IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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SOLARIS OILFIELD SITE SERVICES OPERATING, LLC and SOLARIS OILFIELD SITE SERVICES PERSONNEL, LLC,
Petitioners,

v.

MASABA, INC.
Patent Owner.

_____

Case No. IPR2024-01179
Patent No. 11,780,689
Issue Date: October 10, 2023

Title: Aggregate Transferring System

PATENT OWNER'S SUR-REPLY

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Exhibit No.	Description	Filing Status (X=Already Filed)
2001	U.S. Patent No. 8,926,252 to McIver et al. as Annotated During March 26, 2025 Deposition of Dr. Robert Durham	X
2002	Figures 6 and 7 of U.S. Patent No. 9,663,303 to Waldner et al. as Annotated During March 26, 2025 Deposition of Dr. Robert Durham	X
2003	Transcript of March 26, 2025 Deposition of Dr. Robert Durham	X
2004	Expert Declaration of Travis A. Anderson (dated April 28, 2025)	X
2005	Declaration of Dan Brinkman (dated April 17, 2025)	X
2006	Declaration of Mike Stanton (dated April 27, 2025)	X
2007	Declaration of Aaron Shatto (dated April 8, 2025)	X
2008	Solaris Oilfield Infrastructure Investor Presentation September 2021 (retrieved at https://ir.solarisoilfield.com/~/media/Files/S/Solaris-IR/reports-and-presentations/soi-investor-presentation-2021-09-15.pdf)	X
2009	https://web.archive.org/web/20211130155708/https:/www.solarisoilfield.com/products	X
2010	https://web.archive.org/web/20211130143508/https:/www.solarisoilfield.com/products/top-fill-sand-loading-system	X
2011	Solaris Oilfield Infrastructure Investor Presentation December 2021 (retrieved at https://ir.solarisoilfield.com/~/media/Files/S/Solaris-IR/reports-and-presentations/soi-investor-presentation-dec-2021-for-website.pdf)	X
2012	Audio Recording of Q4 2021 Solaris Oilfield Infrastructure, Inc. Earnings Conference Call (retrieved at https://seekingalpha.com/article/4489042-solaris-oilfield-infrastructure-inc-soi-ceo-bill-zartler-on-q4-2021-results-earnings-call)	X

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2013	Audio Recording of Q1 2022 Solaris Oilfield Infrastructure, Inc. Earnings Conference Call (retrieved at https://seekingalpha.com/article/4505127-solaris-oilfield-infrastructure-inc-soi-ceo-william-zartler-on-q1-2022-results-earnings-call)	X
2014	Audio Recording of Q2 2022 Solaris Oilfield Infrastructure, Inc. Earnings Conference Call (retrieved at https://seekingalpha.com/article/4528682-solaris-oilfield-infrastructure-inc-soi-ceo-william-zartler-on-q2-2022-results-earnings-call)	X
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2016	Audio Recording of Q4 2022 Solaris Oilfield Infrastructure, Inc. Earnings Conference Call (retrieved at https://seekingalpha.com/article/4581377-solaris-oilfield-infrastructure-inc-soi-q4-2022-earnings-call-transcript)	X
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2021	Audio Recording of Q1 2024 Solaris Oilfield Infrastructure, Inc. Earnings Conference Call (retrieved at https://seekingalpha.com/article/4687043-solaris-oilfield-infrastructure-inc-soi-q1-2024-earnings-call-transcript)	X
2022	Audio Recording of Q2 2024 Solaris Oilfield Infrastructure, Inc. Earnings Conference Call (retrieved at https://seekingalpha.com/article/4713146-solaris-oilfield-infrastructure-inc-soi-q2-2024-earnings-call-transcript)	X
2023	Audio Recording of Q3 2024 Solaris Oilfield Infrastructure, Inc. Earnings Conference Call (retrieved at https://seekingalpha.com/article/4733377-solaris-oilfield-infrastructure-inc-soi-q3-2024-earnings-call-transcript)	X
2024	Audio Recording of Q4 2024 Solaris Energy Infrastructure, Inc. Earnings Conference Call (retrieved at https://seekingalpha.com/article/4760799-solaris-energy-infrastructure-inc-sei-q4-2024-earnings-call-transcript)	X
2025	Screenshot from Solaris Top Fill Sand Loading System Animation at https://vimeo.com/673402149 at 0:01	X
2026	Screenshot from Solaris Top Fill Sand Loading System Animation at https://vimeo.com/673402149 at 0:04	X
2027	Screenshot from Solaris Top Fill Sand Loading System Animation at https://vimeo.com/673402149 at 0:11	X
2028	Screenshot from Solaris Top Fill Sand Loading System Animation at https://vimeo.com/673402149 at 0:12	X
2029	Solaris Oilfield Infrastructure Top Fill Sand Loading System Tech Specs	X
2030	Solaris Oilfield Infrastructure Investor Presentation August 2023 (retrieved at https://ir.solarisoilfield.com/~/media/Files/S/Solaris-IR/reports-and-presentations/soi-investor-presentation-august-2023.pdf)	X
2031	U.S. Patent No. 11,858,760	X
2032	CTRM Center, “No, its not ‘Fracking’” at https://www.ctrmcenter.com/blog/fracking/	X
2033	Drillers.com, “Fracking Vs Fracing – The End of the Debate?” at https://drillers.com/fracking-vs-fracing-end-debate	X

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2035	American Concrete Institute, "What is aggregate?" at https://www.concrete.org/frequentlyaskedquestions.aspx?faqid=704	X
2036	Dexter Axle Company, Operation Maintenance Service Manual: Heavy Duty Suspension System at https://www.dextergroup.com/user_area/content_media/raw/heavy-duty-suspension-system-lit-012-00.pdf	X
2037	Amended Complaint and Jury Demand, *Masaba, Inc. v. Solaris Oilfield Site Services Operating, LLC*, Civil Action 2:23-CV-00236 (D. Wyo. June 14, 2024)	X
2038	Photograph Exhibit to September 17, 2025 Deposition of Jeremy Weinstein	Filed with this paper
2039	Photograph Exhibit to September 17, 2025 Deposition of Jeremy Weinstein	Filed with this paper
2040	Transcript of September 4, 2025 Deposition of Dr. Robert Durham (with errata sheet)	Filed with this paper
2041	Transcript of September 10, 2025 Deposition of David Smith (with errata sheet)	Filed with this paper
2042	Transcript of September 17, 2025 Deposition of Jeremy Weinstein	Filed with this paper

I. Introduction

Solaris's Reply asserts that Masaba's Response mischaracterizes Solaris's arguments and "knock[s] down strawmen." (Reply, 1.) The truth is that it responds to the arguments that Solaris actually made, and now Solaris wants to change them. Solaris's Reply offers multiple instances of improper reply arguments and evidence that should be disregarded.

Solaris next alleges that its engineer, Jeremy Weinstein, "told [Masaba] what elements to include" in its design. (Reply, 1.) That is false. The evidence shows that Masaba conceived of several designs, and ultimately, Weinstein only told Masaba *what* requirements the system needed to meet, not *how* to meet them. (Ex. 2005, ¶¶4-14; Ex. 2006, ¶¶3-8; Ex. 2042, 88:17-92:21.) Solaris points to a specification sheet from Weinstein, but it merely recites aspects of an air slide conveyor that Masaba had proposed two months earlier. (*Compare* Reply, 6 n.4 (citing Ex. 1104, §6.2 (Oct. 28, 2020)) *with* Ex. 2005, ¶4; Ex. 2006, ¶3; Ex. 1102 (Aug. 13, 2020); *accord* Ex. 2042, 48:2-23.) Weinstein testified merely that this was "a specification that included the desired *dimensions* for the system." (Ex. 1112, ¶13.)

Solaris also asserts that Masaba's unit "literally fell apart during transport" and therefore "Petitioners had no choice but to build their own top fill systems." (Reply, 1-2.) That is a false narrative. The axle on Masaba's unit broke, but it was repaired and delivered to Solaris. (Ex. 2005, ¶21; Ex. 2042, 94:14-24, 97:1-13.) It

was then one of two units that Solaris first used and praised for their profitability. (Ex. 2012, 2:32, 2:30-2:58; Ex. 2013, 3:25-3:32; Ex. 2014, 13:33, 5:50-5:57; Ex. 2042, 97:12-22.) When Solaris claims it "had no choice but to build [its] own top fill systems," it was because profits beckoned, not because the axle had broken.

II. Durham Is Not Qualified to Testify as a POSITA

Solaris argues that Durham is qualified to testify as a POSITA because he "has extensive experience ***using*** and ***evaluating***" various systems (without stating whether he "evaluated" mechanical or electrical aspects of those systems) and because the '689 Patent describes "methods of using" (Reply, 2), implying that POSITAs need only ***use*** or ***evaluate*** the claimed invention. But in this case, assessing obviousness requires an assessment about ***designing*** the claimed invention. Durham himself states that "the '689 Patent is concerned with ***the problem of designing*** a conveyor system to transfer aggregate to an elevated location." (Ex. 1003, ¶111.) He then repeatedly attempts to testify about "designing" (*e.g.*, Ex. 1003, ¶¶115, 272, 370; Ex. 1110, ¶50), even though his alleged experience is in "using" and "evaluating."

Solaris also argues that the '689 Patent describes "numerous electrical components and systems" (Reply, 2), implying that Durham's ***electrical*** expertise qualifies him. But what matters is what is claimed, because POSITAs assess obviousness of the claimed invention, not unclaimed features.

Finally, Solaris cites new (and improper) testimony to argue that Durham has enough "training…and experience ***designing*** and ***evaluating*** mechanical aspects of conveying systems used in fracturing." (Reply, 2.) But that testimony does not mention anything about "mechanical aspects of conveying systems." Durham merely testifies that he had classes in "statics, instrumentation, [and] fluid dynamics" and in building a "solar driven vehicle"—where he was "electrical design lead" and tasked with "overseeing" construction. (Ex. 1110, ¶ 20.) But that limited classwork would not qualify anyone as a POSITA. Durham's new testimony also asserts "experience in building / designing / engineering / investigating" unidentified aspects of various systems (Ex. 1110, ¶ 20), but none of that experience involved relevant systems, and the slashes in that phrase indicate that all Durham may have done is "investigating." Solaris has not shown that Durham qualifies as a POSITA.

Tellingly, Solaris submits declarations from two mechanical engineers (David Smith and Jeremy Weinstein) and asserts they "confirm Dr. Durham's opinions on the disputed issues." (Reply, 3.) This is a tacit admission that Durham is unqualified. Indeed, **about 40%** of Durham's new declaration regurgitates content from Smith's declaration **substantially verbatim** (*compare, e.g.,* Ex. 1110, ¶¶16-19, 30, 32, 34, 40, 42-43, 55-59, 65-66 *with* Ex. 1111, ¶¶29-30, 42, 56, 57, 64, 67-69, 97-101, 107-108), despite neither having seen the other's declaration (Ex. 2040, 15:5-16:1; Ex. 2041, 6:2-23). Durham did not even generate the simple figures in

his declaration; Smith did. (Ex. 2041, 8:18-9:9.) Apparently, Petitioner's counsel copied material from Smith's declaration to compensate for Durham's lack of expertise. Unfortunately for Solaris, the expert testimony of Smith and Weinstein is too late to establish a *prima facie* case.

III. GROUND 1: Solaris Has Failed to Prove Obviousness Based on *Waldner* and *Dynatek*

A. *Waldner* Does Not Disclose "An Extension Conveyor for Moving Aggregate"

Solaris argues that *Waldner*'s chute is a "conveyor" because "gravity conveyors" exist, which do not impart motion to the material that moves on them but rely on gravity. (Reply, 3.) But a "gravity conveyor" uses rollers (Ex. 1134, p. 2; Ex. 1133, Figs. 1-6); thus, *Waldner*'s chute is not a "gravity conveyor."

In any event, Solaris's overall claim construction is incorrect. According to Solaris, anything that allows aggregate to move is a "conveyor," but the claims require a "conveyor *for moving aggregate*." If a "conveyor" is anything that allows aggregate to move and a "conveyor for moving aggregate" is also anything that allows aggregate to move, as Solaris posits, then the phrase "for moving aggregate" is superfluous. The only way to avoid that problem is to interpret "conveyor for moving aggregate" to mean "conveyor that moves aggregate," *i.e.*, that imparts motion to the aggregate. As such, *Waldner*'s chute does not qualify. As Durham conceded, a "conveyor for moving aggregate" requires "some mechanical device

that helps in…movement," and *Waldner*'s chute does not do so. (Ex. 2003, 68:19-69:16, 69:23-70:3.)

Solaris argues that *Waldner*'s chute *does* impart motion because it is "orientable," *i.e.*, can move from one orientation to another. (Reply, 4.) But that type of motion does not matter. The claims require "an extension conveyor for moving aggregate ***from an inlet of the extension conveyor to an outlet of the extension conveyor***…." (Ex. 1001, 16:49-52), not from one chute orientation to another. Furthermore, reorienting the chute is not moving "aggregate" at all because *Waldner* does not disclose aggregate in the chute during reorientation, *i.e.*, spilling while moving.

B. It Would Not Have Been Obvious to Substitute *Dynatek*'s Articulated Belt Conveyor for *Waldner*'s Chute

Solaris's Petition argued that POSITAs would have been motivated to substitute *Dynatek*'s belt conveyor for *Waldner*'s chute for the following vague and general reasons: "to maximize the system's range of motion and reach, optimize dust control, enhance mechanical control, and/or increase discharge rates." (Petition, 26 (citing Ex. 1003, ¶¶117-118).) In its Reply, Solaris drops its argument about optimizing dust control. And Solaris attempts to improperly modify the three remaining reasons, as discussed below. But first we address why POSITAs would have avoided a *Waldner*/*Dynatek* combination.

1. Skepticism Regarding Bucket Elevators

Solaris argues that skepticism of bucket elevators is "irrelevant" "since *Waldner* already discloses them." (Reply, 5.) Not true. That skepticism "would have steered POSITAs away from *Waldner* as a starting point in the first place." (POR, 30.) Solaris has no reply to this.

Solaris concedes that its employees and the industry had concerns about bucket elevators but asserts that those concerns "were about heat and maintenance issues, not whether they would work." (Reply, 5 (citing Ex. 1112, ¶19 ("We…believed that bucket elevators require more maintenance and were known not to dissipate heat well.")).) But whatever the reasons, those concerns were enough to cause Solaris to resist using a bucket elevator when Masaba first proposed it, even if the alternative meant reduced capacity. (Ex. 2005, ¶10; Ex. 2006, ¶6 & Appx. B). And those concerns were enough to cause Weinstein to initially propose using a high-angle belt conveyor rather than the bucket elevators he was familiar with. (Ex. 1112, ¶¶8-9, 19; Ex. 2042, 35:19-36:18, 57:21-24; Ex. 2005, ¶4; Ex. 2006, ¶3.) Those same concerns would have caused POSITAs to resist using *Waldner* as a starting point.[1]

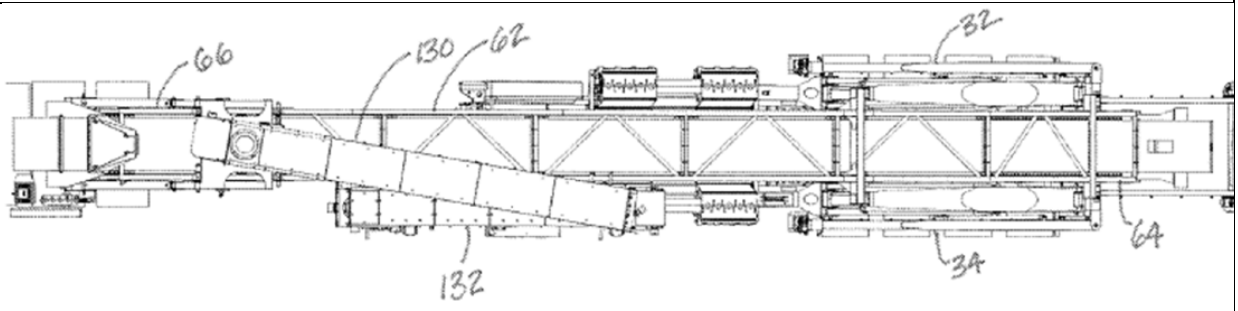
[1] The nonprecedential *SynQor* case (Reply, 5) does not hold otherwise. *SynQor* declined to address skepticism about a starting point because the patentee had forfeited the argument. 2023 WL 234186, *3.

2. Transportable Height

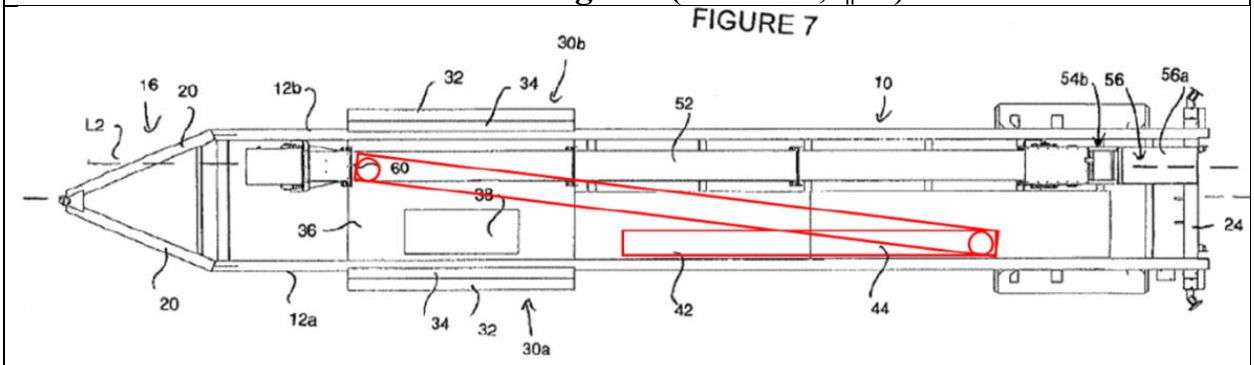
Solaris's experts agree that transportability was an important consideration (Ex. 1111, ¶¶59-60) and that a feature requiring too much permitting would have disincentivized POSITAs (Ex. 2040, 46:14-21, 88:8-18). POSITAs would have wanted a height below 14 feet and preferably below 13.5 feet. (Ex. 2004, ¶61; Ex. 1111, ¶62.) Solaris wanted the same. (Ex. 1112, ¶13; Ex. 1104, §2.2; Ex. 2042, 62:21-65:19.)

According to Mr. Anderson, POSITAs would have concluded that attempting to stack *Dynatek*'s belt conveyor on *Waldner*'s bucket elevator would have resulted in a height of over 16-17 feet without accounting for the loading spout—and a greater height with that spout. (Ex. 2004, ¶61.) Solaris's experts challenge some of Anderson's assumptions, but neither proposes any way of accommodating *Dynatek*'s belt conveyors ***and*** loading spout without using what Anderson testified was the '689 Patent's "creative and unique way to fold the…conveyors." (Ex. 2004, ¶40.) This configuration is shown below, followed by diagrams from Solaris's experts attempting to show how such a configuration would be implemented with *Waldner*:

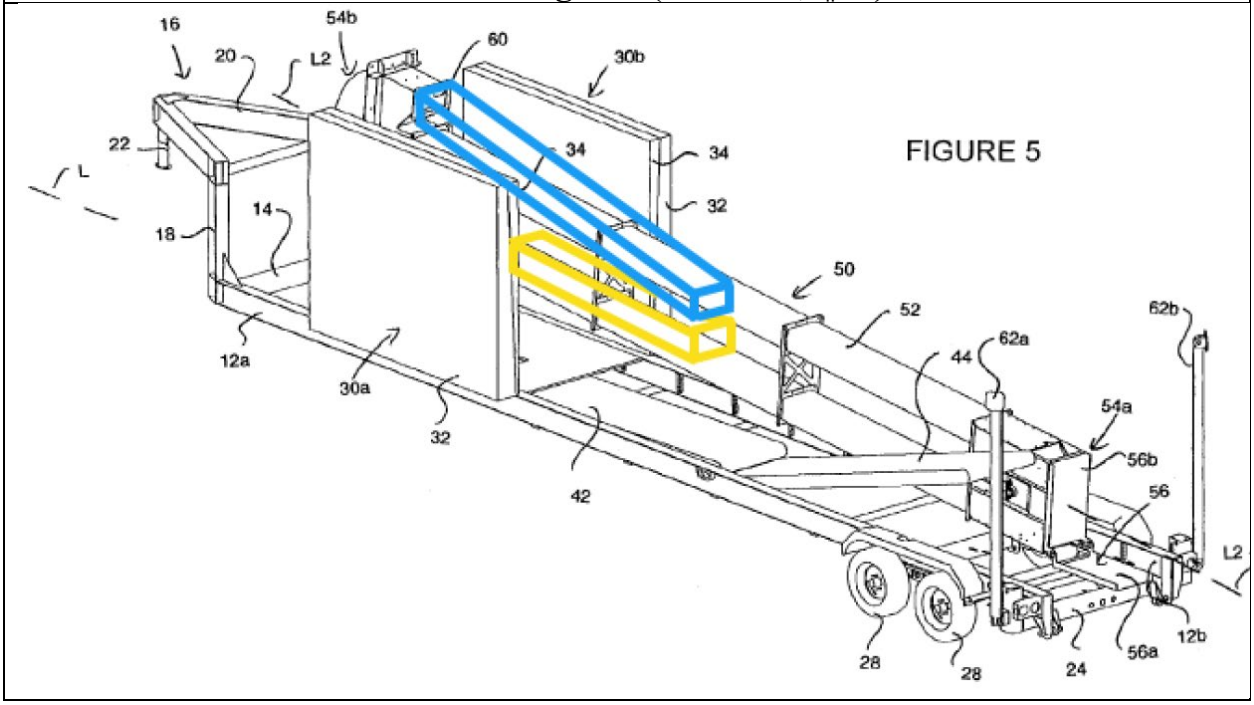
’689 Patent



Durham’s Diagram (Ex. 1110, ¶52)



Smith’s Diagram (Ex. 1111, ¶80)



Significantly, Solaris can point to ***nothing*** in *Waldner*, *Dynatek*, or ***any*** prior art reference showing this configuration. (*See* Ex. 2040, 86:16-87:14, 101:19-102:3.) All Solaris has is the conclusory testimony of its experts.

3. Belt Mistracking

Solaris acknowledges that belt mistracking was a potential problem but argues that POSITAs would know how to address it. (Reply, 12-13.) That is a convenient position to take in hindsight but is insufficiently supported. None of the "design techniques" and "well-known solutions" cited by Solaris's experts deal with a belt conveyor (let alone an articulated belt conveyor) that is repeatedly folded up for transport and then unfolded for operation high atop a bucket elevator. (*See* Exs. 1135-1137, 1150, *cited in* Ex. 1111, ¶¶70-76.) As Mr. Anderson emphasizes, it is that scenario that would cause POSITAs to doubt success. (Ex. 2004, ¶¶54-57; *see also* Ex. 2041, 13:19-15:21.) Masaba agrees that *Waldner* describes tilt sensors and support legs for leveling its base and keeping its bucket elevator vertical, but *Waldner* discloses nothing for keeping its chute side-to-side level (because there is no need to do so). (Ex. 2004, ¶58; Ex. 2003, 104:19-105:12; Ex. 2041, 62:22-64:10.) Likewise, *Dynatek* discloses nothing for ensuring its belt conveyors are side-to-side level after folding and unfolding (because *Dynatek* does not fold/unfold). (Ex. 2004, ¶58.) To address mistracking, the '689 inventors not only used a base leveling system but also (1) a belt-conveyor mounting system unlike *Waldner*'s or *Dynatek*'s

and (2) lock pins absent from *Waldner* or *Dynatek*—to ensure the belt conveyor is correctly positioned even after folding/unfolding. (Ex. 2004, ¶¶64-65; Ex. 2005, ¶14.) Although Solaris's experts argue that a base leveling system was known, neither expert identifies in the prior art a belt-conveyor mounting system or lock pins like the '689 Patent's. (*See* Ex. 1110, ¶¶44-46; Ex. 1111, ¶¶70-76.) Anderson's testimony on these points stands unrebutted.

4. *Dynatek*'s Weight

Solaris argues that POSITAs would know how to deal with *Dynatek*'s heavier weight. (Reply, 13-14.) But, tellingly, Solaris's experts cannot agree how. In one breath, the Petition, Durham, and Smith state that "a POSITA would attach the proximal end of *Dynatek's* truss frame to *Waldner's* bucket elevator frame using, for example, *Waldner's* brackets 252, links 256, and pins 258 or similar structures…." (Ex. 1110, ¶59; Ex. 1111, ¶101; Petition, 49.) But in another breath, Smith says that "[c]learly, a POSITA would have understood that a different mounting system would be required." (Ex. 1111, ¶91.) This contradiction highlights the lack of credibility in Solaris's case.

With respect to wind loads, Solaris argues that *Dynatek's* heavier conveyor would be more stable in wind. (Reply, 13 n.8.) But Solaris's experts would not support that assertion in deposition. (Ex. 2041, 66:16-67:15, 69:16-72:20; Ex. 2040, 84:21-86:15.)

5. Increased Reach and Range of Motion / Enhanced Mechanical Control / Increased Discharge Rates

Solaris silently concedes that its Petition provided no reason why *Waldner* would need ***more*** "range of motion and reach." (Reply, 5.) Instead, Solaris introduces a ***new*** motivation: "[to] increase [*Waldner*'s] reach ***independent of and without changing the discharge rate/speed from it***." (*Id*.) Likewise, Solaris concedes that it provided no explanation of "enhance[d] mechanical control." (Reply, 9.) Instead, Solaris introduces a ***new*** motivation: providing "a second point for lateral adjustments," thereby "providing better leverage and requiring less force to move the outlet." (Reply, 9-10.) Likewise, Solaris concedes that POSITAs would not combine *Dynatek* with *Waldner* to increase *Waldner*'s discharge rate. (Reply, 10.) Instead, Solaris introduces two ***new*** motivations: "[to] increase[] discharge rates from *Waldner*'s chute ***independent of its angle***" and "[to] decrease the weight on the chute or belt conveyor." (Reply, 10, 11.) Solaris also submits new evidence to argue that *Dynatek*-type conveyors "were ***well-known***." (Reply, 15.) This new evidence and argument is untimely, and the Board should disregard it. Its submission is an admission that the original arguments and evidence were insufficient.

Even if considered, these new arguments fail on the merits. Taking the last of the newly alleged motivations first, Solaris has not shown why the weight on *Waldner*'s chute would have been problematic. A system like *Waldner*'s is designed to handle the weight expected. (Ex. 2041, 56:20-24.) Solaris appears to argue that

POSITAs would choose a faster device ***so that*** it need not handle as much weight ***so that*** the faster device needs less strength ***so that*** the faster device can weigh less. That argument is convoluted, and it contradicts Durham's testimony that "faster" belt conveyors are generally heavier than chutes. (Ex. 2040, 10:1-2.)

With respect to the remaining three new motivations, Solaris's Petition never showed (1) why there is a problem with the force required to move *Waldner*'s chute, (2) why POSITAs would want *Waldner* to have more reach without changing a discharge rate or (3) why POSITAs would want *Waldner*'s chute to have a higher discharge rate independent of its angle. Indeed, Smith admitted that *Waldner* "would work just fine" for its designed purposes. (Ex. 2041, 31:13-32:4.) Masaba agrees that the shallower the angle of *Waldner*'s chute, the slower the speed at which aggregate will move along the chute, but there is no evidence that speed would have been a problem—and the Petition does not propose any concrete applications for which *Waldner*'s configuration might be a problem.

The Reply, however, does—once again improperly raising additional new arguments. The Reply posits scenarios in which *Waldner* is used to fill "additional silos" where "[s]pace is limited," particularly where either one silo is too close for *Waldner*'s chute or the other silo is too far. (Reply, 5-7.) Specifically, the Reply focuses on using *Waldner* "to convey dry sand into [Solaris's] silos that predated the '689 Patent." (Reply, 8-9.) But the Petition presents none of these scenarios. Solaris

is effectively attempting to amend its obviousness theory from obviousness based on *Waldner* and *Dynatek* ***in view of the (vague and general) motivations presented in the Petition*** to obviousness based on *Waldner* and *Dynatek* ***in view of Solaris's six-pack silo configuration***. That is improper.

Even if considered, this new theory fails. Durham testified that "*Waldner*'s system could reach all six silos in a six-pack configuration" and that "a POSITA would know how to configure *Waldner* properly to reach all six silos of a six-pack." (Ex. 2040, 37:21-38:8, 51:23-25.) Thus, presenting POSITAs with the Solaris silo configuration does not point to a *Waldner/Dynatek* combination. Furthermore, the real-world evidence shows that when Solaris presented that problem to Solaris's and Masaba's engineers, a solution was far from obvious. Solaris's engineer, Weinstein, was aware of bucket elevators with discharge chutes like *Waldner*'s, was aware of articulated loaders similar to *Dynatek*'s, was aware of Solaris's silo configuration, and had been thinking about the problem—without coming up with a solution—for ***seven years***. (Ex. 2042, 35:19-36:18, 29:3-21, 10:4-8, 17:10-21, 47:1-18; Ex. 1112, ¶¶10-11.) If the solution had been obvious, (1) Weinstein, with over 20 years of mechanical design experience, would have found a solution without having to hire Anchor/Masaba, (2) the Masaba engineers would not have required multiple iterations to invent a solution, (3) there would have been no skepticism about bucket elevators, (4) there would have been no praise by Solaris of Masaba's design, and

(5) there would have been no patenting of the solution by Solaris. (*See* POR, 3-22, 70-73.) Unsurprisingly, Weinstein admits that when he hired Anchor/Masaba, he did not have Masaba's eventual (and allegedly obvious) solution in mind, despite thinking about it for years. (Ex. 2042, 47:1-48:1, 10:4-8, 17:10-21.)

Thus, the real-world evidence shows that the Petition's vague and general motivations to "increase reach and range of motion," "increase discharge rates," and "enhance mechanical control" would not have rendered the claimed invention obvious. Nor would have Solaris's new, improper, and more specific motivations, including the motivation to make *Waldner* work with Solaris's silos.

C. Claim 6

Solaris asserts that *Dynatek*'s truss frame is a "conveyor support frame" (Reply, 16-17), even though the '689 Patent describes a "truss frame" and calls something else the "conveyor support frame." Solaris's argument is that the claim 6 phrase "on the aggregate elevating assembly" specifies the extension conveyor's location, not the conveyor support frame's location. (Ex. 1110, ¶56 *cited in* Reply, 17.) But in the disclosed/preferred embodiment, extension conveyor 122 is "positioned ***adjacent to*** the deployable frame 62 of the aggregate elevating assembly 60," not ***on*** it. (Ex. 1001, 9:52-53.) Thus, Solaris's claim construction would cause claim 6 to fail to read on the preferred/disclosed embodiment, which is "rarely, if

ever, correct." *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996).

Therefore, Solaris is left arguing that the "conveyor support frame" is satisfied by *Waldner*'s brackets 252a/252b, links 256/262, and pins 258/264 taken "collectively." (Petition, 49.) Solaris argues that links 256/262 and pins 258/264 are "moveable." (Reply, 17.) But claim 6 requires more. It requires a "conveyor support frame" that is "movable ***with respect to the deployable frame*** of the aggregate elevating assembly ***when the extension conveyor moves between the lowered position and the raised position***." (Ex. 1001, 17:40-44.) Solaris's Reply provides no answer to the POR's arguments regarding these requirements. (POR, 43-45; Reply, 16-17.)

D. Claim 7

The Petition points only to actuator 270 as the "extension conveyor lift structure" of claim 7. (Petition, 50-51.) And Solaris concedes that actuator 270 moves *Waldner*'s chute horizontally, not vertically as claim 7 requires. (POR, 48; Reply, 17.) Instead, Solaris introduces an improper new theory in which *Dynatek*'s "truss frame" is the "conveyor support frame" of claim 7 and actuator 266 is the "extension conveyor lift structure." (Reply, 17.) That theory is not in the Petition and should be disregarded. In any event, *Dynatek*'s "truss frame" is not a "conveyor support frame" for claim 7 for the same reasons as claim 6.

IV. Ground 1A: Solaris Has Failed to Prove Obviousness Based on *Waldner*, *Dynatek*, and *Sleeman*

Ground 1A of the Petition points to *Sleeman*'s actuator 68 as the "extension conveyor lift structure" of claims 6 and 7. (Petition, 72-73.) Solaris does not dispute that actuator 68 moves *Sleeman*'s chutes horizontally, not vertically as claims 6 and 7 require. (POR, 51-52; Reply, 18.) Instead, Solaris introduces an improper new theory relying on *Sleeman*'s actuator 70. (Reply, 18.) That theory is not in the Petition and should be disregarded. Even if it is considered, Ground 1A fails to satisfy the claim 6 and 7 requirements associated with the "conveyor support frame" for the same reasons as Ground 1.

V. Ground 2: Solaris Has Failed to Prove Obviousness Based on *Waldner*, *Dynatek*, and *Pham*

The Petition's proffered reason for using *Pham* is to make the *Waldner*/*Dynatek* combination "more easily convertible and transportable on *Waldner*'s trailer." (Petition, 76, 79.) Solaris's Reply repeats that reason in different words: to "facilitate collapsing the discharge chute into the stowed position." (Reply, 19.) But the Reply provides no answer to the fact that *Waldner* already has that functionality. (POR, 54; Reply, 19.) Thus, the proffered reason to use *Pham* is not a reason at all.

Solaris also does not dispute that "substituting…*Pham*'s support frame and articulation mechanism…for…*Waldner*'s brackets 252" (Petition, 76-77) would not

satisfy claim 1's requirement for rotation in the horizontal direction. (POR, 55-56; Reply, 19.)

VI. Ground 3: Solaris Has Failed to Prove Obviousness Based on *Waldner*, *Dynatek*, and *Auld*

A. Solaris Has Not Proven That *Auld* is Analogous Art

Solaris has the burden to establish that *Auld* is "analogous art." *See K-Tec, Inc. v. Vita-Mix Corp*., 696 F.3d 1364, 1374-76 (Fed. Cir. 2012). A reference is "analogous art" to the '689 Patent if it is "from the same field of endeavor" or "reasonably pertinent to the particular problem with which the inventor is involved." *In re Clay*, 966 F.2d 656, 659 (Fed. Cir. 1992). Solaris argues only that *Auld* and the '689 Patent have the same field of endeavor. (Reply, 20.) Specifically, Solaris argues that because *Auld* "involves handling aggregate materials" such as gravel, its field is the same as the '689 Patent's. (*Id*.) But that is improper reasoning.

In *In re Clay*, the Sydansk reference taught "the use of a gel in unconfined and irregular volumes within generally underground natural oil-bearing formations." 966 F.2d at 659. In contrast, Clay's application taught "the introduction of gel to the confined dead volume of a man-made storage tank." *Id*. The PTO concluded that Sydansk had the same field of endeavor as Clay's application, namely "maximizing withdrawal of petroleum stored in petroleum reservoirs." *Id*. The Federal Circuit reversed, explaining that "Clay's field of endeavor is the *storage* of refined liquid hydrocarbons" but Sydansk's field was "the *extraction* of crude petroleum." *Id*. In

other words, the mere fact that both involved using gel and hydrocarbons was insufficient.

That same conclusion applies here. Although *Auld* involves using gravel, it is gravel (and other ingredients) used in mixing concrete. *Auld*'s title is "Cement Mixing Plant." In contrast, the '689 Patent's title is "Aggregate Transferring System." The fields of "transferring aggregate" and "cement mixing" are not the same.

Solaris also emphasizes that *Waldner* references a "mobile concrete batching system" in its "background," arguing that *Auld* is "sufficiently analogous to *Waldner*." (Reply, 20.) Once again, this is improper reasoning. Solaris must prove that *Auld* is analogous art to the '689 Patent, not to *Waldner*. *Sanofi-Aventis Deutschland GmbH v. Mylan Pharmaceuticals, Inc*., 66 F.4th 1373 (Fed. Cir. 2023) (rejecting argument that prior art was analogous to another prior art reference rather than to the patent at issue).

B. A POSITA Would Not Use *Auld*'s Teachings to Attach a Kingpin to *Waldner*'s Bucket Elevator

Solaris relies heavily on *Waldner*'s express suggestion that "[o]ther hitch types may alternatively be employed." (Reply, 21 (citing Ex. 1004, 12:28-34).) But the issue is not one of swapping a kingpin for the gooseneck connection on *Waldner*'s trailer. Rather, the issue is whether it would have been obvious to **chop the front off *Waldner*'s trailer** (including its gooseneck connection) and to **put a**

kingpin on *Waldner*'s bucket elevator. That is more than "employ[ing]" an "[o]ther hitch type[]."

Nothing in the prior art submitted with the Petition suggests such a radical change. Solaris says that POSITAs would have thought of this modification in order to "reduce the framing material" for the trailer. (Reply, 21.) But nowhere does *Auld* teach that the purpose of its configuration was to "reduce the framing material" needed for a trailer. Nowhere does the Petition point to such a teaching in the prior art. Solaris only points to the conclusory testimony of its hired-gun electrical engineer. (Reply, 21.)

Solaris complains that Masaba's expert focuses on differences between *Auld* and *Waldner* and "doesn't explain why those differences would discourage POSITAs from combining their teachings." (*Id*.) But he does. (Ex. 2004, ¶146.) Moreover, it is ***Solaris*** that has the burden to show that chopping off *Waldner*'s trailer and attaching a kingpin to *Waldner*'s bucket elevator would have been obvious despite those differences.

Apparently sensing that its *prima facie* case is unpersuasive, Solaris submits new evidence, arguing that "'frameless trailer' and hitches mounted directly on wheel-mounted conveyors ***were well-known***." (Reply, 21.) But the Petition pointed only to *Auld*. Such improper reply argument and evidence should be disregarded.

Solaris also takes issue with Masaba's evidence showing that even if POSITAs had thought of Solaris's proposal, there would have been doubts about success because the bucket elevator is off-center on *Waldner*'s trailer. (Reply, 21.) Solaris says that POSITAs would have fixed that problem by making even more drastic changes to *Waldner*: "centering *Waldner*'s bucket elevator on the trailer, extending its frame 50, or adjusting the trailer's width." (Reply, 22.) But instead of providing evidence that POSITAs would do that, Solaris cites to testimony that presents improper new *prima facie* theories. Whereas the Petition posited a kingpin on the uncentered bucket elevator in *Waldner*'s first embodiment, Solaris's new testimony relies on *Waldner*'s third embodiment (which—puzzlingly—also has an uncentered bucket elevator) and on a centered set of bucket elevators in *Sleeman*, neither of which the Petition cites for that purpose. (*Compare* Petition, 82-83 *with* Ex. 1110, ¶¶65-68 and Ex. 1111, ¶¶107-111, *cited in* Reply, 22.) That switch to new theories is impermissible.

VII. Ground 4: Solaris Has Failed to Prove Obviousness Based on *Waldner*, *Dynatek*, and *McIver*

Solaris concedes that *McIver*'s components are not "more compact" than *Waldner*'s but alludes to the Petition's argument that *McIver*'s system "is more compact ***and*** has a longer range of motion." (Reply, 22; Petition, 92.) But both *McIver*'s silo and *Waldner*'s bucket elevator have the same range of motion, rotating

between the same horizontal and vertical positions. Solaris has identified no real "motivation" for modifying *Waldner* with *McIver*.

Solaris also improperly introduces a new *prima facie* theory. The only evidence submitted with the Petition addressing claim 13's "articulated" requirement was testimony that *McIver*'s rocker arm 204 is articulated. (Ex. 1003, ¶394.) Now, Solaris argues that the "articulated" requirement is met by *McIver*'s elements 204, 206, *and* 210. (Reply, 22-23.) That switch in theories is improper.

VIII. The Objective Evidence Confirms There Was No Obviousness

The objective evidence confirms that Solaris's obviousness case should be rejected. Solaris has no good rebuttal to that evidence.

Solaris argues that "the Board cannot presume nexus between Petitioners' commercial top fill system and the '689 Patent" because "[Masaba] presents no testimony that Petitioners'…systems satisfy all requirements of any '689 Patent claim." (Reply, 23.) But only evidence—not testimony—is required. *Nuna Baby Essentials, Inc. v. Britax Child Safety, Inc.*, IPR2019-00663, 2020 WL 5261299, at *22-23 (PTAB Sept. 2, 2020).

Masaba presented ample evidence. Photographs of Solaris's system as well as Solaris's brochures, presentations, and animations clearly show that its system has all the elements of the claims at issue and is coextensive with them. (Exs. 2007, 2008, 2011, 2025-2030, 2005 ¶¶17-21 & Appx. B).) And Masaba's infringement

complaint confirms where all those elements are. (Ex. 2037, pp. 68-95.) The conclusion that Solaris's Top Fill system embodies the claims is not surprising since Solaris used Masaba's design in making it (Ex. 2042, 57:25-58:16, 83:2-84:25) and since it is substantially identical to the Masaba unit depicted in the '689 Patent. Tellingly, the *only* claim element that Solaris says is missing from its Top Fill system is "unloader ramps." (Reply, 26.) But Solaris's system clearly uses such ramps, as shown in Exhibits 2008 (p. 9), 2011 (p. 11), 2025 (p. 1), 2026 (p. 1), and 2029 (pp. 3-4), and at least claims 18-25 do not require such ramps in any event. Thus, there is a presumption of nexus.

Solaris next argues that the nexus presumption is rebutted because Solaris's praise and the Top Fill's commercial success is attributable to the system's transportability and ability to accept belly-dumped sand, features in the *Waldner* and *Sleeman* prior art. (Reply, 23-24.) But to rebut the nexus presumption, Solaris must prove that the praise and commercial success are due ***solely*** to those prior art features and not due to ***a combination that includes*** those features. *Ecolochem, Inc. v. Southern California Edison Co.*, 227 F.3d 1361, 1378 (Fed. Cir. 2000). Solaris ***cannot*** meet that burden because the Top Fill's ability to accept belly-dumped sand depends on its bucket elevator and articulated belt conveyor. In arguing for obviousness, Solaris asserts that *Waldner*'s (or *Sleeman*'s) chutes would not work as well as an articulated belt conveyor and therefore it would have been obvious to

get better performance by using it. But in arguing for the rebuttal of the nexus presumption, Solaris asserts the Top Fill's success has nothing to do with the articulated belt conveyor. Solaris cannot have it both ways. Either there would have been no reason for POSITAs to use an articulated belt conveyor or the Top Fill's success shows that its use would not have been obvious despite that reason.

Solaris argues that Masaba "does not explain how the alleged praise or commercial success" stems from non-prior-art features. (Reply, 25.) But given the nexus presumption, that argument improperly places the burden on Masaba to show a nexus to non-prior-art-features. In *WBIP, LLC v. Kohler Co.*, 829 F.3d 1317, 1330-31 (Fed. Cir. 2016), the Federal Circuit rejected Solaris's argument because the objective indicia might be linked to the combination as a whole.[2]

Solaris next argues that Masaba's unit was "a commercial failure" because its axle broke. (Reply, 25; Ex. 1112, ¶35.) But after repairs, Masaba's unit was delivered to Solaris, had no further axle problems, and was used to fill silos. (Ex. 2005, ¶21; Ex. 2042, 97:1-22.) Indeed, Solaris touted Masaba's unit to its investors as an "Innovation" and as one of Solaris's "[i]nnovative products & [s]olutions," not as a "commercial failure." (Ex. 2008, pp. 5, 8, 9; Ex. 2011, p. 4.) In its Q4 2021

[2] The cases Solaris cites are distinguishable because they did not involve the nexus presumption or because the praise/success was due *solely* to something other than the claimed invention, such as a prior art feature.

earnings call, Solaris told investors that it had two Top Fill Systems—one of which was clearly Masaba's unit—and that Solaris used those two systems "to optimize trucking," leading to "improved profit per system," "additional profitability per system," and "significant incremental growth." (Ex. 2012, 2:36-3:08, 20:21-20:48.) The Masaba unit's success caused Solaris to make an entire fleet of copycat Top Fill units. (Ex. 2042, 57:25-58:16, 83:2-84:25.) Masaba's unit was clearly not a "commercial failure."[3]

Solaris next argues it did not copy Masaba's unit. Solaris asserts that mere infringement is not copying and that the systems' similar dimensions do not evidence copying because "both systems were built to fit dimensions of preexisting [Solaris] silos and trucks." (Reply, 26.) Those arguments miss the point. Masaba is not arguing that there is copying because there is infringement. The copying is apparent because the two systems look substantially identical and because Solaris admitted using Masaba's unit in making Solaris's fleet. (Ex. 2042, 57:25-58:16, 83:2-84:25.) The closeness of the dimensions only confirms the copying, and the fact that some of those dimensions are dictated by function does not change that fact. All of Masaba's initial concepts beginning in August 2020 ***also*** had dimensions dictated

[3] Solaris argues that "despite attempts to market its patented design to other companies, [Masaba] has not built or been able to sell another unit since." (Reply, 25-26.) But that does not diminish the incredible success that the patented design has enjoyed with Solaris.

by Solaris's silos, but they look very different from the unit that Masaba delivered to Solaris and that Solaris copied. (*Compare* Ex. 2005, ¶¶4-12 *with* Ex. 2005, ¶¶ 17-19, 21 *and* Exs. 2007, 2008, 2011, 2025-2030.) In contrast, the similarity between Masaba's unit and Solaris's system is striking.

Solaris also argues that there was no copying because the '689 Patent published "after Petitioners launched their own units in 2022." (Reply, 26.) But Masaba is not arguing that Solaris's copycat system was derived from the '689 Patent; Solaris admits it was derived from the Masaba unit delivered to Solaris. (Ex. 2042, 57:25-58:16, 83:2-84:25.)

Finally, Solaris argues that its own patent—disclosing a copy of Masaba's unit and claiming the same subject matter claimed here—is not relevant. (Ex. 2031; Reply, 26-27 & n.21.) But the cases Masaba cited show that it ***is*** relevant; the fact that those cases are "non-controlling" does not diminish their persuasive value. And common sense holds that Solaris's representations regarding its patent undercut its arguments concerning the '689 Patent. Solaris argues that Masaba has "fail[ed] to compare" the "disclosure or claims" of Solaris's patent to the '689 claims. (Reply, 26-27.) Incorrect. Masaba pointed to Figures 1 and 3-9 as "describing the very same system that Masaba…delivered in October 2021" and pointed to claim 6 of Solaris's

patent as "claiming patentability for the very system that Solaris now says would have been obvious." (POR, 22.)[4]

In summary, Solaris's attacks on the objective, real-world facts do not withstand scrutiny. It is simply not credible for Solaris to argue that the invention that it commissioned Masaba to invent—and that it has praised, copied, profited from, and patented—was obvious all along.

IX. Conclusion

Solaris has not proven that claims 1-25 are unpatentable for obviousness.

DATED this 30th day of September, 2025.

Respectfully submitted,

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[4] Weinstein's declaration asserts that Masaba's invention was based on "obvious design choices." (Ex. 1112, ¶¶10, 34.) However, Petitioner's counsel instructed Weinstein not to answer questions concerning his contrary representations to the USPTO as a named inventor on Solaris's patent, which would have impeached him. Counsel called the Board to resolve the dispute and left a voice message but have not received a ruling. (Ex. 2042, 103:23-107:8.)

WORD COUNT CERTIFICATION

Pursuant to 37 C.F.R. § 42.24(d), I hereby certify that, according to the word-processing system used to prepare it, the foregoing **Patent Owner's Sur-Reply**, is 5,599 words in length, excluding those portions exempted by 37 C.F.R. § 42.24(a).

/Chad Nydegger/
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CERTIFICATE OF SERVICE

Pursuant to 37 C.F.R. §§ 42.6, I hereby certify that on this 30th day of September, 2025, I caused the foregoing **Patent Owner's Sur-Reply** to be served via email, on the following counsel of record for Petitioner at the email addresses below:

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