

**United States Court of Appeals
for the Federal Circuit**

ARCTIC CAT INC.,
Appellant

v.

GEP POWER PRODUCTS, INC.,
Appellee

2018-1520, 2018-1521

Appeals from the United States Patent and Trademark Office, Patent Trial and Appeal Board in Nos. IPR2016-01385, IPR2016-01388.

Decided: March 26, 2019

JASON STEWART JACKSON, Kutak Rock LLP, Omaha, NE, argued for appellant. Also represented by NIAL ANDREW MACLEOD, Minneapolis, MN.

MICHAEL T. GRIGGS, Boyle Fredrickson, S.C., Milwaukee, WI, argued for appellee. Also represented by ERIC J. LALOR, SARAH M. WONG.

Before PROST, *Chief Judge*, REYNA and TARANTO, *Circuit Judges*.

TARANTO, *Circuit Judge*.

Arctic Cat Inc. owns U.S. Patent Nos. 7,072,188 and 7,420,822, which are both titled “Power Distribution Module for Personal Recreational Vehicle.” The patents describe an assertedly inventive electrical-connection box having an array of receptacle openings that allow wires to be arranged and secured in various positions for distributing power to various electrical components, including components of a personal recreational vehicle. GEP Power Products, Inc. petitioned the Patent Trial and Appeal Board for inter partes reviews of all claims of both patents. The Board determined that all claims of the ’188 and ’822 patents are unpatentable.

Arctic Cat appeals. It argues principally that the Board erred by (1) rejecting Arctic Cat’s submission of the full transcript of its inventor’s deposition, (2) construing various claim preambles as not stating limitations on the claimed inventions, and (3) finding U.S. Patent No. 6,850,421 (Boyd) to be prior art applicable against the ’188 and ’822 patents. We conclude that the Board did not abuse its discretion in rejecting the deposition-transcript submission; that the Board correctly held preamble references to a vehicle in the claims at issue not to be limiting; but that the Board improperly determined that Boyd was prior art. Based on those conclusions, as to the ’188 patent, we reverse in part, vacate in part, and remand for further proceedings. As to the ’822 patent, we affirm.

I

A

The ’822 patent issued from an application that was a continuation of the application from which the ’188 patent issued. The patents claim the same priority date of October 29, 2002, when the application for the ’188 patent was filed, and they have essentially the same specification. The specification describes a power distribution module, which

includes a housing and a cover. '188 patent, col. 1, lines 61–64; '822 patent, col. 2, lines 5–7. The interior of the housing includes a “component attachment portion,” which is a wall with an array of electric-receptacle openings meant for “receiving and securing electrical components.” '188 patent, col. 1, line 61 through col. 2, line 1; '822 patent, col. 2, lines 8–11. The module also includes a distribution harness with electrical conductors that connect electrical components to the receptacles and facilitate power distribution. '188 patent, col. 2, lines 1–6; '822 patent, col. 2, lines 12–16. The specification states that “[a]nother aspect of the present invention is directed to a personal recreational vehicle having an electrical distribution system” that includes the same power distribution module. '188 patent, col. 2, lines 7–9; '822 patent, col. 2, lines 17–19. The invention is purportedly useful because standardization of components across different vehicle models reduces manufacturing time and costs. *See* '188 patent, col. 1, lines 38–55; '822 patent, col. 1, lines 50–67.

In the '188 patent, claims 1, 11, and 19 are independent. Claim 1 reads:

1. A power distribution module for a personal recreational vehicle comprising:

a housing defining an interior, including a component attachment portion and a cover, the cover comprising a first surface substantially surrounding the perimeter thereof, the first surface conforming to a first edge surrounding the perimeter of the component attachment portion, the component attachment portion comprising a fastener secured thereto proximate the first edge thereof, the fastener selectively securing the component attachment portion to the cover having the first surface of the cover in engagement with the first edge of the component attachment portion, the housing further including a plurality of receptacle openings

in a wall in the component attachment portion, wherein the receptacle openings are spaced-apart in rows and columns of openings, the spacing between the rows and the spacing between the columns being substantially the same for receiving and securing at least one electrical component within the housing across multiple rows or across multiple columns of openings; and

a distribution harness having a plurality of electrical conductors, wherein the electrical conductors electrically cooperate with the receptacle openings to connect to the at least one electrical component, wherein the conductors are adapted to distribute power.

'188 patent, col. 7, lines 5–30. The preamble of claim 11 is the same as the preamble of claim 1: “[a] power distribution module for a personal recreational vehicle.” *Compare id.*, col. 7, lines 5–6, *with id.*, col. 7, lines 60–61. The preamble of claim 19 recites only a “power distribution module.” *Id.*, col. 8, line 53.

In the '822 patent, claims 1, 5, and 10 are independent. Claim 1 reads:

1. A personal recreational vehicle comprising:

an electrical distribution system for distributing electrical signals and power, the electrical distribution system including a power distribution module, wherein at least a portion of the electrical signals and power passes through the power distribution module, the power distribution module including:

a housing having a plurality of receptacle openings in a substantially flat wall, the wall having a front side and a back side, wherein the receptacle openings are positioned in an array of at least three equally spaced-apart rows and at least three

equally spaced-apart columns, the receptacle openings positioned to receive electrical components on the front side of the wall across any adjacent openings in at least one row of the array; and

a distribution harness on the backside of the wall opposite the receptacle openings, the distribution harness having a plurality of electrical conductor cables, wherein the electrical conductor cables electrically cooperate with the receptacle openings for receiving electrical components.

'822 patent, col. 7, lines 7–27. Claim 5's preamble recites an "electrical distribution module for a vehicle," *id.*, col. 7, line 41, and claim 10's preamble recites a "power distribution module," *id.*, col. 8, line 29. We do not set out those claims in full, as any differences from claim 1 are not material to the issues we decide.

B

In July 2016, GEP filed petitions for inter partes reviews of the '188 and '822 patents under 35 U.S.C. §§ 311–19, challenging all claims as unpatentable for anticipation or obviousness under 35 U.S.C. §§ 102 and 103.¹ For the '188 patent, the Board instituted a review on three grounds: (1) anticipation of claims 1–6, 11, 19, 22, and 23 by Boyd; (2) obviousness of claims 12–18 over Boyd, U.S. Patent No. 5,354,211 (Svette), and U.S. Patent No. 3,660,869 (Caveney); and (3) obviousness of claims 1–12 and 19–23 over Svette alone. For the '822 patent, the Board also instituted a review on three grounds: (1) anticipation of claims 1, 2, 5, 9, and 10 by Boyd; (2) obviousness of claims 3, 4, and 6–8 over Boyd and Svette; and (3)

¹ As the parties agree, this case is governed by the Title 35 provisions in effect before the changes made by the Leahy-Smith America Invents Act (AIA), Pub. L. No. 112-29, 125 Stat. 284 (2011), took effect.

obviousness of claims 1–10 over Svette and U.S. Patent No. 6,121,548 (Matsuoka).

After the Board instituted its reviews, Arctic Cat filed its Patent Owner Responses on April 3, 2017. In its responses, Arctic Cat relied on statements in a declaration by Mr. Darrel Janisch, an Arctic Cat employee and the sole inventor listed on the '188 and '822 patents. GEP cross-examined Mr. Janisch in a deposition on May 25, 2017. GEP filed its replies in the two proceedings on June 30, 2017, citing statements that Mr. Janisch made during his deposition. Rather than filing the full deposition transcript with its replies, GEP submitted only the portions it cited. Nearly three months later, on September 20, 2017, Arctic Cat submitted the full deposition transcript to the Board, without any request for permission. In orders dated the same day, the Board expunged that submission from the record. Citing 37 C.F.R. § 42.7(a), which permits the Board to expunge papers that are “not authorized,” the Board determined that Arctic Cat’s submission was “unauthorized and untimely.” J.A. 81. More specifically, it noted that Arctic Cat “did not seek authorization” to file the transcript, nor did Arctic Cat “explain[] why . . . the transcript could not have been filed earlier (for example, by the due date in the Scheduling Order for Motions for Observation).” *Id.*

The Board issued its final written decisions on December 5, 2017. *GEP Power Prods., Inc. v. Arctic Cat Inc.*, No. IPR2016-01385 (P.T.A.B. Dec. 5, 2017), Paper No. 27 ('188 Board Decision); *GEP Power Prods., Inc. v. Arctic Cat Inc.*, No. IPR2016-01388 (P.T.A.B. Dec. 5, 2017), Paper No. 31 ('822 Board Decision).

As an initial matter, the Board rejected part of Arctic Cat’s argument that certain language in the claim preambles is limiting, *i.e.*, defines the inventions to be assessed for patentability. Specifically, the Board concluded that the asserted claims in the '188 patent are not limited by

preamble language referring to a personal recreational vehicle and that the same is true of claims 1–4 of the '822 patent. *'188 Board Decision* at 9–12; *'822 Board Decision* at 9–12. With respect to those claims, the Board reasoned that “the claim bodies . . . describe structurally complete inventions” that do not include personal recreational vehicles and that the preambles “recite[] only an intended use for the otherwise complete claimed apparatus.” *'188 Board Decision* at 11; see *'822 Board Decision* at 9–12. The Board did not decide the limiting effect of preamble language in claims 5–10 of the '822 patent, deeming such a decision unnecessary because, for those claims, Arctic Cat did not rely on the preambles in opposing GEP’s unpatentability challenge, at least with respect to the ground relying on Svette and Matsuoka. *'822 Board Decision* at 10.²

Next, the Board addressed the prior-art status of Boyd, whose filing date of April 1, 2002, is about seven months before the October 2002 filing date of the '188 patent (to which the '822 patent claims priority). The Board concluded that Boyd is prior art to those patents under 35 U.S.C. § 102(e). The Board rejected Arctic Cat’s two arguments to the contrary.

First, the Board rejected Arctic Cat’s arguments that the '188 and '822 patents were entitled to a priority date before April 1, 2002, because Mr. Janisch conceived the inventions at issue before that date and diligently worked to

² In this court, Arctic Cat does not contend that the Board erred in not deciding the preamble issue for claims 5–10 of the '822 patent. Moreover, when challenging the Board’s determination of unpatentability of all the '822 patent’s claims based on Svette and Matsuoka, Arctic Cat relies on the preambles only for claims 1–4, not for the other challenged claims of the '822 patent. Br. for Appellant at 41, 51. For the '822 patent, therefore, we decide the limiting effect of the preambles only for claims 1–4.

reduce them to practice. *'188 Board Decision* at 15–22; *'822 Board Decision* at 14–22. The Board relied entirely on the diligence requirement in rejecting Arctic Cat’s argument for antedating Boyd; it did not question Mr. Janisch’s conception before April 2002.³ Arctic Cat offered a declaration from Mr. Janisch, including a timeline of important emails during the relevant months. But the Board determined that Mr. Janisch’s timeline lacked a “sufficiently detailed explanation of events occurring between the bookend communications.” *'188 Board Decision* at 18; *'822 Board Decision* at 17–18.

Second, the Board rejected Arctic Cat’s additional arguments against use of Boyd as prior art—namely, that the relevant, allegedly anticipatory portions of Boyd are not actually “by another,” as required by 35 U.S.C. § 102(e), even though the only named inventor on Boyd is Mr. Boyd himself, not Mr. Janisch. *'188 Board Decision* at 22–27; *'822 Board Decision* at 22–27. The Board noted that a lack of “overlap in inventive entities” does not *necessarily* mean that an earlier reference is “by another,” citing *In re Mathews*, 408 F.2d 1393 (C.C.P.A. 1969). But the Board determined that, on the evidence presented, it could not find that the relevant portions of Boyd were derived from the work of Mr. Janisch—whose employer, Arctic Cat, had hired Mr. Boyd’s employer to reduce Mr. Janisch’s conception to practice. *'188 Board Decision* at 23–25; *'822 Board Decision* at 23–25. Given its conclusions that Boyd is “by another” and that Arctic Cat did not successfully antedate Boyd, the Board determined that Boyd is prior art against the *'188* and *'822* patents. *'188 Board Decision* at 27; *'822 Board Decision* at 27.

³ GEP has not sought a remand on the conception issue if we disagree with the Board on diligence. We therefore take conception before April 2002 as settled.

Ultimately, the Board held all claims of the '188 and '822 patents unpatentable on all instituted grounds, relying on Boyd at least in part with respect to most, though not all, of the claims and grounds. '188 *Board Decision* at 39; '822 *Board Decision* at 38. Arctic Cat timely appealed the Board's decisions. We have jurisdiction under 28 U.S.C. § 1295(a)(4)(A).

II

Arctic Cat first challenges the Board's decision to expunge from the record the full transcript of Mr. Janisch's deposition that Arctic Cat submitted. We review such an evidentiary decision for an abuse of discretion. *See Belden Inc. v. Berk-Tek LLC*, 805 F.3d 1064, 1077–78 (Fed. Cir. 2015); *Chen v. Bouchard*, 347 F.3d 1299, 1307 (Fed. Cir. 2003). Although we do not reject Arctic Cat's main argument about the full transcript, we find no abuse by the Board in this case.

Arctic Cat's main point relies on a regulation that addresses numerous aspects of the taking and use of deposition testimony, namely, 37 C.F.R. § 42.53. The regulation declares that such testimony must be submitted "in the form of a deposition transcript," § 42.53(a), and in subsection (f) specifies certain procedures, "[w]hen the testimony has been transcribed," for dealing with the "transcript of the deposition," § 42.53(f)(5). Paragraph (7) of subsection (f) declares:

Except where the parties agree otherwise, the proponent of the testimony must arrange for providing a copy of the transcript to all other parties. *The testimony must be filed as an exhibit.*

§ 42.53(f)(7) (emphasis added).

Arctic Cat contends that the best reading of the quoted regulatory language is that, when a party submits some testimony from a deposition, that party (the proponent) must submit the transcript of the entire deposition, or that,

in any event, the adversary party may submit the entire transcript if the proponent of the testimony does not. At least one Board panel in another inter partes review concluded that the proponent of any deposition testimony is indeed obliged to file the full transcript. See *Zhongshan Broad Ocean Motor Co. v. Nidec Motor Corp.*, No. IPR2014-01121 (P.T.A.B. Sept. 10, 2015), Paper No. 42, at 2.⁴ If Arctic Cat’s reading of the regulation is right, the regulation may well provide the authorization that the Board found missing when it invoked its discretion under 37 C.F.R. § 42.7(a) to expunge material “that is not authorized.”

But we need not decide whether Arctic Cat’s reading is correct. Even if the regulation provides for submission of a full transcript in the way Arctic Cat argues, the regulation does not say that the submission at issue here—made by Arctic Cat after GEP submitted excerpts as a proponent of deposition testimony given by Mr. Janisch—may be made at any time. Arctic Cat sensibly agrees that the Board has discretion to decide when a filing is too late. Oral Arg. at 10:21–38, <http://oralarguments.cafc.uscourts.gov/default.aspx?fl=2016-1374.mp3>. The Board concluded that Arctic Cat did not “explain[] why . . . the transcript could not have been filed earlier (for example, by the due date in the Scheduling Order for Motions for Observation).” J.A. 81. Given the strong statute-based interest in expedition in inter partes reviews, we see no basis for deeming the Board’s expungement decision in this case to be an abuse of discretion.

⁴ Until May 2015, the second sentence of § 42.53(f)(7) stated that the testimony “must be filed by the proponent” of the testimony. The Director deleted “by the proponent” in order “[t]o clarify that either party is permitted to file testimony as an exhibit.” 80 Fed. Reg. 28,561, 28,563 (May 19, 2015). The Board rendered its decision in *Zhongshan* after that change took effect.

III

Arctic Cat next challenges the Board's determination that certain preamble language in certain claims of the '188 and '822 patents is not limiting. Before the Board, the only aspect of the preamble language that Arctic Cat meaningfully argued to be limiting is language referring to a "personal recreational vehicle"; Arctic Cat did not argue that the label "power distribution module" in the preambles is limiting. The Board therefore confined its preamble analysis to the contention about the "personal recreational vehicle" language. So do we.

We look to case law from our court and its predecessor. The effect of preamble language is not addressed in the statute, which does not mention preambles. Only one regulation promulgated by the Patent and Trademark Office addresses preambles, 37 C.F.R. § 1.75(e); as discussed *infra*, that regulation is of relevance here. Supreme Court cases that mention "preambles" in patent claims are few and do not provide general guidance on their effect. See *Consolidated Rolling Mill Co. v. Barnard & Leas Mfg. Co.*, 156 U.S. 261, 268 (1895) (noting that applicant amended preamble during prosecution); *Burr v. Duryee*, 68 U.S. (1 Wall.) 531 (1863).

As an overarching idea, we have said that "[i]n general, a preamble limits the invention if it recites essential structure or steps, or if it is 'necessary to give life, meaning, and vitality' to the claim." *Catalina Mktg. Int'l, Inc. v. Coolsavings.com, Inc.*, 289 F.3d 801, 808 (Fed. Cir. 2002) (quoting *Pitney Bowes, Inc. v. Hewlett-Packard Co.*, 182 F.3d 1298, 1305 (Fed. Cir. 1999)). We also have said that "[w]hether to treat a preamble as a limitation is 'determined on the facts of each case in light of the overall form of the claim, and the invention as described in the specification and illuminated in the prosecution history.'" *Deere & Co. v. Bush Hog, LLC*, 703 F.3d 1349, 1357 (Fed. Cir. 2012) (quoting *Applied Materials, Inc. v. Advanced Semiconductor*

Materials America, Inc., 98 F.3d 1563, 1572–73 (Fed. Cir. 1996)). And “[t]his court has recognized that as a general rule preamble language is not treated as limiting.” *Aspex Eyewear, Inc. v. Marchon Eyewear, Inc.*, 672 F.3d 1335, 1347 (Fed. Cir. 2012) (citing *Allen Eng’g Corp. v. Bartell Indus., Inc.*, 299 F.3d 1336, 1346 (Fed. Cir. 2002)).

Those general formulations have for decades been implemented through a number of more concrete and objective rules. *Catalina*, 289 F.3d at 808–09; see *Summit 6, LLC v. Samsung Electronics Co.*, 802 F.3d 1283, 1292 (Fed. Cir. 2015); *Deere*, 703 F.3d at 1358; *Rowe v. Dror*, 112 F.3d 473, 478 (Fed. Cir. 1997). Those rules have a long history, and have thus shaped drafting practices, so they play a role akin to that of canons of construction in statutory interpretation. They channel the work of identifying the “understanding of what the inventors actually invented and intended to encompass by the claim.” *Corning Glass Works v. Sumitomo Elec. U.S.A., Inc.*, 868 F.2d 1251, 1257 (Fed. Cir. 1989).

We have treated the effect of preamble language as a claim-construction issue. See *Deere*, 703 F.3d at 1357. We decide claim construction de novo as an issue of law where, as here, the issue is decided only on the intrinsic evidence. *Teva Pharm. USA, Inc. v. Sandoz, Inc.*, 135 S. Ct. 831, 837–38, 841 (2015); *Hamilton Beach Brands, Inc. v. f’real Foods, LLC*, 908 F.3d 1328, 1339 (Fed. Cir. 2018). In this case, it makes no difference to our conclusion whether the standard from *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc), or a “broadest reasonable interpretation” standard applies to this threshold issue of claim construction.

A

The preambles in claims 1 and 11 of the ’188 patent recite “[a] power distribution module for a personal recreational vehicle.” The Board determined that those preambles are not limiting because the bodies of claims 1 and 11

“describe structurally complete inventions” and the preambles refer to a personal recreational vehicle only as an intended use. *'188 Board Decision* at 11. We agree.

We have long ruled that “a preamble is not limiting ‘where a patentee defines a structurally complete invention in the claim body and uses the preamble only to state a purpose or intended use for the invention.’” *Catalina*, 289 F.3d at 808 (quoting *Rowe*, 112 F.3d at 478); see *Georgetown Rail Equip. Co. v. Holland L.P.*, 867 F.3d 1229, 1236–37 (Fed. Cir. 2017); *Deere*, 703 F.3d at 1358. That rule is grounded in the statutory distinction, in identifying the permissible subject matter of a patent claim, between a physical product (which may be defined in part by its claimed functional capabilities) and activities that constitute a process (which may include a new “use” of a known invention). See 35 U.S.C. § 101 (“process” versus “machine, manufacture, or composition of matter”); 35 U.S.C. § 100(b) (defining “process”); *MasterMine Software, Inc. v. Microsoft Corp.*, 874 F.3d 1307, 1312–16 (Fed. Cir. 2017) (explaining impermissibility of mixing products with processes in claims). In particular, the rule against giving invention-defining effect to intended-use preamble language reflects a longstanding substantive aspect of the patent statute—specifically, the “well settled” fundamental principle “that the recitation of a new intended use for an old product does not make a claim to that old product patentable.” *In re Schreiber*, 128 F.3d 1473, 1477 (Fed. Cir. 1997); see *In re Zierden*, 411 F.2d 1325, 1328–29 (C.C.P.A. 1969); *In re Sinex*, 309 F.2d 488, 492 (C.C.P.A. 1962); *Kropa v. Robie*, 187 F.2d 150, 152 (C.C.P.A. 1951); see also *Catalina*, 289 F.3d at 809 (discussing *Roberts v. Ryer*, 91 U.S. 150, 157 (1875), and *In re Gardiner*, 171 F.2d 313, 315–16 (C.C.P.A. 1948))

In its discussion of claims 1 and 11, the Board correctly noted the following:

[T]hose claims recite limitations including . . . a housing with a component attachment portion and a cover, a plurality of receptacles in the component attachment portion, and a distribution harness having a plurality of electrical conductors that electrically cooperate with the receptacles to connect to at least one electrical component. The bodies of those claims do not recite a personal recreational vehicle.

'188 *Board Decision* at 11. Moreover, in the preambles, the reference to a “personal recreational vehicle” merely identifies an intended use for the claimed power distribution module. This preamble language does not claim the vehicle; it claims only the module (the name for what is defined in the bodies of the claims) and identifies a use for that module—in a personal recreational vehicle. Arctic Cat has not demonstrated that the identified use itself imposes any structural requirement on the claimed module beyond what is required by the bodies of the claims. Nor has it shown any “reliance on the preamble during prosecution to distinguish the claimed invention from the prior art.” *Catalina*, 289 F.3d at 808.

For these preambles, therefore, the result is controlled by the principle that “a preamble is not limiting ‘where a patentee defines a structurally complete invention in the claim body and uses the preamble only to state a purpose or intended use for the invention.’” *Id.* (quoting *Rowe*, 112 F.3d at 478). As in *Catalina*, “deletion of the disputed phrase from the preamble . . . [would] not affect the structural definition or operation of the [invention] itself.” *Id.* at 810. We hold that the preambles in claims 1 and 11 of the '188 patent do not limit claims 1–18 in that patent.

B

For the '822 patent, as we have noted, a preamble issue is presented only by claim 1 (and dependent claims 2–4). The preamble of claim 1 recites “[a] personal recreational

vehicle.” The Board determined that this preamble is non-limiting, essentially for the same reasons as for claims 1 and 11 of the ’188 patent. *Compare ’822 Board Decision* at 9–12, *with ’188 Board Decision* at 9–12. We agree.

This claim language does recite “additional structure” (the personal recreational vehicle) over and above the structure recited in the body of the claims (the power distribution module). But not every preamble reference to additional structure is limiting, even when the structure is noted in the specification—even, indeed, when the structure is “underscored as important by the specification.” *See Catalina*, 289 F.3d at 808 (“[W]hen reciting additional structure or steps underscored as important by the specification, the preamble *may* operate as a claim limitation.” (emphasis added)). For the claims at issue here, we conclude, the reference to the personal recreational vehicle does not suffice to be part of the definition of the invention, understood in light of the specification.

The rules we have articulated about what preamble language reciting structure *is* limiting are telling about what is missing here. The vehicle language here does not supply “antecedent basis” for terms in the body defining a module; nor does it supply structure needed to make the body itself a “structurally complete invention.” *Id.* Rather, it merely adds structure of which the body-recited module is a part.⁵ And Arctic Cat does not argue that the preamble language at issue was relied on during prosecution to distinguish prior art so as to make it part of the invention as

⁵ Claim 5 of the ’822 patent refers in the body to “the conductor cables extending from the housing to route power signals throughout the vehicle.” We do not address that reference to “the vehicle,” because we do not have a preamble issue as to claim 5 before us.

understood upon issuance. *See id.* (noting rule giving limiting effect to such preamble language).

Moreover, the structure recited in the preamble is identified only as a “personal recreational vehicle,” and what the specification says about it is distinctly limited. The Summary of the Invention in the specification, after stating that “[o]ne aspect of the present invention” is the module, ’188 patent, col. 1, lines 60–61; ’822 patent, col. 2, lines 3–5, does go on to state that “[a]nother aspect of the present invention is directed to a personal recreational vehicle” having claimed features regarding electrical distribution, ’188 patent, col. 2, lines 7–8; ’822 patent, col. 2, lines 17–18. And Figure 1 shows a vehicle, not just the module. But the “aspect” statement is conclusory, and the figure is skeletal. What is missing in the specification is any identification of a feature of the vehicle that is asserted to be an improvement other than the “power distribution module” as described in the various claims. The vehicle in the preamble is entirely conventional apart from the improvement in the body of the claims. In this respect, the preamble here differs crucially from those in cases such as *Proveris Scientific Corp. v. Innovasystems, Inc.*, 739 F.3d 1367, 1373 (Fed. Cir. 2014); *Deere*, 703 F.3d at 1358; and *Poly-Am., L.P. v. GSE Lining Tech., Inc.*, 383 F.3d 1303, 1310 (Fed. Cir. 2004).

The relation between the preamble and body here makes the claim language here almost fit—but not actually fit—a pattern addressed in longstanding case law about claims in *Jepson* form. We have long held that preamble language is limiting when the claim recites a combination in the way specified in the one PTO regulation on preambles, *i.e.*, by describing the “conventional or known” elements in a “preamble,” followed by a transition phrase “such as ‘wherein the improvement comprises,’” and then an identification of elements that “the applicant considers as the new or improved portion.” 37 C.F.R. § 1.75(e) (based on *Ex parte Jepson*, 243 Off. Gaz. Pat. Office 525 (Ass’t

Comm’r Pat. 1917)); *see Catalina*, 289 F.3d at 808; *Rowe*, 112 F.3d at 479 (“When this form is employed, the claim preamble defines not only the context of the claimed invention, but also its scope.”); *Pentec, Inc. v. Graphic Controls Corp.*, 776 F.2d 309, 315 (Fed. Cir. 1985) (same). But the claim language chosen by Arctic Cat crucially differs from *Jepson* language and so does not fall under the case law for *Jepson* language: it does *not* use the required transitional phrase. Where an applicant chose *not* to use the well-established *Jepson* transitional phrase, and the preamble is wholly conventional while only the body of the claim identifies an improvement, that choice is a powerful reason to deny the preamble the limiting effect it would have had if the “improvement” transitional phrase had been used.

For those reasons, we hold that the preamble of claim 1 of the ’822 patent does not limit claims 1–4 of that patent.

IV

Arctic Cat argues that the Board incorrectly ruled that Boyd, having a filing date (and hence relevant priority date) of April 1, 2002, is prior art for purposes of the two patents at issue here, which on their faces claim priority only to October 29, 2002. We agree with Arctic Cat.

It is undisputed that, for Boyd to be prior art, it must come within 35 U.S.C. § 102(e)(2), which declares that an inventor is not entitled to a patent on an invention if “the invention was described in . . . a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent,” subject to an exception not relevant in this case. Arctic Cat argued to the Board that, even though Boyd’s application was filed before the application for the ’188 patent (and the later application for the ’822 patent), § 102(e)(2) does not apply to Boyd for two reasons. First, Arctic Cat argued that Mr. Janisch invented the subject matter of the claims at issue before April 1, 2002, so that the Boyd application came after, not “before,” the “invention by the applicant” (Mr.

Janisch). Second, Arctic Cat argued that the disclosures in Boyd relevant to the patentability of the claims at issue are not actually “by another” (*i.e.*, someone different from Mr. Janisch), because those disclosures set forth inventions of Mr. Janisch, not Mr. Boyd. Either one of those arguments, if accepted, would eliminate Boyd as prior art in this matter. The Board rejected both.

Arctic Cat challenges the Board’s conclusions on both the antedating and “by another” issues. We agree with Arctic Cat that the Board erred in its rejection of Arctic Cat’s proof that Mr. Janisch’s inventions antedate April 1, 2002. We therefore do not reach the “by another” issue.

Antedating of Boyd in this case required that Mr. Janisch have (1) conceived of the inventions at issue before April 1, 2002, and (2) diligently reduced the conceptions to practice. *See Perfect Surgical Techniques, Inc. v. Olympus America, Inc.*, 841 F.3d 1004, 1007 (Fed. Cir. 2016). The parties treat the inventions of the claims at issue as a single invention for these purposes. In addition, they do not dispute that Mr. Janisch’s conception pre-dated April 1, 2002, or that he was diligent up to April 1, 2002. The only issue, therefore, is Mr. Janisch’s diligence in reducing the invention to practice from April 1, 2002, until the reduction to practice was completed on October 29, 2002, with the filing of the application that issued as the ’188 patent.

“Reasonable diligence must be shown throughout the entire critical period, which begins just prior to the competing reference’s effective date and ends on the date of the invention’s reduction to practice.” *Id.* An inventor’s testimony of reasonable diligence throughout the critical period “must be corroborated by evidence.” *Id.* We apply a “rule of reason” to evaluate such corroborating evidence. *Id.* at 1008.

Crucially for this case, diligence need not be perfectly continuous—only *reasonably* continuous. *Id.* at 1009. “[P]eriods of inactivity within the critical period do not

automatically vanquish a patent owner's claim of reasonable diligence." *Id.* "[T]he point of the diligence analysis is not to scour the patent owner's corroborating evidence in search of intervals of time where the patent owner has failed to substantiate some sort of activity." *Id.* Rather, the adequacy of the reduction to practice is determined by whether, "in light of the evidence as a whole, 'the invention was not abandoned or unreasonably delayed.'" *Id.* (quoting *Brown v. Barbacid*, 436 F.3d 1376, 1379 (Fed. Cir. 2006)). "Whether a patent antedates a reference is a question of law based on subsidiary findings of fact," and "[t]he issue of reasonable diligence 'turns on the factual record, and we review Board determinations as to diligence for support by substantial evidence in the record.'" *Id.* at 1008 (quoting *In re Steed*, 802 F.3d 1311, 1317 (Fed. Cir. 2015)).

We conclude that the records in the two proceedings before us (which are materially identical) establish that Mr. Janisch was reasonably diligent during the critical period so as not to have abandoned his invention or unreasonably delayed its reduction to practice. The Board concluded that the evidence did not establish diligence throughout the period from April 1, 2002, to October 29, 2002. '188 *Board Decision* at 22.⁶ But the Board's analysis rested on too rigid a standard, and the record establishes diligence under the correct standard.

Mr. Janisch submitted a declaration that included a 2002 timeline with citations to exhibits to demonstrate his efforts to reduce his invention to practice. J.A. 1584–86. The Board took issue with some of the date ranges in that timeline, particularly from April 1 to April 29 and from August 16 to October 18. '188 *Board Decision* at 18–19. Although the Board said that it was not "scour[ing] the record for gaps in activity," it criticized Mr. Janisch for not

⁶ We cite only the '188 *Board Decision*. The '822 *Board Decision* is materially identical on the issue.

“account[ing] for” approximately half of the days during the critical period. *Id.* at 19–20. It also faulted Mr. Janisch for providing “conclusory explanations, which lack specifics as to facts and dates.” *Id.* at 21.

But in the context of this case, the details the Board found missing from Mr. Janisch’s explanation do not suggest lack of reasonable diligence. During the identified gaps in Mr. Janisch’s personal activity, the invention was being tested at Mr. Boyd’s employer, Tyco, hired by Arctic Cat for that purpose. *See id.* at 20. Lack of diligence cannot be inferred from putting the invention into someone else’s hands for needed testing and awaiting test results for a short period commensurate with the testing need, at least where oversight was diligent. That course of action, as a way of reducing an invention to practice, does not give rise to an inference of unreasonable delay or abandonment of the invention. *See Perfect Surgical*, 841 F.3d at 1009 (“That an inventor overseeing a study did not record its progress on a daily, weekly, or *even monthly* basis does not mean the inventor necessarily abandoned his invention or unreasonably delayed it.” (emphasis added)).

Here, the evidence confirms Mr. Janisch’s diligent oversight—indeed, his persistence in moving the project of reduction to practice through multiple stages in a timely manner. The product specifications and test protocols went through five revisions in only five months. *Compare* J.A. 1621 (revision 3 on March 15, 2002), *with* J.A. 1632 (revision 8 on August 16, 2002). Mr. Janisch pressed for progress. In an internal email dated May 17, 2002, Mr. Janisch asked with apparent urgency about getting supplies needed for testing: “*How soon* can we expect to receive the . . . decals?” J.A. 1625 (emphasis added). In another email, dated August 16, 2002, Mr. Janisch directed Tyco: “Please keep us apprised of Tyco test results, *as they are completed.*” J.A. 1632 (emphasis added). There is no substantial evidence of any meaningful inattention to the task of reducing the invention to practice. Reviewing all the

evidence under a rule of reason, we conclude that the only possible result on this record is that Mr. Janisch was reasonably diligent in reducing his invention to practice.

There being no dispute about conception before April 2002, we hold that Mr. Janisch's invention antedated Boyd. It follows that Boyd is not available as prior art against the '188 and '822 patents. In light of that holding, we do not reach the issue of whether Boyd is "by another" under § 102(e).

V

Our resolution of the above issues has the following consequences for the Board's unpatentability rulings.

For the '188 patent, the Board determined that claims 1–6, 11, 19, 22, and 23 are unpatentable as anticipated by Boyd. The Board also determined that claims 12–18 are unpatentable for obviousness over Boyd, Svette, and Caveney. Those two instituted grounds, as presented by GEP to the Board, depend on Boyd being prior art. Because we hold that Boyd is not prior art, we reverse the Board's unpatentability rulings on the first and second instituted grounds.

The Board addressed a third instituted ground, ruling that claims 1–12 and 19–23 are unpatentable for obviousness over Svette alone. In so ruling, however, the Board relied on Boyd as evidence of background knowledge that a relevant artisan would have used to properly read Svette. *'188 Board Decision* at 35 (citing *Randall Mfg. v. Rea*, 733 F.3d 1355, 1362 (Fed. Cir. 2013)). We hold that Boyd is not prior art. We think it advisable to permit the Board to determine in the first instance whether removal of Boyd from the pool of prior art affects the proper outcome on the Svette-only ground. We vacate the Board's decision on the third instituted ground and remand for further proceedings, to be conducted without treating Boyd as prior art.

For the '822 patent, the Board determined, among other things, that all the claims, namely, claims 1–10, are unpatentable for obviousness over Svette and Matsuoka. That ruling is not undermined by our holding that Boyd is not prior art. Nor are we persuaded that the Board committed any other error undermining its unpatentability determination as to those claims based on Svette and Matsuoka. Contrary to Arctic Cat's contentions, we do not think that the Board shifted the burden of proving unpatentability to Arctic Cat or that the Board erred in finding what Matsuoka teaches. As to the '822 patent, we therefore affirm the Board's decision.

VI

We have considered the remaining arguments presented to us, but we find them unpersuasive. Accordingly, the Board's decision on the '188 patent is reversed in part and vacated in part, and the matter is remanded for further proceedings consistent with this opinion. The Board's decision on the '822 patent is affirmed.

No costs.

**REVERSED IN PART, VACATED IN PART, AND
REMANDED IN APPEAL NO. 2018-1520
AFFIRMED IN APPEAL NO. 2018-1521**