-42, AND 58 ARE OBVIOUS OVER NAKAFUSHI IN VIEW OF MATSUSHIMA, YAMAMOTO, AND OLMR

A. Claim 2

Champion does not contest that Matsushima teaches a pull-start, batteryless engine and instead only disputes whether it would have been obvious to combine Nakafushi with Matsushima.

Nakafushi, like the Workshop Manual, teaches a fuel delivery system comprising a liquid fuel valve, gaseous fuel valve, liquid fuel cut-off, and switch. It would have been obvious to combine this teaching with Matsushima's teaching of a pull-start, batteryless engine for the same reasons it was obvious to combine the Workshop Manual with Matsushima. *See supra* §VI.A; EX1113, ¶130. Champion does not identify any difference between the Workshop Manual and Nakafushi that is material to the obviousness of combining their *teachings* with Matsushima's teachings.

Nakafushi does not limit itself to specific use cases or engine structures. POR, 64. A POSA would have considered Nakafushi's teaching in a variety of use cases and engine types, including uses in "cold or remote applications" and with small engines. *See* POR, 64-65; EX1113, ¶¶130-131. In such applications, it would have been obvious to combine the teachings of Nakafushi and Matsushima. *See supra* §VI.A.; EX1113, ¶131.

Champion notes that Nakafushi's battery powers fuel delivery system components. But Champion acknowledges that in a pull-start, batteryless engine, such components may be powered by the recoil during startup instead of a battery. POR, 41. POSAs would have understood that after startup, the engine could power the fuel delivery system by powering an alternator (generator) to produce electricity. EX1113, ¶132. This configuration is expressly considered in Matsushima. *Id.*; EX1029, 2:13-40; Pet., 77.

B. Claim 4

Champion does not contest that Matsushima teaches a pull-start engine having an electrical power generator and instead only disputes whether it was obvious to combine Nakafushi with Matsushima.

As explained above (*supra* §VIII.A) and in the Petition (Pet., 77), it would have been obvious to combine Nakafushi's dual fuel delivery system with Matsushima's (batteryless) recoil starter teachings. The recoil starter teaching encompasses Matsushima's generator, so that the engine can operate after starting without a battery. EX1113, ¶134. Champion acknowledges that the combination requires an alternative electricity source if the battery is removed, supplying the motivation to combine. POR, 65-66.

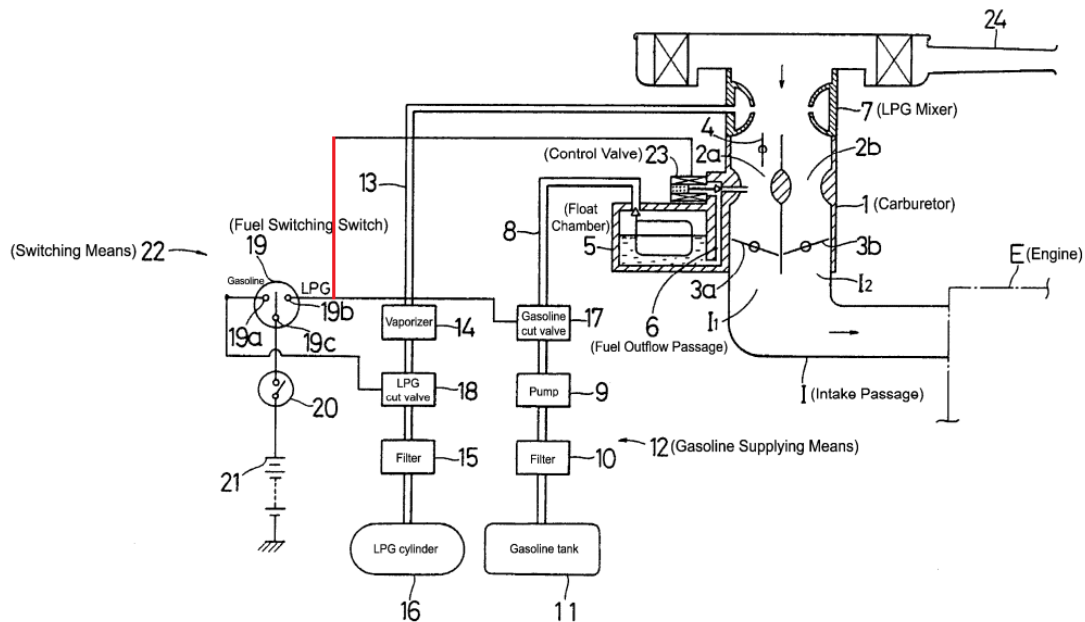
C. Claim 8

Champion does not contest that Olmr teaches a normally open valve and instead disputes whether incorporating arguments relating to the Workshop Manual establishes a motivation to combine.

The Petition explains that the decision to configure a solenoid as normally open or closed is mere design choice and cites Dr. Morse's testimony, referencing a detailed discussion of the motivation for incorporating Olmr's valve with Nakafushi. Pet., 81 (citing EX1003, ¶309).

Nakafushi and the Workshop Manual teach similar fuel delivery systems such that a POSA would combine their teachings in similar ways. *Supra* §VIII.A. Any differences are immaterial to their combinability with Olmr. EX1113, ¶137.

Finally, rewiring Nakafushi for a normally open liquid fuel cutoff would have been straightforward to a POSA. EX1113, ¶136.



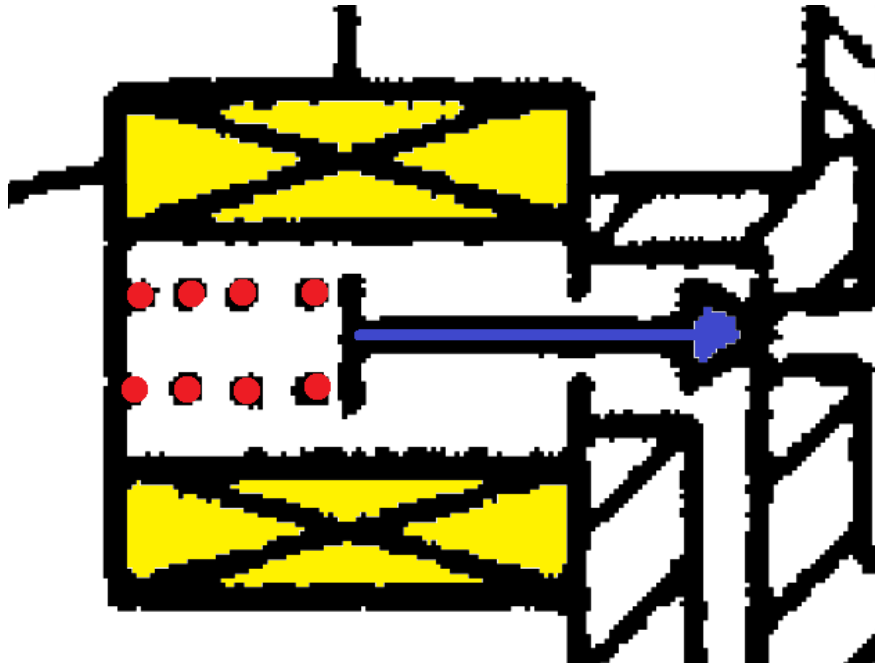
EX1005, FIG. 1 (rewired for a normally open liquid fuel cutoff).

D. Claim 20

Champion disputes whether Generac disclosed a motivation to combine. Section VII.D of the Petition (where the Petition's claim 20 analysis is included) and the supporting cited portions of Dr. Morse's declaration provide the motivation to use Olmr's solenoid valve for Nakafushi's cut valve 23. Pet., 77-80, 85 (citing EX1003, ¶328).

Nakafushi itself provides motivation to use a solenoid valve as the control valve 23. It discloses that the valve is electrically operated and normally closed. *See* EX1005, ¶14; Pet., 85. Nakafushi's figures show the cross-sectional depiction of a spring (red), schematic of a solenoid coil (yellow), and plunger (blue). A POSA

would have understood that the spring must be compressed to pull the plunger away from the fluid opening into the open position. EX1113, ¶139.



EX1005, FIG. 1 (annotated).

Nakafushi does not use the word “solenoid” so to the extent Olmr is required to disclose a solenoid, the Petition explains that a solenoid is a simple substitution of one known element for another to obtain predictable results. Pet., §VII.D.

E. Claims 5-7, 9-14, 19, 21, 23, 32-42, and 58

Claims 5-7, 9-14, 19, 21, 23, 32-42, and 58 are not separately addressed and invalid for the reasons stated in the petition.

IX. GROUND 5: CLAIMS 1, 15-16, AND 43-44 ARE ANTICIPATED BY HOLZAPFEL

A. Element 1.2

Champion exhibits gamesmanship by raising arguments under an irrelevant construction that no party here has adopted and that Champion itself rejected. Harbor Freight is no longer a petitioner in this proceeding (*see* Paper 17 at 2). Generac *stipulated* with Champion that “switch” as used in the '398 Patent should have its plain and ordinary meaning. EX1099. Champion argued Harbor Freight's construction differs from the plain and ordinary meaning. EX1098, 24; *see also* POR, 73.

Furthermore, the court preliminarily rejected Harbor Freight's construction, tentatively construing the term as “[a] device that—by means of controlling electrical current or mechanical movement—toggles between gaseous and liquid fuel inputs to the dual-fuel engine.” EX1111, 5; *see also* Memorandum regarding PTAB Consideration of Prior Findings of Fact and Conclusions of Law (Sept. 16, 2025). Champion admits that Holzapfel “discloses a mechanical structure that can be used to actuate two valves simultaneously.” POR, 73.

B. Element 1.3

Champion argues that Holzapfel fails to disclose a gaseous fuel source because the normally gaseous fuel leaves tank 16 in liquid phase. Champion is wrong.

First, the “gaseous fuel” terms refer to components that interact with fuel in the gaseous state at standard temperature and pressure. *Supra* §IV. Holzapfel's engine runs on “normally gaseous fuel.” *See* EX1009, 2:8-12. Therefore, tank 16 is a “gaseous fuel source” regardless of the fuel's phase inside or exiting the tank. Holzapfel itself describes the fuel as a “gaseous fuel” inside the tank and claims a “source of gaseous fuel.” EX1009, Claim 2. Champion's constructions require Holzapfel's “source of gaseous fuel” to not comprise a “gaseous fuel source.”

Second, even accepting Champion's claim construction arguments, tank 16 is a “gaseous fuel source” because some of the fuel exiting the tank would be in gas phase. EX1113, ¶148.

Third, even if the “gaseous fuel source” must provide gaseous fuel *only* in gas phase, the tank 16 with the heat exchanger 20 and pressure reducing valve 24 (vaporizer) provide a “gaseous fuel source.” *See* POR at 74 (describing vaporization of gaseous fuel into gas phase by these structures); *see also* IPR2025-00805, Paper 24 at 22-23 (identifying Nakafushi's LPG Canister and vaporizer as a “gaseous fuel source”).

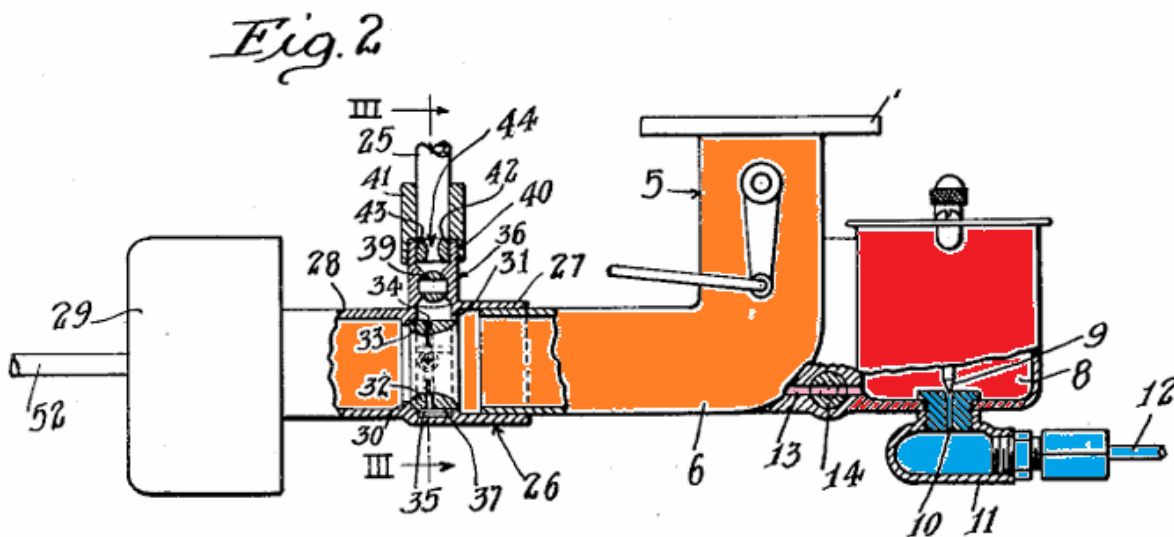
C. Element 1.4

Champion argues that the liquid fuel valve 9 is not positioned “along a liquid fuel line.” Champion restrictively reads the “liquid fuel line” as referring to only reference number 12 of Holzapfel. But the claim language and specification

demonstrate that the claimed fuel line includes the entire flow path from the fuel source to the carburetor, not just tubing. *See supra* §V.B.

Like the '398 Patent, Holzapfel discloses an inlet structure along the flow path between the liquid fuel source and the carburetor. Holzapfel further discloses that valve 9 obstructs the entrance point dividing the flow path "gaseous fuel line" and the carburetor. EX1009, 1:89-99.

Specifically, the '398 Patent discloses that the carburetor comprises a throat, float bowl, and the fuel passage therebetween. EX1001, Claims 23 and 43. Holzapfel describes carburetor 5 as comprising float bowl 8 (red) and bent tube 6 (with a throat). EX1009, 2:84-107. Inlet connection 11 and passage 10 are components of the flow path/fuel line (blue) leading into carburetor 5. Needle valve 9 is positioned along (at the end of) that fuel line. EX1113, ¶158.



EX1009, FIG. 2 (annotated).

D. Claims 15-16 and 43-44

Claims 15-16 and 43-44 are not separately addressed and invalid for the reasons stated in the petition.

X. GROUNDS 6-9: CLAIMS 17, 23-26, 43-46, 53-54 AND 56 ARE ANTICIPATED/OBVIOUS OVER HOLZAPFEL, NEAL, WINBERG, AND/OR YAMAMOTO

Grounds 6-9 are unaddressed. These claims are invalid for the reasons stated in the petition.

XI. CONCLUSION

For the reasons above, Petitioner asks that the PTAB issue a final written decision, finding Claims 1-17, 19-26, 32-46, 53-54, and 56-58 unpatentable, and the Director cancel these claims.

Respectfully submitted,

Date: August 18, 2026

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CERTIFICATE OF WORD COUNT

Pursuant to 37 C.F.R. §42.24, the undersigned attorney for the Petitioner, Generac Power Systems, Inc., declares that the argument section of this Petition has 5,431 words, according to the word count tool in Microsoft Word™.

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CERTIFICATE OF SERVICE

The undersigned certifies, in accordance with 37 C.F.R. §§42.105 and 42.6,
that service was made on the Patent Owner as detailed below.

<i>Date of service</i>	August 18, 2026
<i>Manner of service</i>	Electronic mail addressed to: j.staley@pkhip.com s.amy@pkhip.com t.finch@pkhip.com championlit@pkhip.com
<i>Documents served</i>	Reply To Patent Owner Response in <i>Inter Partes</i> Review of U.S. Patent No. 10,697,398, including Exhibit List; Exhibits EX1091 through EX1113
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