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UNITED STATES DISTRICT COURT

DISTRICT OF ARIZONA

Champion Power Equipment, Inc., Plaintiff, v. Firman Power Equipment Inc., Defendant.	Case No. 2:23-cv-02371-DWL **FIRMAN POWER EQUIPMENT INC.'S INVALIDITY CONTENTIONS**

EX2055 (IPR2025-00951)
Patent Owner Champion

I. INTRODUCTION

Pursuant to the Court's Case Management Order (Doc. 33), Defendant Firman Power Equipment Inc. ("Firman") provides these preliminary Invalidity Contentions (collectively, "Contentions").

In this case, Plaintiff Champion Power Equipment Inc. ("Champion") asserts certain claims of U.S. Patent No. 10,393,034; U.S. Patent No. 10,598,101; U.S. Patent No. 11,143,120; U.S. Patent No. 11,143,145; U.S. Patent No. 11,306,667; U.S. Patent No. 11,761,390; U.S. Patent No. 11,905,896; U.S. Patent No. 10,697,398; U.S. Patent No. 11,492,985; U.S. Patent No. 11,530,654; U.S. Patent No. 11,840,970; U.S. Patent No. 10,221,780; and U.S. Patent No. 11,905,895 (collectively, "Asserted Patents").

Firman's discovery and investigation in connection with this lawsuit are continuing and, thus, these Contentions are based on knowledge and information presently available to Firman. Firman reserves the right to amend and/or supplement these Contentions (including, without limitation, in the event that additional information is identified during the course of discovery, after the Court has construed the claims of the Asserted Patents, after Champion and/or its expert witness(es) disclose their positions and opinions, and/or in response to any amendment by Champion of its Infringement Contentions).

II. PRIOR ART INVALDITY

Firman identifies the following prior art references that anticipate and/or render obvious the asserted claims of the Asserted Patents.

Appendix A identifies prior art patents by patent number, country of origin, date of issue, and production number.

Appendix B identifies prior art publications by title, date (or estimated date) of publication, and where feasible, author and publisher, as well as production number.

Appendix C identifies prior art in the form of sales, offers for sale, or uses by specifying the item offered for sale or publicly used or known, the date (or estimated date) the offer or use took place or the information became known, and the identity of

the person or entity which made the use or which made and received the offer, or the person or entity which made the information known or to whom it was made known, and production number if available.

A. Anticipation

These Contentions rely on (without conceding) the priority dates of each of the Asserted Patents as asserted by Champion in its Infringement Contentions as the earliest possible priority date Champion asserts. Champion, however, has failed to respond to discovery seeking Champion's alleged support for its contentions. To the extend Champion alters its priority claim when it provides the requested support, Firman reserves the right to amend its contentions accordingly.

To the extent the exemplary references describe various implementations of the same underlying system, that underlying system is a single reference under 35 U.S.C. §§ 102(a), 102(b), and/or 102(g). The exemplary references are evidence of the capabilities of the prior art system, and each chart provided for a prior art system should be understood to incorporate by reference all printed publications describing or relating to that prior art system and all charts provided for those printed publications. Even if the exemplary references are not treated as a single prior art reference, it would have also been obvious to combine the features described in those references because the individual references discuss the same system.

The cited portions of prior art references are exemplary and representative of the content of the prior art references, and should be understood in the context of the reference as a whole, as understood by one of ordinary skill in the art. The patents and patent publications listed above are representative and incorporate related patent applications, patent publications, and issued patents. For example, in some cases Firman charts patent application publication, but pursuant to 35 U.S.C. 102, the issued patent resulting from the application would be prior art for the same reason. Firm thus intends its citations to the location in the patent application publication to refer to the

same relative location in the issued patent, and vice versa where Firman charts a patent rather than a patent application publication.

Firman's charts include citations to exemplary translations of foreign language reference (which are being produced with these Invalidity Contentions). These citations are for exemplary and for illustrative purposes only. Firman relies on the original references, rather than after cited translation, as prior art.

In addition, Firman incorporates prior art references of record in the prosecution of the Asserted Patents and related applications, as well as prior art discussed in the specifications of the Asserted Patents.

Nothing in these Contentions should be construed as an admission that the asserted claims are infringed by any accused product, that any particular feature or aspect of any of the accused products practices any elements of the asserted claims, or that Champion's apparent claim constructions are supportable or proper. These Contentions address the apparent constructions and interpretations that Champion is relying on for its infringement contentions, and Firman reserves its right to dispute any such interpretations. Therefore, to the extent the prior art discloses the same features and functionality that Champion has identified in its infringement contentions, Firman reserves the right to argue that the features or functionality do not practice any element of any of the asserted claims.

To the extent Firman cites or quotes any exemplary portion of any prior art reference with respect to a particular claim limitation in any of the attached charts, Firman reserves the right to rely on such portion of the prior art reference (and any similar disclosure in the reference) for all purposes with respect to such claim limitation (including, but not limited to, in connection with any other invalidity defense involving such prior art reference), any related claim limitation, and any substantially similar limitation(s) of any other claim(s). Firman reserves the right to identify additional portions in the same prior art disclosed herein to support its invalidity theories. Firman also reserves the right to rely on uncited portions of the prior art references and on other

publications and testimony as aids in understanding and interpreting the cited portions, as providing context for the state of the art and knowledge of persons skilled in the art, as additional evidence that a claim is known or disclosed, and as evidence supporting obviousness. Firman's identification of any portion of a prior art reference with respect to any limitation of any claim of any asserted patent is not an admission that such limitation satisfies the requirements of 35 U.S.C. § 112.

Firman intends to take discovery concerning the prior art and the invalidity of the Asserted Patents, including for example, testimony from authors or named inventors of the identified prior art, testimony from other individuals associated with the identified prior art, or additional evidence concerning the identified prior art. Each exemplary printed publication describing or relating to a prior art system should be understood to discuss the system's capabilities generally and also to discuss specific implementation examples of specific installations of the particular system, which, upon information and belief, was made, used, known, and on sale before the priority date of the Asserted Patents; thus, the making, using, knowledge of, and/or sale of the system is itself invalidating prior art.

Pursuant to the Court's Case Management Order (Doc. 33), Firman's invalidity contentions respond to Champion's infringement contentions. Champion's infringement contentions accused numerous Firman products, but have mapped only two such products. For example, Champion provided a single claim chart mapping a single product, but alleges that chart is sufficient to allege infringement against the Model H05751, Model H03651, Model H03652, Model H03654, Model H05752, Model H05753, Model H05754, Model H07552, Model H07553, Model H07554, Model H08051, Model H08052, Model H08053, Model T04073, Model T07571, Model T07571F, Model T07573, Model T08071, Model T08072, Model T09275, Model T09371, Model WH03562OF, and Model WH03662OF. Similarly, Champion provided a single claim chart mapping a single product, but alleges that chart is sufficient to allege infringement against Model WH02942, Model WH02942F, Model WH03041,

Model WH03042, Model WH03242, Model WH03342, Model WH03242F, and Model WH03344. Responding to Champion's contentions, Firman therefore provides claim charts representing groups of references. The following table identifies each claim chart and the additional references Firman groups with that chart. Firman has grouped those references according to the chart below because those grouped references have similar disclosures located at similar places to the reference Firman has charted. Firman contends that all grouped references represent invalidating prior art for the same reasons it contends the corresponding charted reference represents invalidating prior art.

Ex.	Mapped Reference	Grouped Reference
1.	Bai	
2.	Bernhardsson	
3.	Cao	
4.	Champion 71532 Manual	Champion 100153 Manual (2014) Champion 100153 Device Champion 71532 Device Champion 71530 Manual Champion 71531 Manual Champion 76533 Manual Champion 76555 Manual Champion 100122 Manual Champion 100155 Manual Champion 100230 Manual Champion 100230 Manual Champion 71530 Device Champion 71531 Device Champion 76533 Device Champion 76555 Device Champion 100122 Device Champion 100155 Device Champion 100230 Device Champion 100230 Device
5.	Chen	
6.	Deng '518	Deng '277
7.	Deng '819	

Ex.	Mapped Reference	Grouped Reference
8.	ECO8990E with Kit	ECO8990E ECO8990E Gas Kit ECO8990E Manual (expressly mapped in Ex. 8) ECO8990E Gas Kit Instruction (expressly mapped in Ex. 8)
9.	GasHose	
10.	Hallberg '207	
11.	Hallberg '763	
12.	Honda EU2000i Video	Honda EU2000i Honda EU2000i with Conversion
13.	Honda EU20i Manual	Honda EU20i Manual A Honda EU20i Manual B Honda EU20i Manual C Honda EU20i Manual D Honda EU20i Manual E Honda EU20i Manual F Honda EU20i Manual G Honda EU20i
14.	Honda EU20i Video	Bassguitarist1985 Honda EU20i with Conversion
15.	Hoots	
16.	Jaasma	
17.	Kern	
18.	Kubota Engine	Kubota Manual (expressly mapped in Ex. 18) Kubota DF972-E2 Engine
19.	Lian '307	
20.	McLean	
21.	Nishida '116	
22.	NoOutage	
23.	Northstar 8000 TFG Manual	Northstar 8000 TFG
24.	Olmr	
25.	Parlatore	
26.	Poehlman '699	Poehlman '848
27.	Pursifull	
28.	RD9000E	RD9000E Manual (expressly mapped in Ex. 28)
29.	Sarder '230	Sarder '101 Sarder '273 Sarder '390 Sarder '667 Sarder '896

Ex.	Mapped Reference	Grouped Reference
30.	SCAG Manual	SCAG IPL 06216 SCAG IPL 06292 SCAG IPL 06201 SCAG Manual 03278 SCAG Manual 03331
31.	Sugimoto	
32.	Swanson	
33.	Takahashi	
34.	Tsuda	
35.	Walker	
36.	Wang	
37.	Winco HPS12000HE with Kit	Winco HPS12000HE Manual (expressly mapped in Ex. 37) Winco Solenoid Kit Instruction Sheet (expressly mapped in Ex. 37) Winco Solenoid Kit Diagram(expressly mapped in Ex. 37) Winco HPS12000HE Winco Solenoid Kit AFC Valve Winco HPS9000VE Winco HPS6000HE Winco HPS9000VE Solenoid Kit Winco HPS6000HE Solenoid Kit Winco HPS9000VE Manual Winco HPS6000HE Manual Winco HPS12000HE Manual Winco HPS Owners Manual Winco Dyna Manual Winco Solenoid Kit Instruction Sheet 2 Winco HPS6000HE Instruction Sheet Winco HPS9000VE Instruction Sheet Winco HPS12000HE Manual 2
38.	Zhang	
39.	Zhao Yunying	

In addition to the above, the manner in which SCAG Turf Tiger maps to the Asserted Claims is demonstrated through the combination of Exs. 18 and 30.

Exhibits 1 through 39 provide claim charts mapping each element of each asserted claim, to each prior art reference. Except where those charts state that an

element would been obvious, Firman contends that each prior art refence anticipates each asserted claim, pursuant to 35 U.S.C. § 102.

Firman also Incorporates by reference Exhibits 1 and 3 of Champion's Infringement Contentions as admitting Firman H03651, Firman H03652, Firman H05751, and Firman H08051 would anticipate the claims of U.S. Patent No. 10,393,034 ("the '034 patent") and U.S. Patent No. 11,143,120 ("the '120 patent") should they predate those patents. Firman offered for sale and publicly disclosed the Firman H03651, Firman H03652, Firman H05751, Firman H08051 generators (or equivalent versions of those generators containing the accused functionality) at the 2016 National Hardware Show on May 2-4 2016. Just months after that, on October 4, 2016, Champion filed the application resulting in the '034 patent. This application was a continuation-in-part of Champion's earlier patent applications and added new matter to that application. The '120 patent claims priority to the application that led to the '034 patent. Thus, any claims of the '034 or '120 patents that contain matter disclosed for the first time on October 4, 2016, would be entitled to a priority date no earlier than October 4, 2016. Champion's discovery responses currently deny that any asserted claims are entitled to a priority date of no earlier than October 4, 2016. In discovery, Firman requested Champion provided its basis for this contention, but Champion has refused. Champion bears the burden for establishing its priority claim. Should Champion be unable to support its current priority claim for any claim of the '034 or '120 patents, all such claims would be anticipated by Firman H03651, Firman H03652, Firman H05751, Firman H08051 for the reasons Champion laid out in Exhibits 1 and 3 of its Infringement Contentions.

B. Obviousness

Firman also contends that the prior art renders the Asserted Patents obvious for the reasons that follow. Firman makes this obviousness contention in addition to it anticipatory contention. For example, for the reasons set forth in Ex. 28, Firman contends the RD9000E anticipates all asserted claims except those few claims in which

Ex. 28 expressly identifies elements as being rendered obvious rather than expressly present in the RD9000E. In addition to that anticipation contention, Firman also contends the RD9000E renders obvious the asserted claims for the reasons outlined below.

In *KSR Int'l Co. v. Teleflex Inc.*, the Supreme Court clarified the standard for what types of inventions are unpatentable as obvious. 550 U.S. 398 (2007). "In *KSR*, the Supreme Court criticized a rigid approach to determining obviousness based on the disclosures of individual prior-art references, with little recourse to the knowledge, creativity, and common sense that an ordinarily skilled artisan would have brought to bear when considering combinations or modifications." *Randall Mfg. v. Rea*, 733 F.3d 1355, 1362 (Fed. Cir. 2013). The Court explained that in many cases a person of ordinary skill "will be able to fit the teachings of multiple patents together like pieces of a puzzle." *KSR*, 550 U.S. at 420–21. Accordingly, the Court emphasized that inventions arising from ordinary innovation, ordinary skill, or common sense should not be patentable. *Id.* at 415–22, 427. "[W]hen a patent simply arranges old elements with each performing the same function it had been known to perform and yields no more than one would expect from such an arrangement, the combination is obvious." *Id.* at 417. A "court must ask whether the [claimed] improvement is more than the predictable use"—a "predictable variation"—"of prior art elements according to their established functions," considering whether the alleged invention is merely "the simple substitution of one known element for another or the mere application of a known technique to a piece of prior art ready for the improvement." *Id.* at 417. In that regard, a patent claim may be obvious if the combination of elements was "obvious to try" or if "there existed at the time of the invention a known problem for which there was an obvious solution encompassed by the patent's claims." *Id.* at 419-21. "[I]f a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill." *Id.* at 417.

In addition, "[w]hen a work is available in one field of endeavor, design incentives and other market forces can prompt variations of it, either in the same field or a different one." *Id.* "If a person of ordinary skill can implement a predictable variation, Section 103 likely bars its patentability." *Id.*

Firman believes that no showing of a specific motivation to combine prior art is required to combine the references disclosed above and in the attached charts, as each combination of art would have no unexpected results, and at most would simply represent a known alternative to one of skill in the art. *See id.* at 415–17 (rejecting the Federal Circuit's "rigid" application of the teaching, suggestion, or motivation to combine test, instead espousing an "expansive and flexible" approach). Nevertheless, in addition to the information contained in the sections immediately above and elsewhere in these contentions, Firman identifies exemplary motivations and reasons to combine the cited art. As explained below, motivations to combine the teachings of the prior art references disclosed herein are found in the references themselves and: (1) the nature of the problem being solved, (2) the express, implied and inherent teachings of the prior art, (3) the knowledge of persons of ordinary skill in the art, (4) the predictable results obtained in combining the different elements of the prior art, (5) common subject matter, and (6) same or similar fields of use.

The subsections below therefore identify various combinations of references, along with exemplary motivations to combine. Multiple combinations, however, apply to the same reference to the extent identified below. For example, for the reasons stated in Section II.B.2. below, it would be obvious to combine the RD9000E with any of the references disclosing pressure regulation devices located off board the generator. Likewise, for the reasons stated in Section II.B.3. below, it would be obvious to combine the RD9000E with any of the references disclosing the use of a solenoid to control gaseous fuel flow. Each of these combinations apply in an additive—not mutually exclusive—manner. Thus, for the reasons identified in Section II.B.2 and Section II.B.3, it would have been obvious combine the RD9000E with any of the

references disclosing pressure regulation devices located off board the generator ***and*** any of the references disclosing the use of a solenoid to control gaseous fuel flow. Thus, for the reasons discussed below its obviousness combinations are additive and not mutually exclusive, and may therefore stack.

1. *Pressure regulation was obvious.*

Locating two stages of devices that regulate the pressure of fuel supplied from a pressurized fuel source at a location apart from the device utilizing that fuel was well known in the art. The following prior art references disclose this functionality.

- Bassguitarist1985
- NoOutage (and grouped references)
- Northstar 8000 TFG Manual (and grouped references)
- Parlatore (and grouped references)
- RD9000E (and grouped references)
- Honda EU20i Video
- Honda EU2000i Video
- Honda EU2000i with Conversion

It would have been obvious to modify any device utilizing fuel from a pressurized source to locate at least two stages of pressure regulating devices at a location apart from the device utilizing that fuel because doing so represents that mere altering a position of a component, that has a known and predicable functionality well known to one of skill in the art, and one of skill in the art would have been motivated to do this to save space. Specifically, in the context of a generator, which includes two potential positions for the pressure regulation equipment: on the pressurize fuel source (e.g., an LNG or propane tank) or on the generator itself. Inverter generators have less available space, making it obvious to locate pressure regulating devices on the fuel source, as the above cited references have done.

It would therefore have been obvious to combine any of the above refences with any of the above identified prior art engines or generators, which each use a regulated

pressurized fuel source: Champion 71532 Manual (and grouped references), Deng '819 (and grouped references), Hallberg '207 (and grouped references), Hallberg '763 (and grouped references), Honda EU20i Manual (and grouped references), Jaasma (and grouped references), Kern (and grouped references), Kubota Engine (and grouped references), McLean (and grouped references), Nishida '116 (and grouped references), Northstar 8000 TFG Manual (and grouped references), Poehlman '699 (and grouped references), Pursifull (and grouped references), RD9000E (and grouped references), Sarder '230 (and grouped references), SCAG Manual (and grouped references), Sugimoto (and grouped references), Takahashi (and grouped references), Tsuda (and grouped references), Walker (and grouped references), Winco HPS12000HE Manual, Winco HPS9000VE Manual, Winco HPS6000HE Manual, Winco HPS Owners Manual, Winco HPS12000HE Manual 2, Winco HPS12000HE, Winco HPS9000VE, Winco HPS6000HE, Winco Dyna Manual, Winco HPS12000HE with Kit, SCAG Turf Tiger, ECO8990E with Kit, ECO8990E Manual, ECO8990E, Honda EU2000i Video, Honda EU2000i with Conversion, and Honda EU2000i (hereinafter the "Prior Art Engines and Generators"). Similarly, it would have been obvious to use with the Prior Art Engines and Generators multiple stages of regulation (as many regulators are designed with designated operating ranges that require using multiple stages of regulation to achieve the desired pressure change), to disconnect a fuel source or the fuel regulation from the device using the fuel (as simply needed to transport the device or store it when not in use), and to include a valve at the output of a fuel source, (also as simply needed to transport the device, to store it when not in use, and for safety).

2. *Off board pressure regulation was obvious.*

Locating all devices that regulate the pressure of fuel supplied from a pressurized fuel source at a location apart from the device utilizing that fuel was well known in the art. The following prior art references disclose this functionality.

- Bassguitarist1985
- GasHose (and grouped references)

- NoOutage (and grouped references)
- Parlatore (and grouped references)
- Honda EU20i Video
- Honda EU2000i Video
- Honda EU2000i with Conversion

It would have been obvious to modify any device utilizing fuel from a pressurized source to locate all pressure regulating devices at a location apart from the device utilizing that fuel because doing so represents that mere altering a position of a component, that has a known and predicable functionality well known to one of skill in the art, and one of skill in the art would have been motivated to do this to save space. Specifically, in the context of a generator, that includes two potential positions for the pressure regulation equipment: on the pressurize fuel source (e.g., an LNG or propane tank) or on the generator itself. Inverter generators have less available space, making it obvious to locate pressure regulating devices on the fuel source, as the above cited references have done. Indeed, it would have been obvious to move all pressure regulating devices off board to further save on space. It would therefore have been obvious to combine any of the above refences with any of the Prior Art Engines and Generators, which each use a regulated pressurized fuel.

3. *Use of cutoff solenoid on a gaseous fuel line was obvious.*

Using a solenoid to cutoff or control the flow of a gaseous fuel was well known in the art. The following prior art references disclose this functionality.

- Bernhardsson (and grouped references)
- Kubota Engine (and grouped references)
- Northstar 8000 TFG Manual (and grouped references)
- Poehlman '699 (and grouped references)
- SCAG Manual (and grouped references)
- Walker (and grouped references)
- Winco Solenoid Kit Instruction Sheet

- Winco Solenoid Kit Diagram
- Winco Solenoid Kit
- Winco HPS9000VE Solenoid Kit
- Winco HPS6000HE Solenoid Kit
- Winco Solenoid Kit Instruction Sheet 2
- Winco HPS6000HE Instruction Sheet
- Winco HPS9000VE Instruction Sheet
- Winco HPS12000HE with Kit
- SCAG Turf Tiger
- AFC Valve

It would have been obvious to modify any device utilizing gaseous fuel to include a solenoid to cutoff or control the flow of a gaseous fuel because doing so represents an intended well-known use of a component with predicable functionality that was itself also well-known to a person of skill in the art. One of skill in the art would be motivated to use a solenoid in place of a manual valve to automate the otherwise manual process of opening and closing a valve. In some multifuel engines, one fuel line may be controlled by a manual valve and another was controlled by a solenoid. It would have been obvious to flip this arrangement and control either fuel with either a manual or solenoid valve because doing so was a well known use of a well known component, and one of skill in the art would be motivated to do so to automate a manual process or add reliability, safety, or regulatory compliance. Likewise, one of skill in the art would be motivated to add an additional solenoid to a device that included a manual valve as an added level of security in the switching process and regulatory compliance, which represents another use well known to one of skill in the art. In doing so, it would likewise have been obvious to configure the additional solenoid to be normally open to ensure that, absent power, the solenoid performs its intended function. It would therefore have been obvious to combine any of the above refences with any of the Prior Art Engines and Generators. It would likewise have been

obvious to modify any of the Prior Art Engines and Generators to include such elements based solely on the knowledge of one of skill in the art for the reasons stated above.

4. *Use of valves and switches for fuel selection was obvious.*

Using valves and switches for fuel selection was obvious. The following prior art references disclose this functionality.

- Bai (and grouped references)
- Bernhardsson (and grouped references)
- Cao (and grouped references)
- Champion 71532 Manual (and grouped references)
- Deng '518 (and grouped references)
- Deng '819 (and grouped references)
- Hallberg '207 (and grouped references)
- Hallberg '763 (and grouped references)
- Kubota Engine (and grouped references)
- Lian '307 (and grouped references)
- McLean (and grouped references)
- Northstar 8000 TFG Manual (and grouped references)
- Poehlman '699 (and grouped references)
- Pursifull (and grouped references)
- RD9000E (and grouped references)
- Sarder '230 (and grouped references)
- SCAG Manual (and grouped references)
- Sugimoto (and grouped references)
- Takahashi (and grouped references)
- Tsuda (and grouped references)
- Zhang (and grouped references)
- SCAG Turf Tiger

It would have been obvious to modify any engine or generator that ran on multiple fuels to use valves and switches to facilitate the process of selecting a fuel to provide to the engine because doing so represents a use known to a person of skill in the art, of components with predicable functionality that was itself also well-known to a person of skill in the art. One of skill in the art would be motivated to use valves and switches to facilitate the process of selecting a fuel and automate the otherwise manual process of opening and closing valves one at a time, or coupling or decoupling fuel lines. Likewise, one of skill in the art would be motivated to use valves and switches to avoid the unintentional introduction of multiple fuels at the same time, a risk well known to one of skill in the art. It would therefore have been obvious to combine any of the above refences with any of the Prior Art Engines and Generators.

5. *Use of an engine or device using an engine to power a generator.*

Using an internal combustion engine to power a generator was obvious. The following prior art references discloses such engines.

- Hallberg '207 (and grouped references)
- Hallberg '763 (and grouped references)
- Jaasma (and grouped references)
- Kubota Engine (and grouped references)
- McLean (and grouped references)
- Poehlman '699 (and grouped references)
- Pursifull (and grouped references)
- SCAG Manual (and grouped references)
- Takahashi (and grouped references)
- Tsuda (and grouped references)
- Walker (and grouped references)
- SCAG Turf Tiger

It would have been obvious to use any of those engines to power a generator because generators were well known in the prior art, as was the need to power the

rotation of internal electrical power generation components. One of skill in the art would be motivated to use an internal combustion engine to power a generator to achieve the rotational energy required to generate electricity. Indeed, manufacturers of generators (and other similar products and industries) often use the same engines that power their generators to power other small equipment and view the internal combustion engines as interchangeable. It would therefore have been obvious to combine any of the above refences with any of the prior art generators: Champion 71532 Manual (and grouped references), Deng '819 (and grouped references), Honda EU20i Manual (and grouped references), Kern (and grouped references), Nishida '116 (and grouped references), Northstar 8000 TFG Manual (and grouped references), RD9000E (and grouped references), Sarder '230 (and grouped references), Sugimoto (and grouped references), Winco HPS12000HE Manual, Winco HPS9000VE Manual, Winco HPS6000HE Manual, Winco HPS Owners Manual, Winco HPS12000HE Manual 2, Winco HPS12000HE, Winco HPS9000VE, Winco HPS6000HE, Winco Dyna Manual, Winco HPS12000HE with Kit, ECO8990E with Kit, ECO8990E Manual, ECO8990E, Honda EU2000i Video, Honda EU2000i with Conversion, and Honda EU2000i.

6. *Use of quick connects was obvious.*

Using a quick connect to control the coupling and decoupling of a fuel line was well known in the art. The following prior art references disclose this functionality.

- Champion 71532 Manual (and grouped references)
- GasHose (and grouped references)
- Honda EU20i Manual (and grouped references)
- NoOutage (and grouped references)
- Sarder '230 (and grouped references)
- Sugimoto (and grouped references)
- Honda EU2000i Video
- Honda EU2000i with Conversion

- Honda EU2000i

It would have been obvious to modify any device having gaseous fuel line to use a quick connect for coupling and decoupling the fuel line in place of a traditional coupling because doing so represents an intended use of a component with a predicable functionality that was well-known to a person of skill in the art. One of skill in the art would be motivated to use a quick connect in order to make coupling or decoupling the fuel line easier for a user, to provide an added level of safety by avoid missed connection, and to avoid leakage during the coupling/decoupling process. It would therefore have been obvious to combine any of the above refences with any of the Prior Art Engines and Generators. It would likewise have been obvious to modify any of the the Prior Art Engines and Generators to include a quick connect based solely on the knowledge of one of skill in the art for the reasons stated above.

7. *Use of carburetor cutoff solenoids was obvious.*

Using a solenoid mounted on, in, or near a carburetor to control the fuel flow into the carburetor was well known in the art. The following prior art references disclose this functionality.

- Bernhardsson (and grouped references)
- Champion 71532 Manual (and grouped references)
- Chen (and grouped references)
- Kubota Engine (and grouped references)
- Nishida '116 (and grouped references)
- Northstar 8000 TFG Manual (and grouped references)
- Olmr (and grouped references)
- RD9000E (and grouped references)
- Sarder '230 (and grouped references)
- SCAG Manual (and grouped references)
- Sugimoto (and grouped references)
- Swanson (and grouped references)

- Tsuda (and grouped references)
- Walker (and grouped references)
- Wang (and grouped references)
- Zhao Yunying (and grouped references)
- SCAG Turf Tiger
- ECO8990E with Kit
- ECO8990E Manual
- ECO8990E

It would have been obvious to modify any carbureted engine to include a solenoid mounted on, in, or near the carburetor to control the fuel flow because carburetor solenoids were well-known to a person of skill in the art, and were components with a predicable functionality that was itself also well-known to a person of skill in the art. Namely, one of skill in the art was aware of the need to quickly and immediately cutoff fuel flow into the carburetor to assist in shutting off the engine, such that the vacuum the engine created would not continue to automatically draw fuel after the user shut off the ignition. One of skill in the art would have recognized the existence of this cutoff could be coopted for use in fuel switching as well, as that requires the same thing as starting and stopping the engine: control of the flow of fuel into the engine. It would also have been obvious to configure those solenoids to be normally open to ensure that absent power, they performed their intended function. Likewise, it would have been obvious to locate that carburetor to cut off fuel flow from the float bowl to a nozzle in a venturi of the carburetor upstream from a throttle for the engine because it provides the most geometrically advantageous position, a position that was used by many preexisting carburetor that was both well known to a person of skill in the art and one that would be obvious to figure out. It would therefore have been obvious to combine any of the above refences with any of the Prior Art Engines and Generators. It would likewise have been obvious to modify any of the Prior Art Engines and Generators to include a solenoid mounted on, in, or near the carburetor to

control the fuel flow based solely on the knowledge of one of skill in the art for the reasons stated above.

8. *Use of standard fuels was obvious.*

Using a gasoline and LPG to fuel an engine was well known in the art. The following prior art references disclose this functionality.

- Champion 71532 Manual (and grouped references)
- Jaasma (and grouped references)
- Northstar 8000 TFG Manual (and grouped references)
- Poehlman '699 (and grouped references)
- RD9000E (and grouped references)
- Sarder '230 (and grouped references)
- SCAG Manual (and grouped references)
- Walker (and grouped references)
- Winco HPS12000HE Manual
- Winco HPS9000VE Manual
- Winco HPS6000HE Manual
- Winco HPS Owners Manual
- Winco HPS12000HE Manual 2
- Winco HPS12000HE
- Winco HPS9000VE
- Winco HPS6000HE
- Winco Dyna Manual
- Winco HPS12000HE with Kit
- SCAG Turf Tiger
- ECO8990E with Kit
- Honda EU2000i Video
- Honda EU2000i with Conversion

These were common fuels, well known to a person of skill in the art, and operated with a predicable functionality that was itself also well-known to a person of skill in the art. Indeed, these are some of the most commonly found for sale in commercial fueling stations, or used as fuel sources for home, recreational vehicle, or caping supplies, which are all areas portable generators and small internal combustion engines are commonly found. It would therefore have been obvious to select either of these as an engine fuel for any of the Prior Art Engines and Generators. It would have likewise been obvious to do that based solely on the knowledge of one of skill in the art.

9. *Use of standard carburetor elements was obvious.*

Using a carburetor that has a throat, venturi, float bowl, and fuel passage was well known in the art. These were common element, well known to a person of skill in the art, and operated with a predicable functionality that was itself also well-known to a person of skill in the art. It would therefore have been obvious to modify any internal combustion engine to include these elements based solely on the knowledge of one of skill in the art.

10. *Use of standard engine electronic was obvious.*

Using an internal combustion engine that includes a pull start, alternator, and charging coil was well known in the art. These were common elements, well known to a person of skill in the art, and operated with a predicable functionality that was itself also well-known to a person of skill in the art. It would therefore have been obvious to modify any internal combustion engine to include these elements based solely on the knowledge of one of skill in the art. Likewise, it would be obvious to power elements on board an internal combustion engine or a generator (such as switches, solenoid, or other control elements) using the available onboard power, such as power drawn from the alternator, a battery, and a magneto. And when in a generator, it would likewise have been obvious to power elements (such as switches, solenoid, or other control elements) using the power the generator created. Regulating that power (such as

through the use of a voltage regulator) would have been obvious to avoid unintended opening and closing of switches or other affects caused by unwanted variation in the power levels. Doing so would have been obvious based on the Prior Art Engines and Generators, as well as based solely on the knowledge of one of skill in the art.

11. *Positioning known elements was obvious.*

Positioning known elements, such as switches and valves, either on or in a generator housing, or on or adjacent other components was well known in the art. Fuel valves and switches were common elements, well known to a person of skill in the art, and operated with a predicable functionality that did not achieve unpredictable results when their location was changed. Moving them around a device would therefore have been obvious because a person of skill in the art frequently applies basic engineering and design choices when determining where to locate a part, such as placing a valve near a switch (e.g., as described in Hoots), or on the surface of a generator where it would be accessible. Likewise, it would have been obvious to couple fuel sources to inlets and outlets as needed to move fuel from one location to another. Variations in the locations of these parts, and parts like them, would therefore have been obvious, and a person of skill in the art would be motivated to do them by standard principles of design that requiring considering different locations and selecting the one that balances form, function, and convince.

III. INDEFINITENESS

Title 35 U.S.C. § 112(b) (formerly 35 U.S.C. § 112, ¶ 2) provides that "[t]he specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention." If a claim fails to satisfy the definiteness requirement, it is invalid. *See, e.g., Bancorp Servs., L.L.C. v. Hartford Life Ins. Co.*, 359 F.3d 1367, 1371 (Fed. Cir. 2004). "In ruling on a claim of patent indefiniteness, a court must determine whether those skilled in the art would understand what is claimed when the claim is read in light of the specification."

Id.; *Exxon Research & Eng'g Co. v. United States*, 265 F.3d 1371, 1375 (Fed. Cir. 2001). The proper test for determining whether a claim satisfies the definiteness requirement is whether the claim provides "reasonable certainty" as to its scope and bounds to a person of ordinary skill in the art at the time of filing. *Nautilus, Inc. v. Biosig Instruments, Inc.*, 572 U.S. 898, 901 (2014). "[A] patent is invalid for indefiniteness if its claims, read in light of the specification delineating the patent, and the prosecution history, fail to inform, with reasonable certainty, those skilled in the art about the scope of the invention." *Id.*

Champion has yet to provide a proposed claim construction for the terms below. To the extent Champion argues that the following claim terms in the Patents in Suit should be construed in such a way to cover the Accused Products, the claim terms are indefinite as being insolubly ambiguous. Consequently, the claims in which these terms appear are indefinite under 35 U.S.C. § 112(b). The inclusion of these terms in the Firman's invalidity and noninfringement charts is not a concession by Firman that these terms are not indefinite.

At least the following claims are indefinite for missing antecedent basis or indefinite or inconsistent nomenclature: The '034 patent's use of "gaseous cutoff coupled to open and close a gaseous fuel source to the engine" in claim 1 and its corresponding use of "the gaseous cutoff solenoid" in claim 2 or indefinite. One of ordinary skill cannot determine whether the term "solenoid" has been omitted from Claim 1 or where any antecedent basis is provided for the "the gaseous cutoff solenoid" in claim 2. These claims are thus indefinite under 35 U.S.C. § 112(b).

IV. LACK OF ENABLEMENT AND FAILURE TO SATISFY WRITTEN DESCRIPTION

Title 35 U.S.C. § 112(a) (formerly 35 U.S.C. § 112, ¶ 1) provides that "[t]he specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor

of carrying out his invention."

The enablement requirement requires that the patent specification enable those skilled in the art to make and use the full scope of the claimed invention without undue experimentation based on the underlying facts. *See, e.g.*, *Genentech, Inc. v. Novo Nordisk A/S*, 108 F.3d 1361, 1365 (Fed. Cir. 1997); *In re Wright*, 999 F.2d 1557, 1561 (Fed. Cir. 1993); *In re Vaeck*, 947 F.2d 488, 495 (Fed. Cir. 1991). Factors to be considered when evaluating whether there is undue experimentation include: 1) the quantity of experimentation necessary, 2) the amount of direction or guidance presented, 3) the presence or absence of working examples, 4) the nature of the invention, 5) the state of the prior art, 6) the relative skill of those in the art, 7) the predictability or non-predictability of the art, and 8) the breadth of the claims. *In re Wands*, 858 F.2d 731, 737 (Fed. Cir. 1988).

Likewise, 35 U.S.C. § 112(a) (formerly 35 U.S.C. § 112, ¶1) provides that "[t]he specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor of carrying out his invention."

The written description requirement is a separate requirement to enablement; it applies to all claims and requires that the patent specification objectively demonstrate that the applicant actually invented (was in possession of) the claimed subject matter. *Ariad Pharms., Inc. v. Eli Lilly and Co.*, 598 F.3d 1336, 1349-51 (Fed. Cir. 2010). The test for sufficiency of written description is whether the disclosure of the application reasonably conveys to those skilled in the art that the inventor had possession of the claimed subject matter as of the filing date. *Id.* The level of detail required to satisfy the written description varies depending on the nature and scope of the claims and the complexity and predictability of the relevant technology. *Id.* at 1351-52.

The specifications of the Patents in Suit do not provide an adequate written

description and have failed to enable numerous claim terms. Namely, the specifications of the Patents in Suit only provide limited disclosure and do not teach one of ordinary skill in the art how to make and use the broader reading of the claims on which Champion's infringement contentions rely. Consequently, the full scope of each of the claims identified below would require undue experimentation, and the claims are thus invalid as not enabled under 35 U.S.C. § 112(a).

Likewise, the specifications of the Patents in Suit do not provide an adequate written description of the broad claims and claimed functions for the asserted claims, and consequently, one of ordinary skill in the art would conclude that the inventors did not have possession of the claimed inventions as of the filing date.

Firman's assertions of lack of enablement and written description are based on its understanding of the Claim Construction on which Champion relies. Firman expressly reserves the right to amend its contentions in this regard should Champion proffer proposed claim constructions affecting additional claim elements. The asserted claims are invalid for failing to meet the written description and enablement requirements for at least the following reasons:

The '101, '667, '390, and '896 patents ("Champion's Family 1 Patents") have failed to describe or enable a fuel valve assembly comprising multiple different fuel valves. Instead, the specification of the patents discloses only a valve assembly comprising a single valve. As a result, the specification of Champion's Family 1 Patents does not provide disclosure of, or teach one of ordinary skill in the art how to make and use, the following claim elements. Likewise, the specifications of the Patents in Suit do not provide an adequate written description of the following claim elements, and consequently, one of ordinary skill in the art would conclude that the inventors did not have possession of the claimed inventions as of the filing date.

- A "valve assembly fluidly connected to each of a first fuel source and a second fuel source, the valve assembly being operable to selectively control a first fuel flow and a second fuel flow from the first fuel source and the

second fuel source." *See, e.g.*, claims 101-17, 101-18, 667-1, 667-10, 390-3, 896-21, 896-30.

- A "valve assembly" that comprises "Two fuel inputs" and "Two fuel outputs." *See, e.g.*, claims 101-18, 667-1, 667-13, 390-5, 896-27, 896-30.
- A "valve assembly" that comprises "A first fuel valve" and "A second fuel valve." *See, e.g.*, claims 101-18, 667-3, 667-15, 390-7, 898-28, 896-32.

Champion's Family 1 Patents have failed to describe or enable a fuel valve assembly comprising a solenoid. Instead, the specification of the patents discloses only a valve assembly comprising a mechanical valve actuated by a mechanical handle. Yet Champion appears to interpret the claimed valve assemblies to include an electronically actuated solenoid. As a result, the specification of Champion's Family 1 Patents does not provide disclosure of, or teach one of ordinary skill in the art how to make and use, the following claim elements. Likewise, the specifications of the Patents in Suit do not provide an adequate written description of the following claim elements, and consequently, one of ordinary skill in the art would conclude that the inventors did not have possession of the claimed inventions as of the filing date.

- A "valve assembly fluidly connected to each of a first fuel source and a second fuel source, the valve assembly being operable to selectively control a first fuel flow and a second fuel flow from the first fuel source and the second fuel source." *See, e.g.*, claims 101-17, 101-18, 667-1, 667-10, 390-3, 896-21, 896-30.
- A "valve assembly" that comprises "Two fuel inputs" and "Two fuel outputs." *See, e.g.*, claims 101-18, 667-1, 667-13, 390-5, 896-27, 896-30.
- A "valve assembly" that comprises "A first fuel valve" and "A second fuel valve." *See, e.g.*, claims 101-18, 667-3, 667-15, 390-7, 898-28, 896-32.

Champion's Family 1 Patents have failed to describe or enable a selector switch that effectuates a selection. Instead, the specification of the patents discloses only a selector switch that enables a user to take a subsequent action that itself effectuates a

selection. Yet Champion appears to interpret the claimed selector switch to cover switches that themselves effectuates a selection. As a result, the specification of Champion's Family 1 Patents does not provide disclosure of, or teach one of ordinary skill in the art how to make and use, the following claim elements. Likewise, the specifications of the Patents in Suit do not provide an adequate written description of the following claim elements, and consequently, one of ordinary skill in the art would conclude that the inventors did not have possession of the claimed inventions as of the filing date.

- "Positioning of the selector switch. . . enables a selection of one of the first fuel flow and the second fuel flow." *See, e.g.*, claims 101-17, 667-10, 667-18, 896-21, 896-22.
- A "selector switch . . . to allow a user to manually select one of the first fuel flow and the second fuel flow." *See, e.g.*, claims 101-18, 667-1, 896-30.
- A "selector switch" that is "configured to enable a first fuel flow from a first fuel source" and "a second fuel flow from a second fuel source." *See, e.g.*, claim 390-1.

The '780, '654, '985, '970, '895, '398, '145, '034 and '120 patents ("Champion's Family 2 Patents") have failed to describe or enable a mechanical valve that controls the flow of fuel from two sources. Instead, the specifications of the patents disclose only a mechanical valve with one input and one output that controls a single flow of fuel from a single fuel source. As a result, the specification of Champion's Family 2 Patents does not provide disclosure of, or teach one of ordinary skill in the art how to make and use, the following claim elements. Likewise, the specifications of the Patents in Suit do not provide an adequate written description of the following claim elements, and consequently, one of ordinary skill in the art would conclude that the inventors did not have possession of the claimed inventions as of the filing date.

- A "mechanical fuel valve . . .to selectively control fuel flow . . . from a first fuel source . . . and a second fuel source." *See, e.g.*, 780-1, 780-8, 780-15, 895-1, 895-8.

- A "mechanical fuel valve . . . to selectively control fuel flow . . . from the liquid fuel source . . . and the pressurized fuel source." *See, e.g.*, claims 654-1, 654-6, 985-5, 985-15, 970-1, 970-12, 970-44, 895-14.

Champion's Family 2 Patents have failed to describe or enable, particularly within the applications filed as of the alleged priority date of these patents, a switch for changing operation of the engine. Instead, the specifications of the patents disclose a combination of a valve and a selectively accessible port that enable a user to manually reconfigure fuel supply connections. As a result, the specification of Champion's Family 2 Patents does not provide disclosure of, or teach one of ordinary skill in the art how to make and use, the following claim elements. Likewise, the specifications of the Patents in Suit do not provide an adequate written description of the following claim elements, and consequently, one of ordinary skill in the art would conclude that the inventors did not have possession of the claimed inventions as of the filing date.

- A "switch to change operation of the engine between gaseous fuel and liquid fuel." *See, e.g.*, claims 398-1, 398-57, 145-1.
- "wherein the switch is an electro-mechanical switch." *See, e.g.*, claims 398-5, 154-6.

Champion's Family 2 Patents have failed to describe or enable the construction of a fuel lockout apparatus that covers the accused products. Instead, the specifications of the patents disclose a combination of a valve and a selectively accessible port that enable a user to manually reconfigure fuel supply connections. Yet Champion appears to interpret the claimed lockout apparatus to include the knob of the asserted products. As a result, the specification of Champion's Family 2 Patents does not provide disclosure of, or teach one of ordinary skill in the art how to make and use, the following claim elements. Likewise, the specifications of the Patents in Suit do not provide an adequate written description of the following claim elements, and consequently, one of ordinary skill in the art would conclude that the inventors did not have possession of the claimed inventions as of the filing date.

- A "lockout apparatus." *See, e.g.*, claims 780-1, 780-2, 780-6, 780-7, 780-8, 780-9, 780-11, 780-13, 780-14, 780-15, 654-1, 654-2, 654-6, 654-7, 985-6, 970-4, 970-5, 970-26, 970-27, 970-51, 895-1, 895-2, 895-6, 895-8, 895-12, 895-14, 895-15.

Champion's Family 2 Patents have failed to describe or enable the construction of a fuel lockout apparatus that prevents coupling to covers items that have no impact on coupling. Yet Champion appears to interpret the claimed lockout apparatus to covers items that have no impact on coupling. As a result, the specification of Champion's Family 2 Patents does not provide disclosure of, or teach one of ordinary skill in the art how to make and use, the following claim elements. Likewise, the specifications of the Patents in Suit do not provide an adequate written description of the following claim elements, and consequently, one of ordinary skill in the art would conclude that the inventors did not have possession of the claimed inventions as of the filing date.

- A "fuel lockout apparatus" configured to "prevent the second fuel source from coupling to the second fuel line" or "permit the second fuel source to couple to the second fuel line." *See, e.g.*, claims 780-1, 780-8, 780-9.
- The "fuel lockout apparatus . . . prevents the pressurized fuel source from coupling to the dual fuel generator." *See, e.g.*, claim 654-1.
- A "fuel lockout apparatus . . . to prevent the pressurize fuel source from coupling to the gaseous fuel line . . . and permit the pressurized fuel source to couple to the gaseous fuel line." *See, e.g.*, claims 654-6, 985-6, 970-4, 970-26, 970-50, 895-14.
- A "fuel lockout apparatus" configured to "prevent the second fuel source from coupling to the second fuel line" and "permit the second fuel source to couple to the second fuel line." *See, e.g.*, claim 895-1.

Champion's Family 2 Patents have failed to describe or enable, particularly within the applications filed as of the alleged priority date of these patents, an electronic gaseous valve, such a solenoid. Instead, the specifications of the patents disclose a quick connect.

As a result, the specification of Champion's Family 2 Patents does not provide disclosure of, or teach one of ordinary skill in the art how to make and use, the following claim elements. Likewise, the specifications of the Patents in Suit do not provide an adequate written description of the following claim elements, and consequently, one of ordinary skill in the art would conclude that the inventors did not have possession of the claimed inventions as of the filing date.

- A "gaseous cutoff solenoid." *See, e.g.*, claim 034-2.
- "activating the gaseous cutoff simultaneously activates the liquid cutoff solenoid." *See, e.g.*, claim 034-6.
- "a gaseous fuel cutoff solenoid." *See, e.g.*, claims 034-14, 034-19.
- "a gaseous fuel valve coupled to control fuel flow through the gaseous fuel line and selectively engage engine operation on gaseous fuel." *See, e.g.*, claim 034-18.
- "an electro-mechanical valve system coupled to the engine and operated by an electrical switch . . . that controls fuel flow to the engine from the liquid fuel source and the pressurized fuel source." *See, e.g.*, claims 034-11, 120-13.

V. DOCUMENT PRODUCTION

Subject to the Federal Rules of Civil Procedure and the Case Management Order (Doc. 33), Firman identifies the following documents that support its these Contentions: FIRMAN_00004526-FIRMAN_00007773 and Firman's Amended Answer and Counterclaim (Doc. No. 61) and its accompanying exhibits and documents referenced by incorporation.

DATED this 30th day of August, 2024.

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CERTIFICATE OF SERVICE

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