

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Kubota North America Corporation,
Petitioner

v.

Vermeer Manufacturing Company,
Patent Owner

IPR2025-00168 (U.S. Patent No. 9,321,386)

PETITIONER'S REPLY

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Vermeer (“PO”) touts that they invented and patented a vertical-lift compact utility loader (CUL) and devotes large portions of their Response (Paper 22/23) (“POR”) to discussing their commercial vertical-lift CULs success relative to conventional radial-lift CULs. However, it is undisputed that PO was not first to invent a vertical-lift CUL—KR996 is a prior art patent that clearly illustrates and describes just such a CUL. The POR now argues for patentability based on commonplace features—such as engine brackets, tracks instead of wheels, or a mainframe that includes welds—that KR996 does not expressly describe. Yet, as demonstrated in the Petition (Paper 3), each of these features was well known in the art and represents an obvious design choice that would bring predictable benefits to KR996’s CUL.

I. SUMMARY OF ARGUMENTS PRESENTED IN THIS REPLY

POR repeats several arguments that are factually and legally flawed. These are addressed in summary below, and in detail in the following sections.

A. PO’s bodily incorporation and teaching away arguments are neither legally correct nor factually supported.

PO’s arguments improperly rely on “bodily incorporation,” assuming that the prior art components must be combined exactly as depicted in not-to-scale patent

figures, without any engineering modifications. This approach is wrong, as established by Federal Circuit precedent including *Allied Erecting & Dismantling Co. v. Genesis Attachments, LLC*, 825 F.3d 1373, 1381 (Fed. Cir. 2016), which is particularly on-point to this proceeding. *Allied* confirms the test is whether a skilled artisan would have been motivated to combine their teachings to achieve the claimed invention. *Id.* (citing *Pfizer, Inc. v. Apotex, Inc.*, 480 F.3d 1348, 1361 (Fed. Cir. 2007)). It is well established that “[t]he test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference[.]” *Allied*, 1381 (quoting *In re Keller*, 642 F.2d 413, 425 (C.C.P.A. 1981)). But this is what PO did. Their expert copied figures from KR996 to form a CAD model. EX1043, 83-84 (Dr. Fleming describing “one of [his] engineers” “sketch[ing] over” patent images to create an “overlay”). These CAD drawings are fundamentally flawed as they are merely overlays of KR996’s figures, which are not indicated to be drawn to scale. POR and Dr. Fleming compound their errors by overlaying a reproduced portion of Bares’ figure onto their generated CAD drawing, without contemplating any engineering judgement or even common sense.

Dr. Fleming admitted that in doing so he was employing bodily incorporation.¹ PO's bodily incorporation-based arguments are legally unsound, and the Board should reject them.

B. There is no genuine dispute that Petitioner's expert Dr. Velinsky, PE is fully qualified.

PO spends an inordinate amount of time attacking and denigrating the technical capabilities of Petitioner's expert, Dr. Velinsky. But there should be no serious dispute that Dr. Velinsky is fully qualified for this role. In short, Dr. Velinsky has a PhD in mechanical engineering and was a professor of mechanical engineering at UC Davis, where among other things, his area of expertise was vehicle design and mechanics, along with machinery. EX1003, ¶¶8-14; EX1036. He also served as the Director of the Advanced Highway Maintenance & Construction Technology Research Center ("Research Center") from 1991-2016. *Id.* (priority date of the '386 patent is 2015). While there, Dr. Velinsky worked on the design and fabrication of highway maintenance and construction machines (skid steers) developed to address a "wide variety of highway tasks including...collection of roadway debris, landscape

¹ EX1043, 97-98 (discussing taking "exact figure...onto exact figure"). EX1043, citations to original page numbers.

maintenance, graffiti removal and plowing of snow, and involve the use of mechanisms to allow the tasks to be performed.” *Id.*

Importantly, PO admits that skid steers with vertical-lift were well-known in the art prior to their patent but still argues that providing vertical-lift to a compact utility loader (CUL) or mini skid steer was new and non-obvious. POR, 11. While Petitioner disputes that POSITA would need to have specialized first-hand expertise in compact utility loaders (CUL)—other than the analysis and design of mechanical systems, which is also an area of expertise of Dr. Velinsky—Dr. Velinsky has personally designed a CUL/mini skid steer before the priority date and is qualified to opine on them, even under this arbitrary standard set by PO. EX2021, 10.

Indeed, it is PO's expert, Dr. Fleming, who has never designed a CUL. EX1043, 24 (Fleming indicating no “design development work specifically for mini skid steer. The ones I worked on were a full-size skid steer with a cab”). And Dr. Fleming had no experience with CULs prior to the '386 patent's priority date in 2015. EX1043, 25 (indicating first experience “with the Vermeer [v.] the Toro PGR issue...sometime around 2020”). So, Petitioner's expert Dr. Velinsky is the only true expert of CULs—according to PO's own unsupported requirements—at the priority date of the patent.

II. CLAIM CONSTRUCTION OF MAINFRAME

Prior to the institution decision (Paper 16, “ID”), the Board requested, and the parties provided, briefing on the meaning of the claim term “mainframe.” PO argued that the mainframe must be “always present and not selectively removable.” Paper 12, 1. The Board rejected PO’s proposal instead construing the term as a “primary supporting structure,” and in so doing, found KR996’s compact utility loader (CUL) frame, which includes both a body 11 and a selectively removable fixture 41, is a “mainframe.” ID, 20, 33. That is, when the KR996 machine is a CUL and operating with a loader unit, it has a primary supporting structure of the combined body and fixture. Both parties agree on the Board’s construction, but PO now recycles their previously rejected construction by arguing that any frame portion that is selectively removable is a “secondary” structure, and thus not “part of primary supporting structure.” *See* POR, 41. However, and as will be described below, the Board not only correctly construed this term, but also correctly applied this construction in its institution decision and PO’s argument should again be rejected.

A. A “mainframe” can be made of separable components.

The term *mainframe* (“main frame”) is used often in the prior art. The POR identifies two prior art patents with a single, un-separable, component labeled “main frame” or “main frame assembly.” *See* EX2017, EX2018. Other prior art patents use

the term to describe multi-component assemblies, with many of such components being readily separable or removable.² In another example, a 2005 service manual for a Bobcat skid steer identifies a “MAIN FRAME” that includes many components such as an instrument panel, a fuel tank, a hood, and a lift arm, all of which are identified as removable.

² EX1047, 5:50-55 (“main frame 24” includes uprights 56 and boom assembly 32 along with various other “structural elements”), FIG. 2; EX1048, FIG. 1, 1:23-25, 13:24-45 (“main frame 205” for “compact track loader” including members 213/216 “attached and fixed by bolts”); EX1049 (“main frame assembly 10” including modular assembly at by “connect[ing]” “at the same or a different location”); EX1050, 6:40-50 (“loader main frame” including, *inter alia*, “transmission case 70”); EX1006 (FIG. 1, main frame 1 including attachment members 11).

This example manual illustrates “main frame” to include separately removable components

		MAIN FRAME
BOB-TACH	50-10-1	
Installation	50-10-2	
Lever And Wedge Removal	50-10-3	
Removal	50-10-1	
Seal Removal And Installation	50-10-3	
BOTTOM ACCESS PANEL	50-90-1	
Removal and Installation	50-90-1	
INSTRUMENT PANEL	50-50-1	
Removal and Installation	50-50-1	
FUEL TANK	50-40-1	
Removal And Installation	50-40-1	
GRAB BAR	50-60-1	
Removal and Installation	50-60-1	
HOOD	50-70-1	
Disassembly And Assembly	50-70-1	
Hood Latch Removal	50-70-2	
Removal and Installation	50-70-1	
LIFT ARM	50-20-1	
Removal And Installation	50-20-1	
REVERSE STOP PANEL	50-80-1	
Description	50-80-1	
Inspecting Function	50-80-1	
Removal And Installation	50-80-1	
Reverse Stop Mechanism Removal And Installation	50-80-2	
RIDE-ON PLATFORM	50-100-1	
Caster Removal and Installation	50-100-2	
Removal and Installation	50-100-1	
Tire Removal and Installation	50-100-1	
TAILGATE	50-30-1	
Rear Door Panel Removal And Installation	50-30-1	
Removal And Installation	50-30-1	
Tailgate Bumper Adjustment	50-30-3	
Tailgate Striker Adjustment	50-30-2	
Tailgate Striker Removal And Installation	50-30-2	
TIGHTEN ALL HARDWARE PER SIZE TO GRADE 5 TORQUE (See TORQUE SPECIFICATIONS FOR BOLTS on Page SPEC-30-1.) UNLESS OTHERWISE SPECIFIED.		
217 of 388	50-01	MT52 Bobcat Mini Track Loader Service Manual

Dealer Copy – Not for Resale

EX1051, 217. All of this is consistent with the phrase “primary supporting structure”, which does not require the absence of selectively removeable components, but rather that the structure be “of first rank, importance, or value.” EX1052, 4 (dictionary definition of “primary”).

B. KR996’s CUL mainframe includes fixture 41 of its loader unit.

The machine at issue is KR996’s *compact tool carrier* (also referred to as compact utility loader (CUL) or mini skid steer), which includes vehicle 10 and

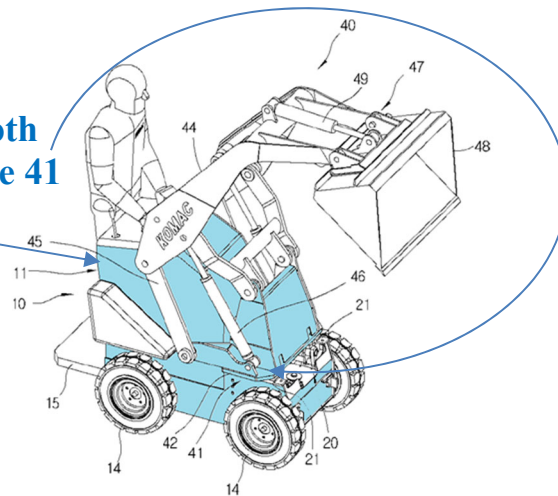
loader unit 40.³ Both vehicle 10 and loader unit 40 include frame portions—the vehicle has body 11 and the loader unit has fixture 41. Thus, the primary supporting structure or *mainframe* of the KR996 CUL is the combination of body 11 and fixture 41. *See, e.g.*, EX1005, Fig. 9. Dr. Velinsky confirms that both the body 11 and the fixture 41 are critical and important to providing a primary support structure for the CUL. EX1042, ¶2. Dr. Fleming also agrees that the fixture 41 is one “critical” component supporting a “load” when “operating as a loader”. EX1043, 105-106.

PO incorrectly argues that only body 11 is the primary support structure. This is incorrect for multiple reasons. For one, body 11 would be the primary support structure for KR996's vehicle 10 operating alone, not as a loader. In contrast,

³ Each claim recites that the mainframe is *for supporting the loader*. *See, e.g.*, element [31.2a], the loader meaning the moveable arm(s). The appropriate starting point is always with the language of the asserted claim itself. *See Comark Commc'ns, Inc. v. Harris Corp.*, 156 F.3d 1182, 1186 (Fed. Cir. 1998). “[T]he context of the surrounding words of the claim also must be considered in determining the ordinary and customary meaning of those terms.” *Phillips v. AWH Corp.*, 415 F.3d 1303, 1314 (quoting *ACTV, Inc. v. Walt Disney Co.*, 346 F.3d 1082, 1088 (Fed. Cir. 2003)).

KR996's CUL includes both vehicle 10 and loader unit 40, and the *primary support structure* for it would include body 11 and fixture 41 that are necessary to support the loader arm. *See* Petition, 33-34; EX1003, ¶¶73-75 (mainframe includes “body 11...as well as other portions” of KR996 “that support the loader,” which “when in operation the mainframe of the vehicle is in one piece providing support for the loader” and identifying bracket); EX2021, 69-70 (agreeing Board's construction does not change original opinion); EX1042, ¶¶2-4.

For the KR996 CUL, the mainframe must include both the body 11 and the fixture 41



EX1042, KR996's CUL of Fig. 9.

Whether the assembly of body 11 and fixture 41 can be done by an operator near a job site does not negate the fact that when assembled, the vehicle body 11 and the loader unit fixture 41 together form the primary supporting structure of the CUL

and are for ***supporting the loader***. Further, the loader unit 40 including the fixture 41 is *not* removable during loader operations.

Thus, the Board's ID construction of "primary supporting structure" is correct and includes the combination of the body 11 and the fixture 41 which supports the loader of KR996 by attachment of its linkages/actuator.

III. GROUND 1—KR996+JP705

A. Petition supports combining JP705's engine bracket teachings.

The Petition describes incorporating JP705's *engine bracket*⁴—a welded bracket extending from a side of a mainframe—in KR996's mainframe to secure KR996's engine providing various engineering advantages. Petition, 26-28, 35-36; EX1003, ¶¶60-62, 82. *See also*, EX1043, 52-54 (discussing desirable to mount from sides to address torque). PO's argument that KR996 must already have some mechanism for securing the engine does not address the advantages brought by JP705's bracket including its location. *See* POR, 37.

PO does not refute these reasons to combine, focusing instead on JP705's mainframe size and JP705's engine position. *See* POR, 38. To be clear, the Petition shows incorporating JP705's *engine bracket* (not its mainframe or engine location)

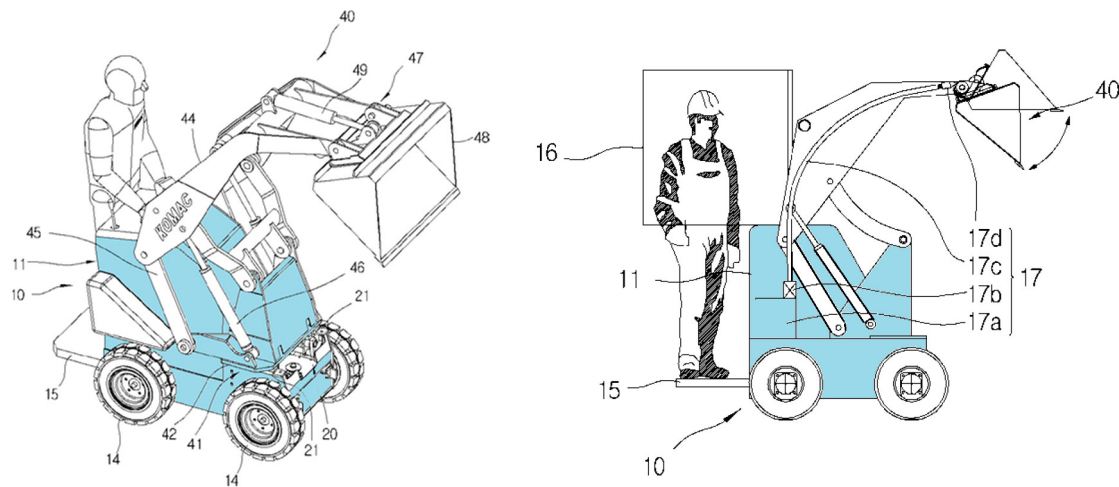
⁴ *See, e.g.*, claim element [31.2b].

into KR996's existing mainframe and engine location—where the bracket performs the exact same function in the exact same way.

B. PO arguments on linkages/actuator connections rely on an incorrect construction of “mainframe”.

The Petition established that when KR996's machine is configured as a loader, it has linkage(s) and actuator pivot point connections to a *mainframe* just as claimed in the '386 patent. *See, e.g.*, Petition, 37-39; EX1005, Figs. 9, 21.⁵ This is consistent with the Board's institution decision. ID, 32-34. KR996's loader mainframe—which includes components of body 11 and fixture 41 of loader unit 40—is a primary supporting structure of the CUL as discussed above and the linkage/actuator are pivotably attached thereto. EX1042, ¶¶2-4.

⁵ PO counsel's request for Dr. Velinsky to identify a mainframe for supporting a loader in the context of Fig. 1 where a loader unit (40) is not attached is not germane to the challenge. *Contrast*, EX1005, Fig. 9.



Id.

C. Mainframe incorporating a single weldment is obvious.

Certain claims recite that the mainframe *incorporates a single weldment*. See, e.g., claim 33. The Petition shows that the JP705 engine bracket is attached by welding; thus, applying the bracket to the KR996 frame provides “a *mainframe incorporat[ing] a single weldment*.” Petition, 46.⁶ It is uncontested that it would

⁶ The Petition also states that it would have been obvious “to form other portions of the mainframe of KR996 as a part of a *single weldment*.” *Id.*, emphasis added.

have been obvious for the KR996 mainframe to include a single weldment. *See* EX1043, 113-114 (discussing likely welds in KR996).⁷

This is consistent with the use of “incorporates” in other patent claims in the art. *See* EX1054, 22:45-49; EX1055, 26:33-40. This is also consistent with how PO has used the term. *See* related USP 12,098,063, claim 3 which recites “wherein the mainframe is a single weldment.” *See PPC Broadband, Inc. v Corning Optical Communications*, 815 F.3d 747, 52-53 (Fed. Cir. 2016)(supporting different terms have different meanings).

The POR incorrectly construes the claim requiring the mainframe **consists** (in its entirety) of a single, unitary welded piece. POR, 42. Nonetheless, the Petition already addressed this as an obvious design choice. *See* Petition, 47 discussing consisting of single weldment including in EX1006, EX1010. Certainly, trade-offs exist between fasteners and welding, including ease of separability. *Id.*, EX1003, ¶118; EX1042, ¶5 (discussing advantages of dedicated loader); EX1043, 103-104

⁷ The term “incorporate” means “take in or contain (something) as part of a whole; include”). EX1053, 4. Thus, the claims do not preclude the mainframe from having some portions formed as a single weldment, and other portions fastened in other manners.

(confirming advantageous to just have loader function). Further, KR996 does not disparage a dedicated or non-separable loader but instead recognizes being able to switch between a loader and an excavator provides “operational efficiency.” EX1005, [0007]. *See Medichem, S.A. v. Rolabo, S.L.*, 437 F.3d 1157, 1165 (Fed. Cir. 2006) (“a given course of action often has simultaneous advantages and disadvantages, and this does not necessarily obviate motivation to combine.”); *see also, PAR Pharm., Inc. v. TWI Pharms., Inc.*, 773 F.3d 1186, 1197–98 (Fed. Cir. 2014) (“Our precedent, however, does not require that the motivation be the best option, only that it be a suitable option from which the prior art did not teach away”); *In re Haase*, 542 F. App’x 962, 969 (Fed. Cir. 2013).

IV. GROUND II—KR996+JP705+BARES

Certain claims recite *track[s]* and/or a *drive sprocket* (e.g., claim elements [37], [40], [70.5a], [74.6a], [78.5]), which are obvious in view of Bares.

A. Tracks and wheels are well-known, interchangeable alternatives.

The Petition shows that CULs having tracks or wheels were well-known alternatives. *See, e.g.,* Petition, 72-74. *See also*, EX1043, 12 (“skid steers could be either wheeled or tracked.”) The Petition also details the specific benefits of a track configuration for KR996, such as improved traction, better ability to cross holes, and reduced ground pressure, which are particularly advantageous in demolition and

deconstruction environments. *See* Petition, 73, EX1003, ¶¶160-161. PO does not contest that these drive assemblies were known alternatives but argues for narrowing KR996 to be applicable only to certain terrain (which it is not) and relies on bodily incorporation of the proposed combination.

B. Tracks benefit KR996's CUL in its described operation conditions.

The POR argues that KR996 is specifically designed for “indoor deconstruction work,” would not be operable on uneven terrain, and thus would not benefit from tracks. POR, 48-51. This is incorrect. KR996 is directed to “building deconstruction work,” which inherently involves uneven terrain and debris—conditions where tracks excel. EX1005, (54); Petition, 73; EX1003, ¶¶160-161 (deconstruction work has “uneven terrain and debris that its vehicle must traverse” that tracks benefit, reduced pressure to surface, traction, and crossing of holes or trenches, all applicable to demolition.) Also, the use of mini skid steers with tracked assemblies for indoor demolition tasks is common. *See* EX1057, 2014 illustration of Toro tracked mini skid steer operating indoors (*see also* EX1062); EX1056, 3:64-4:2, FIG. 1 (suggesting indoor use for tracked loader).

Further, this operable terrain argument is based on PO's assumption that KR996 requires a “clean surface” for its attachment/detachment functions. *See* POR 49-50. Even if true, this would only apply to the specific location where

attachments/tools are changed—not to the overall operation of the KR996 CUL. In practice, attachments are typically swapped away from the work area and the CUL traverses various surfaces to both perform its work and to reach those locations. As Dr. Fleming concedes, “you’d have to take your skid steer to wherever the attachment is” and “typically you would want to have the unused attachments off to the side.” EX1043, 48-49. *See also*, EX1058, illustrating cleaning and changing attachments away from worksite (*see* EX1062). Thus, the operational advantages of tracks remain regardless of any alleged attachment/detachment terrain limitations.

C. Wheels are not essential for KR996’s CUL function or detachability.

PO contends wheels are critical to KR996’s detachability function and must be maintained. POR, 45-48. KR996’s detachability does not require wheels. *See* EX1005, 2, claiming vehicle 10 without limitation to its drive mechanism. Moreover, the POR narrative of the criticality of tires “flex[ing] and grip[ping]” or “bow[ing] out” to perform KR996’s attachment/detachment function overstates the role of the tires. *See* POR, 45-46. What KR996 actually says is:

When the vehicle (10) is moved forward to the bogie (30) side, the lower frame (31) of the **bogie (30) enters between the two wheels (14), making contact with the inner side of the wheel (14) by the guide plate (38).** As the wheel (14) continues to **rotate** in the forward

direction, the guide plate (38) of the bogie (30) is pulled inward of the vehicle (10), causing the lower frame (31) of the bogie (30) to be fully inserted into the bottom of the vehicle (10).

EX1005, [0036]. In other words, KR996 merely suggests that there is “contact” between the rotating drive mechanism and the guide plate.

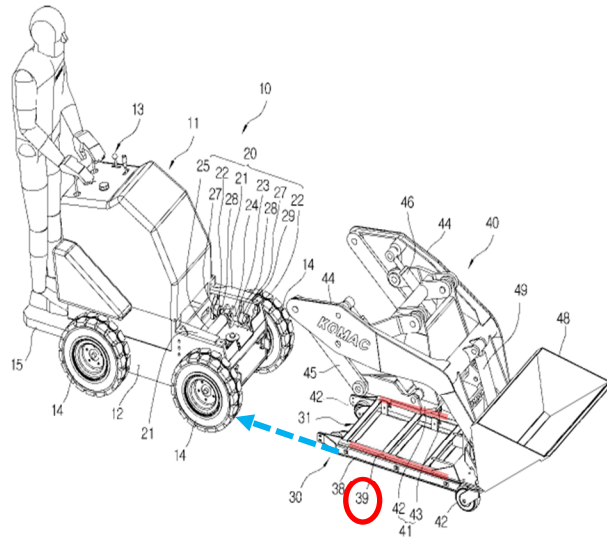
From this mere mention of “contact,” PO spins a tale alleging it is the extent of flexion or bowing out of a tire that is critical to its attachment/detachment functionality. *See* POR, 45-48.⁸ To be clear, KR996 never discusses that its tires “bow out under the load of the machine,” (POR, 46) nor discusses any reliance on the extent of tires’ compression. Moreover, even if there is some gap-tuning needed to address the difference between the track and wheel, KR996 also describes how to address this. KR996 explicitly describes “a liner (39)” that is precisely for the purpose of “adjust[ing] the gap” between the drive mechanism—wheel (14)—and the bogie—guide plate (38). EX1005, [0005], [0053]. Therefore, should the gap be

⁸ EX2021, 84:9-15 shows what Velinsky agreed to is an interface between tires and bogie “helps pull in” the bogie. Velinsky did not agree with PO’s contention that the sidewalls of tracks and tires are different. *See* EX2021, 136:23-25.

different between the extent of flexion of wheels compared to the flexion (or purported lack thereof) of tracks, KR996's liner can compensate for it. *See, id.*

Further, PO overstates the differences between tracks and wheels. Modification of the drive assembly from tire to track just means any desired contact locus is between the track and the bogie's guide plate (as opposed to a wheel and the bogie guide plate). The track is positioned at the same location, comprises a similar material, is rotating in the same direction as the wheel would be, and has an appreciable thickness. *See* EX1051, 206 (describing rubber); EX1010, FIG. 7, arrow 160A, track thickness 148, 5:29-38.

PO's assertion that a track would not extend a significant enough height above the ground to allow for contact with the bogie is also incorrect. *See* POR, 46-47. The guide plate 39 contacts with the drive mechanism (wheel 14/Bares' track) at the front of the vehicle 10 where the tire/track is extending vertically from the ground to over the front wheel (idler wheel 152/wheel 14); KR996 illustrations and even Dr. Fleming's CAD model plainly show this height greater than the bogie guide plates. *See* EX1005, Figs. 7-8. Similarly, PO's alleged loss of "alignment feature" associated with wheels lacks any citation to KR996 and appears to be mere conjecture; PO provides no reason that the track, which extends along the CUL, provides a different boundary than wheels. *See* POR, 47.



adjustable thickness liner (39)

EX1005, Fig. 1, [0035] (“thickness of the liner (39) can be adjusted”).

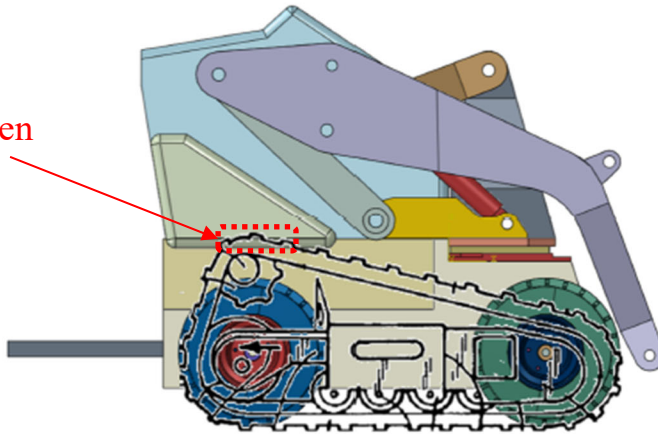
Moreover, PO’s argument is premised on POSITA being mere automatons, void of any engineering knowledge. The POR simply ignores the features of Bares’ rotating track (and plurality of rotating wheels with its assembly), which are all available to provide contact and directional force, if desired. *See* EX1010, 5:33-43, 6:59-7:11 (describing rotating wheels). As discussed above, KR996 explicitly discloses one example, a liner, readily available for modification to provide desired contact. Moreover, *Allied* shows that such design changes do not negate a motivation to combine.

D. Incorporating tracks is well within the skills of POSITA.

PO also argues that POSITA could not change the drive assembly to a track assembly because the track and/or drive motor—if Bares' track is cut-and-pasted onto the flawed CAD drawing of KR996's CUL—would interfere with components of KR996's CUL. This argument is based on a rigid, literal overlay of patent figures ignoring that bodily incorporation is not required, that patent drawings are not scale, and that POSITA routinely makes necessary modifications.

Both experts agree that in practice it is known to make modifications in designing vehicles. *See* EX1043, 23-24 (Dr. Fleming agreed that in his experience “if there was a design issue that was found, we would get together and have a design review meeting [for] a path forward...to resolve the issue.”); EX1003, ¶171 (“design choice”). Yet, when developing his figures for this proceeding, Dr. Fleming “did not try to” fix or make any design or engineering modification to address the alleged interference. EX1043, 97, 123.

Exemplary alleged
“significant interference”
that Dr. Fleming did not even
try to address is minimal



POR, 52
Dr. Fleming's KR996 CAD model
with Bares' track "superimposed"

Moreover, the interference in Dr. Fleming's figure is just the type of design issue that engineers commonly address. Dr. Fleming is quick to agree to this when discussing making changes to the embodiments of the Vermeer patent. EX1043, 59-60 (“obviously you can't have a machine you're trying to use that had interference. So there would be some design work that would be done to eliminate that interference. ...that could potentially involve structure, that could involve **moving internal components such as engine and drive line components.**”) Perhaps most telling of the abilities of POSITA to arrange the components is found in the context of the '386 patent itself, which does not illustrate its suggested wheel drive mechanism and does not describe its engine or disclose or illustrate the position of its drive motors or fuel tanks. *See* EX1001, 3:24-30, 4:10-13, 5:52-59 (all discussing

components that are “not shown”). Dr. Fleming agrees that the selection of proper engine, hydraulics and drive system components would be an “engineering project for designing product”—one within the capability of POSITA (such as changing a track for wheels). EX1043, 35-36, 39.

Further, there are a myriad of options for machine engines, tanks and drive mechanisms that can affect and address the alleged space constraints such as moving the engine, drive motor, or tank and/or varying component shape or size. *See* EX1043, 38-44, 86-87 (varying drive motor size/shape, tank size/shape).

V. SECONDARY CONSIDERATIONS OF NON-OBVIOUSNESS

PO's arguments for non-obviousness based on secondary considerations fail for at least four reasons: A) the considerations lack any nexus to the claims; B) the overall strength of the prior art; C) the improper reliance on hearsay evidence; and D) the mischaracterization of the evidence.

A. Lack of nexus between PO's evidence and the claimed invention.

PO's secondary considerations lack nexus to the claims as their arguments and evidence are premised on the assertion that PO was the first to invent a vertical-lift CUL. Specifically:

- Dr. Fleming agrees that the evidence of secondary considerations is directed to vertical-lift. EX1043, 123 (“The evidence of secondary

considerations, is that directly primarily to vertical lift? A. I would say primarily, yes.”).

- Magazine recognition directed to the introduction of “vertical lift to the compact tool carrier market.” POR, 59-60.
- Hearsay testimony from Vermeer’s Product Manager regarding the “popularity of vertical-lift machines.” *Id.*
- Inventor’s testimony that his vertical-lift machine has “greater lift capacity than its radial-lift counterpart.” *Id.*, 62.
- Hearsay stories of Toro engineers developing vertical-lift machines cobbled from portions of depositions taken from a different litigation. *Id.*, 61-66.
- Some of Kubota’s customers prefer vertical-lift machines. *Id.*, 67-75.

It is undisputed that KR996 discloses a vertical-lift CUL, demonstrating that PO was not the first to invent this. As can be seen *supra*, our discussions are not directed to vertical lift, but whether it would be obvious to include a bracket, a track assembly, or make a mainframe including a single weldment. PO’s evidence does not show these conventional features drove any of their secondary indicia.

Objective evidence of nonobviousness lacks a nexus if it relates solely to a feature that was already known in the prior art. *See Yita LLC v. MacNeil IP LLC*, 69 F.4th 1356, 1364 (Fed. Cir. 2023); *Ethicon Endo-Surgery, Inc. v. Covidien LP*, 812 F.3d 1023, 1034 (Fed. Cir. 2016). Thus, PO's reliance on evidence directed only to vertical-lift functionality—a feature known in the art—renders its secondary considerations legally irrelevant to the obviousness inquiry.

B. The prior art is strong.

Nearly all elements of the challenged claims are explicitly disclosed in KR996, with only a few conventional features shown to be obvious. In such a case, secondary considerations cannot override such a strong showing of obviousness.⁹ *See Leapfrog Enterprises, Inc. v. Fisher-Price, Inc.*, 485 F.3d 1157, 1162 (Fed. Cir. 2007)(“given the strength of the *prima facie* obviousness showing, the [substantial] evidence on secondary considerations was inadequate to overcome a final conclusion that claim [] would have been obvious”).

⁹ Dr. Velinsky reviewed the secondary considerations evidence and found it related to applying a vertical-lift to a CUL. EX1003, ¶26. As KR996 teaches just that, he properly concluded that those considerations did not alter his opinion finding the claims obvious. *Id.*; EX2021, 59.

C. PO's evidentiary deficiencies: cross-examination, completeness, and authentication lacking.

PO's evidence should be accorded little to no weight due to significant evidentiary deficiencies (a separate motion to exclude will be provided later in this proceeding). POR relies on declarations, portions of deposition testimony, and portions of third-party (Toro) documents from a prior litigation as truth of the matter being asserted. Petitioner was not a party to this prior litigation, and has been denied the opportunity to get the complete documents of record and/or depose the declarants or people providing the testimony. For example, POR relies upon:

- Testimony from "Vermeer's Product Manager" regarding sales figures. (POR, 60 citing EX1030, 128, 302, declaration of inventor Hutchinson).
- "Toro's 2015 Annual Statement" (POR, 60 citing EX1029, 185, slide presented at examiner interview).
- Internal Toro documents alleging "engineers identified significant challenges in development of a vertical-lift mechanism" (POR, 61 citing EX1030, 54, portion of Toro internal document).
- Declaratory "evidence showing...surpassed [lift] expectations" (POR, 62 citing EX1029, 142, declaration of inventor L. Hartke).

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- Internal Toro documents and Toro employee testimony as “evidence of record...[that] skilled [Toro] engineers...struggled for many years” (POR, 62-66 citing EX1030, 36-57, portions of Neil Borenstein (“Toro’s Marketing Director”) deposition testimony, portions of James Kuemper (Toro’s “Principal Designer”) deposition testimony, reference to Toro internal documents).

PO did not provide the referenced declarations, deposition transcripts, or Toro documents directly in the present proceeding, despite relying on them for the truth of the matter asserted therein. The fact that portions of this evidence were previously introduced and discussed by PO in an *ex parte* reexamination does not cure it from being hearsay.

Moreover, despite Petitioner’s requests, PO was unwilling or unable to produce the declarants (apart from Dr. Fleming) for cross-examination. EX1059, illustrating deceased, health and lack of control. Declarations of the deceased Hartke and unavailable Hutchison (both inventors of the ’386 patent) are hearsay and are self-serving statements so should be afforded little weight. PO’s selective quotation of deposition testimony—without providing the full transcripts, despite Petitioner’s repeated requests—invites distortion and deprives Petitioner and the Board of the necessary context to evaluate the statements. *Id.* As shown below, PO’s omission of

deposition testimony of Toro declarants, which Petitioner located only by review of other PTAB matters, illustrates the risk of mischaracterization.

D. PO's arguments mischaracterize the tenor and substance of its evidence.

PO's arguments, as best ascertained from the portions of testimony provided, are directed to the challenges of development and commercialization of a vertical-lift CUL that has a certain "lift capacity" relative to then available radial-lift counterparts in the market. *See* POR 60-66. However, the mere existence of development challenges or struggle to meet a market demand for improved performance does not constitute an indicia of non-obviousness, especially where the claims themselves do not recite any "lift capacity" limitation.

PO contends that Petitioner's performance of surveys of the market and its customers demonstrate intentional copying. POR, 67. But, Petitioner's commercially available CUL is different than Vermeer's CUL and different than the challenged claims, which Petitioner will demonstrate in the related (stayed) litigation. Further, Dr. Fleming has testified that it is common industry practice to survey the market and benchmark against competitors and this supports obviousness. *See* EX1046, ¶¶110, 120.

PO also relies on a Toro patent application for supporting the difficulties of a vertical-lift CUL. POR, 61-62 citing EX2004, [0007]. However, the cited passage states only that it is “difficult” to use “such high lift loader arms” particular to USP 5,542,814 on a CUL. EX2004, [0007]. The inventors of that Toro application have testified just that—a fact that PO fully knows and has previously relied upon but does not disclose here. *See* PGR2020-00081, Paper 1, 41-43 (PO relying on Toro inventors’ Kuemper and Azure testimony to show this same statement is discussing a specific “front mounted scissor mechanism,” not generally vertical-lift). Further, Toro inventor testimony portions submitted in that proceeding show the Toro inventors did not think it was “difficult or impossible” to provide a “vertical lift or four-bar linkage” on a CUL at least because “there are so many other loaders out there that have vertical lift on them” and the “art [high lift loader arms] is out there for skid steers. That’s easily adaptable.” *See* EX1060, 7-8; EX1061, 8 (portions of deposition produced by PO in the PGR2020-00081).

VI. PO’S INFLAMMATORY RHETORIC ATTACKING DR. VELINSKY IS CONTRARY TO THE ACTUAL RECORD

PO repeated attempts to discredit Dr. Velinsky are unfounded and distract from the actual issues before the Board. *See, e.g.*, POR, 2, 31-36. The record demonstrates that Dr. Velinsky is a highly qualified expert whose opinions are

grounded in relevant experience and thorough understanding of the technology at issue. *See* Section I.B.

PO also mischaracterizes Dr. Velinsky's testimony. Dr. Velinsky confirmed he understood the layout of CUL, referred PO's counsel to the CUL patents of record, and explained the relative locations of CUL components are a matter of "design choice." EX2021, 25-28. Whether Dr. Velinsky chose to answer a line of questioning that did not appear focused on obtaining relevant substantive testimony—hydraulic attachments not being claimed or even described in the '386 patent—says nothing as to his qualifications. PO does not contend it invented a new attachment and the prior art of record and Velinsky's testimony is replete with discussion of various attachments.

PO also criticizes Dr. Velinsky for not personally generating CAD drawings, implying this undermines his credibility. This argument is meritless. It is standard practice for experts to rely on technical staff or assistants for tasks such as CAD modeling. *See* EX2021, 14. Indeed, PO's own expert, Dr. Fleming, admitted that he does not personally generate his CAD drawings but relies on his team. EX1043, 27-28, 83-84. What is relevant is whether Dr. Velinsky's analysis and conclusions in his declarations are his own; here they are. EX1003, XI. Finally, PO's accusation that Dr. Velinsky "admitted" to using "hindsight" is a distortion of the record. *See*

POR, 34, *contrast* EX2021, 54-57 (Dr. Velinsky explaining the truism that he “had to look to the claims to know what the technology was.”)

VII. CONCLUSION

The Board should find all challenged claims unpatentable.

Respectfully submitted,

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Dated: Dec. 3, 2025

Certificate of Word Count

Pursuant to 37 C.F.R. § 42.24, the undersigned attorney for the Petitioner declares that the argument section of this Reply has a total of 5,354 words, according to the word count tool in Microsoft Word™.

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CERTIFICATE OF SERVICE

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

Date of service December 3, 2025

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