

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

NISSAN MOTOR CO., LTD.,

Petitioner,

v.

LONGHORN AUTOMOTIVE GROUP LLC,

Patent Owner,

Patent No. 7,513,238B2 to Pfaff *et al.*

Issue Date: April 7, 2009

Title: DIRECTLY INJECTING INTERNAL COMBUSTION ENGINE

Inter Partes Review No.: IPR2025-01089

**PETITIONER'S OPPOSITION TO PATENT OWNER'S REQUEST FOR
DISCRETIONARY DENIAL OF INSTITUTION**

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35 U.S.C. §103(a)	<i>passim</i>
37 C.F.R. §42	<i>passim</i>

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1001	U.S. Patent No. 7,513,238B2 (the “’238 Patent”)
1002	Complaint filed in <i>Longhorn Automotive Group LLC v. Nissan Motor Co., Ltd.</i> , 2:24-cv-00397-JRG (E.D. Tex.) (May 31, 2024)
1003	Plaintiff’s “Appendix C: Claim Chart for U.S. Patent 7,513,238” served in <i>Longhorn Automotive Group LLC v. Nissan Motor Co., Ltd.</i> , 2:24-cv-00397-JRG (E.D. Tex.) (Nov. 22, 2024)
1004	Declaration of Dr. Glenn R. Bower Ph.D., PE
1005	Japanese Utility Model Application Publication No. S58-102720 to Ishida (“Ishida”) and Certified Translation Thereof
1006	Japanese Patent Application Publication No. 2697100 to Takatomo <i>et al.</i> (“Takatomo”) and Certified Translation Thereof
1007	U.S. Patent Application Publication No. 2002/0117146 to Gatellier <i>et al.</i> (“Gatellier”)
1008	U.S. Patent No. 6,314,933 to Iijima <i>et al.</i> (“Iijima”)
1009	Japanese Patent Application Publication No. S54-74012 to Oota (“Oota”) and Certified Translation Thereof
1010	Prosecution history of the ’238 Patent
1011	U.S. Patent No. 6,161,518 to Nakakita <i>et al.</i> (“Nakakita”)
1012	U.S. Patent Application Publication No. 2003/0217732 to Kataoka <i>et al.</i> (“Kataoka”)
1013	U.S. Patent Application Publication No. 2004/0123832 to Quigley <i>et al.</i> (“Quigley”)

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Exhibit No.	Exhibit Name
1014	“Visualization and Analysis of the Impingement Processes of a Narrow-Cone DI Gasoline Spray,” <i>SAE Technical Paper Series</i> , 2001-01-2023, Published May 7, 2001, by Park <i>et al.</i> (“Park”)
1015	“Internal Combustion Engine Fundamentals,” John B. Heywood, 1988 (“Heywood”)
1016	European Patent Application Publication No. 0697511 to Sekiguchi <i>et al.</i> (“Sekiguchi”)
1017	Excerpts from “Diesel-engine management”; 2 nd Ed., Bosch, 1999 (“Bosch”)
1018	“Assignment abstract of title for Application 10577797;; https://assignment.uspto.gov/patent/index.html#/patent/search/resultAbstract?id=7513238&type=patNum
1019	National Judicial Caseload Profile Trial Statistics
1020	Docket Navigator, Gilstrap IPR Stay Motion Success Statistics
1021	Docket Navigator, Gilstrap Reexam Stay Motion Success Statistics
1022	Judge Rodney Gilstrap’s Calendar of Jury Selections (June 1, 2026)
1023	Judge Rodney Gilstrap’s Time to Trial Statistics
1024	Docket Navigator, Judge Rodney Gilstrap Profile
1025	Second Amended Docket Control Order
1026	“Nissan celebrates 700,000 Murano crossovers assembled in the U.S.”; https://usa.nissannews.com/en-US/releases/nissan-

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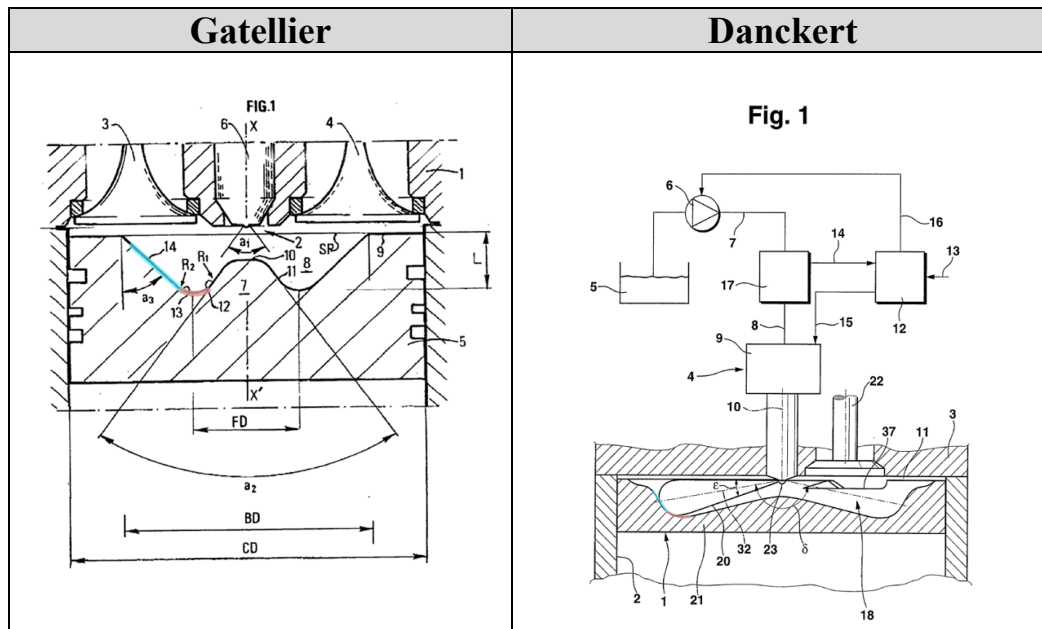
Exhibit No.	Exhibit Name
	celebrates-700000-murano-crossovers-assembled-in-the-us, June 24, 2025
1027	"Nissan aims to 'max out' U.S. production plant amid Trump's tariffs"; https://www.cnbc.com/2025/04/16/nissan-us-production-plant-trump-tariffs.html , April 16, 2025
1028	German Patent Application Publication No. 19649052 to Danckert <i>et al.</i> ("Danckert") and Certified Translation Thereof

I. INTRODUCTION

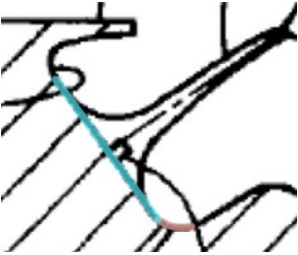
This Petition should be referred to the Board for correction of a material mistake made by the Examiner in allowing claims to issue based on a purportedly novel engine piston geometry that was well known in the prior art. Indeed, the very references identified in the background of the '238 Patent at issue disclose the purportedly novel ascending planar surface of the piston recess. This Petition should also be referred in view of its strong technical merit, as the prior art is replete with examples of the claimed piston geometry. These considerations, together with proper analysis of the *Fintiv* factors, render discretionary denial inappropriate in this case.

First, the Examiner mistakenly allowed the Challenged Claims based on an allegedly distinguishing feature that was actually disclosed in the very prior art discussed in the background of the '238 Patent. During prosecution, the Applicant argued, and the Examiner accepted, that the cited prior art failed to disclose a “surface of the piston recess adjoining the elevation” where “the surface is substantially planar and has an ascending gradient” [hereafter the “ascending planar surface adjoining the elevation”]. But, not only was this feature disclosed in the prior art discussed in the background of the '238 Patent, it was ubiquitous in internal combustion engine design at the time of the alleged invention.

The '238 Patent background identifies two prior art internal combustion engine piston designs—Gatellier and Danckert. As shown below, both designs clearly disclose a piston with a recess having an elevation in its central region and the purportedly novel ascending planar surface adjoining the elevation:



Second, the Examiner additionally erred overlooking other prior art references that also clearly disclose the purportedly novel ascending planar surface adjoining the elevation, and which demonstrate the strong technical merit of the petition. Ishida and Takatomo—the two primary references included in the Petition—clearly disclose a piston with a recess having an elevation in its central region and the purportedly novel ascending planar surface adjoining the elevation:

Ishida	Takatomo
	

Other *Fintiv* considerations warrant the referral. Petitioner and its U.S.-based affiliate, Nissan North America, began volume production of vehicles including the accused piston technology nearly ten years ago and, in that time, have never been sued by non-practicing Patent Owner Longhorn or its predecessors in interest to the '238 Patent. Now, in district court proceedings involving the '238 Patent, Longhorn asserts the '238 Patent alongside four other entirely unrelated patents. None share an applicant, inventor, subject matter, original assignee, or priority relationship with the '238 Patent. None are directed to internal combustion engine design, much less the '238 Patent's specific piston geometry. These kinds of sprawling allegations by a patent owner weigh against any settled expectations stemming from the patent's age.

Patent Owner's arguments range from procedural errors (e.g., identifying only a preliminarily scheduled trial date, not the statistics-based trial date as embraced by

the Board), to legal errors (e.g., considering under *Fintiv* Factor 1 whether a stay is likely pre-institution instead of post-institution).

Taking all the facts, evidence, circumstances, and other considerations together, discretionary denial is not appropriate. Petitioner respectfully requests the Petition be referred to the Board for merits assessment.

II. REFERRAL IS WARRANTED IN VIEW OF THE EXAMINER'S MISTAKE AND THE TECHNICAL MERIT OF THE PETITION

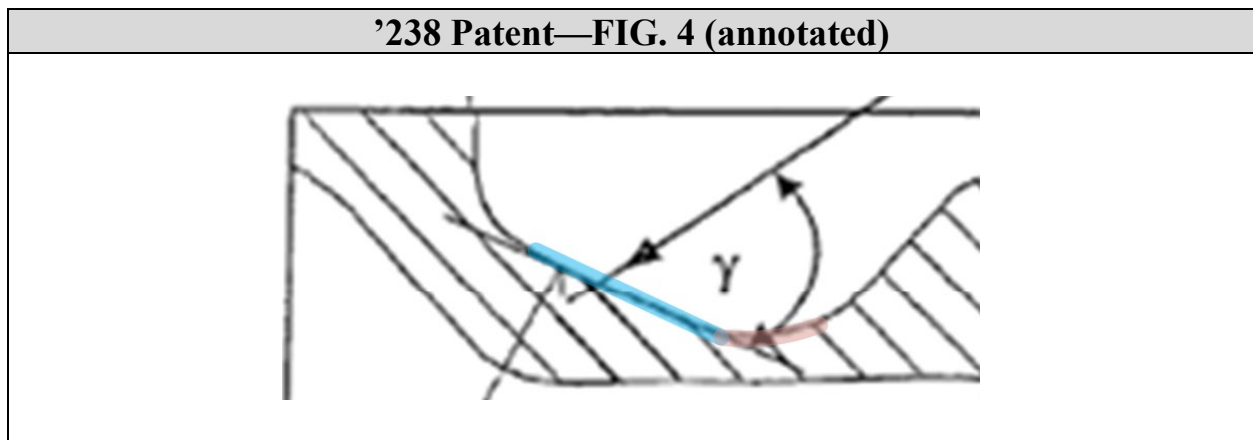
A. The Examiner Erred by Overlooking The Planar Ascending Surfaces of Gatellier and Danckert—Both Discussed in Background of the '238 Patent

The Examiner overlooked that the prior art discussed in the '238 Patent background disclosed pistons having the ascending planar surface adjoining the elevation that the Applicant argued rendered the claims patentable, and, as a direct result, improperly allowed the claims.

During prosecution of the '238 Patent, the Examiner mailed a non-final Office Action on September 19, 2008, rejecting application claim 11 (which later issued as claim 1 of the '238 Patent) under pre-AIA 35 U.S.C. §102(b) as being anticipated by each of Nakakita (EX. 1011), Kataoka (EX. 1012), and Quigley (EX. 1013). EX. 1010, 40-43. In its response of December 19, 2008, the Applicant amended claim 11 as follows:

Claim 11 (Currently Amended): A directly injecting internal combustion engine, comprising at least one cylinder which has a combustion space in which a piston executes an oscillating movement, and an injection nozzle for injection of fuel into the combustion space, wherein the piston ~~has~~ has a piston recess, which, in a central region thereof, has an elevation extending in a cylinder head direction, and a surface of the piston recess adjoining the elevation in a recess edge direction is connected to the elevation via a radius so that an injection jet impinging ~~in this region~~ the surface and injected as early as possible is distributed both in a elevation direction and in the recess edge direction, and the surface is substantially planar and has an extent-ascending gradient in the recess edge direction such that an injection jet injected as late as possible impinges onto the surface, the last-mentioned injection jet being distributed both in the elevation direction and in the recess edge direction.

Id., 30. Figure 4 below—annotated to reflect the amendment's ascending planar surface adjoining the elevation—depicts the claimed geometry of the '238 Patent:

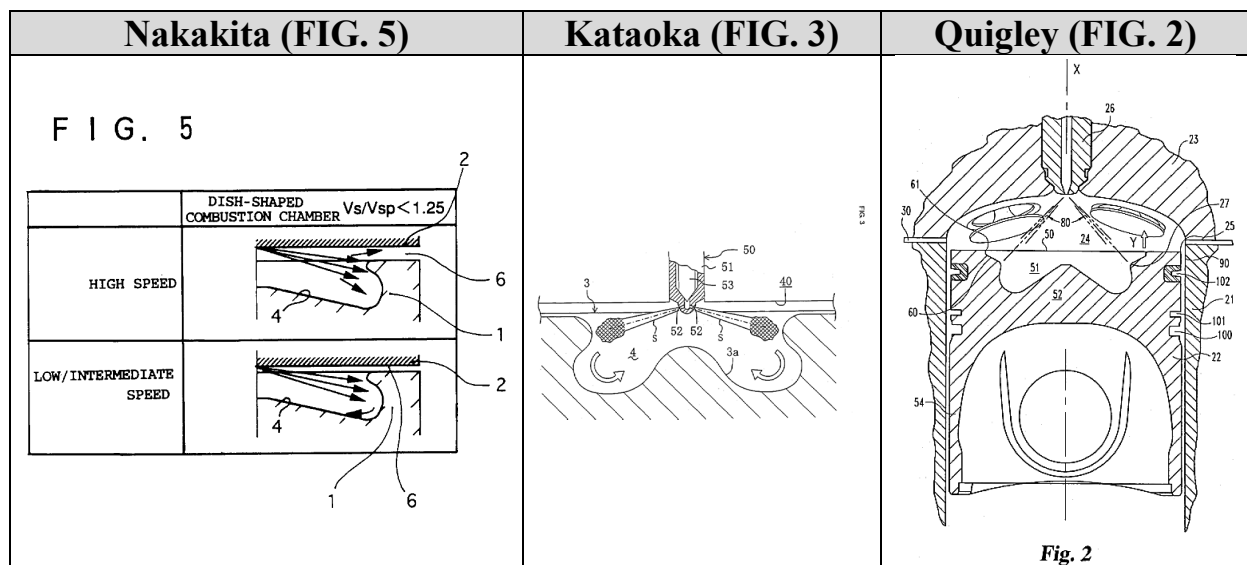


In accompanying remarks, the Applicant pointed to “[t]he amendments to Claim 11,” and argued that “[t]he claimed geometry [of claim 11]” allows the directly

injecting engine to operate with both a homogenous operator and a conventional combustion operation by ensuring that the injection jet impinges at the piston recess for optimal intermixing of fuel and air independently of the injection time point as described at paragraph [0009] of the Specification.” *Id.*, 33 (emphasis added).

The Applicant then turned to the three cited references—Nakakita, Kataoka, and Quigley—arguing that they “do not show or suggest the claimed geometry in amended Claim 11.” *Id.* Coupled with amending application claim 11 to recite that the surface of the piston recess adjoining the elevation is substantially planar and has an ascending gradient, the Applicant argued that this feature was not found in the cited art: “Nakakita et al’s piston does not have a surface with an ascending gradient. The Kataoka et al piston does not have a substantially planar surface anywhere in the recess. The Quigley et al piston does not have the claimed surface adjoining the elevation in terms of an ascending gradient. Nothing in the teachings of the cited documents would have led to the present invention.” *Id.* (emphasis added). In response, the Examiner mailed a Notice of Allowance without comment. *Id.*, 15. In short, the Applicant’s only argued basis for patentability was the ascending planar surface adjoining the elevation (*i.e.*, the geometry of the piston recess).

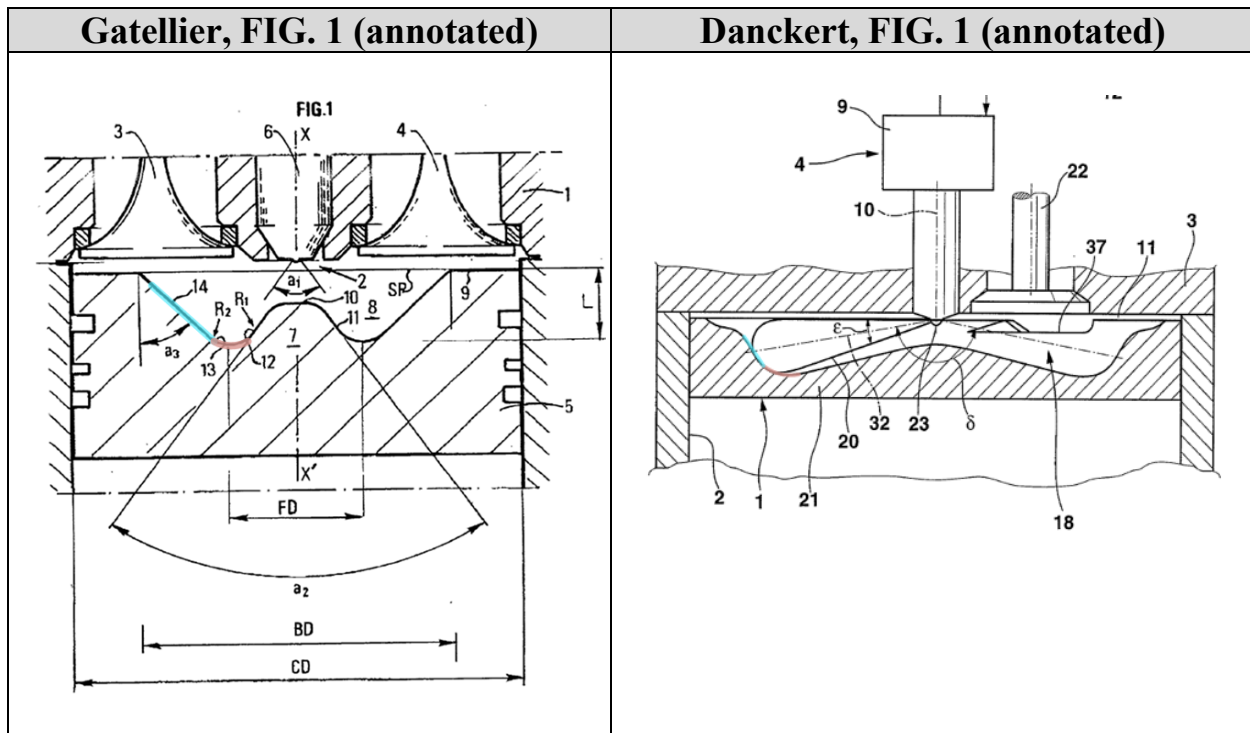
Although entirely non-novel, the amendment and accompanying argument was apparently persuasive to the Examiner; likely because, as shown below, Nakakita and Kataoka each disclose a curved surface adjoining the elevation, rather than the required ascending planar surface. And, as the Applicant noted, Quigley “does not have the claimed surface adjoining the elevation in terms of an ascending gradient.” *Id.*, 33 (*i.e.*, the outer planar portion of Quigley's recess does not adjoin the elevation).



But contrary to the Applicant's position during prosecution, and overlooked by the Examiner, the prior art is replete with piston geometries having a piston recess with an elevation in a central region and an ascending planar surface adjoining the elevation.

Both Gatellier and Danckert are discussed in the '238 Patent background (*see*

EX. 1001, 1:16-20 (discussing Gatellier) and 1:21-24 (discussing Danckert)), and, as shown below, teach pistons with a recess having an elevation in the central region of the piston recess and the purportedly novel ascending planar surface adjoining the elevation:

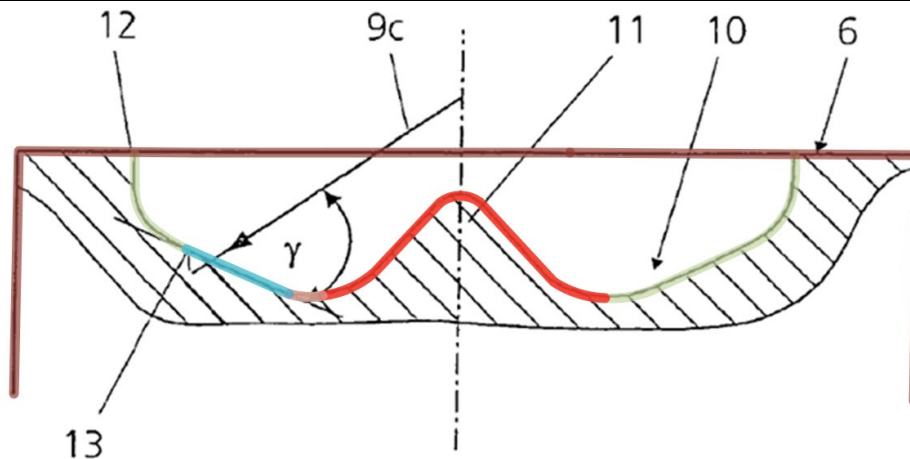


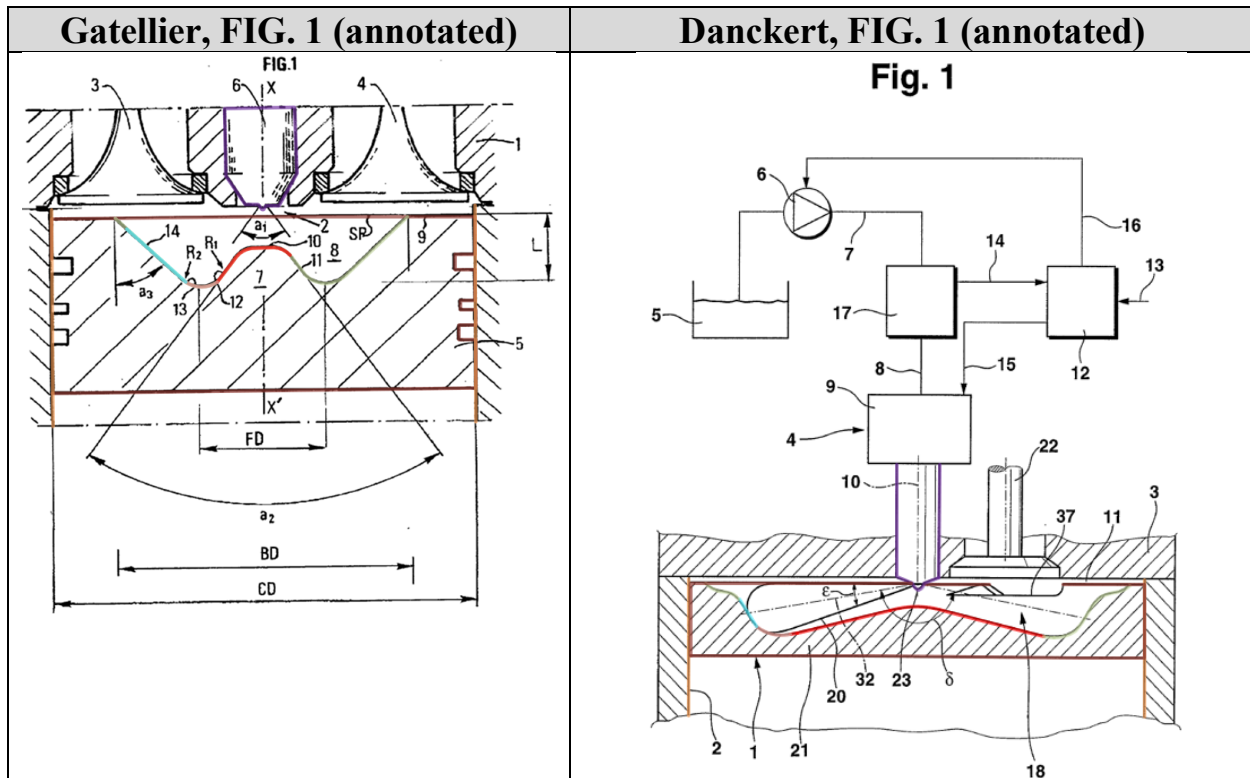
More than that, Gatellier and Danckert disclose at least all the structural features of Claim 1, as the side-by-side figures below illustrate.

'238 Patent—Claim 1

A directly injecting internal combustion engine, comprising
at least one **cylinder** which has a combustion space in which a **piston** executes an oscillating movement, and an **injection nozzle** for injection of fuel into the combustion space,
wherein the **piston** has a **piston recess**, which, **in a central region thereof, has an elevation** extending in a cylinder head direction,
and a **surface** of the piston recess adjoining the **elevation** in a recess edge direction is connected to the **elevation via a radius** so that an injection jet impinging the surface and injected as early as possible is distributed both in a elevation direction and in the recess edge direction,
and the **surface is substantially planar and has an ascending gradient** in the recess edge direction such that an injection jet injected as late as possible impinges onto the surface, the last-mentioned injection jet being distributed both in the elevation direction and in the recess edge direction.

'238 Patent, FIG. 4 (annotated)





It was material error that the Examiner failed to appreciate Gatellier's and Danckert's disclosures, both of which are straightforward and explicitly disclose the planar ascending surface adjoining the elevation feature—and, in fact, every other structural limitation of Claim 1.

In response to the Applicant's December 19, 2008 amendments and arguments concerning the ascending planar surface adjoining the elevation, the Examiner should have applied Gatellier and Danckert, which teach the piston geometry that the Applicant amended into the independent claim and argued differentiated over the cited prior art. Doing so would have required the Applicant

to introduce further structural limitations beyond the ascending planar surface geometry to attempt to distinguish the claimed structure from the cited prior art.

For example, the Applicant would have been required to identify purported structural features of the invention—*other than the geometry of the piston recess (which was known)*—that could ensure that the invention could “operate with both a homogenous operator and a conventional combustion operation by ensuring that the injection jet impinges at the piston recess for optimal intermixing of fuel and air independently of the injection time point as described at paragraph [0009] of the Specification.” EX. 1010, 33.

To the extent the Applicant attempted, in response to such a rejection, to argue that either Gatellier or Danckert do not disclose some other limitation of the claim, *e.g.*, functional limitations relating to the injection jet, such as “so that an injection jet impinging the surface and injected as early as possible is distributed both in a elevation direction and in the recess edge direction” or “such that an injection jet injected as late as possible impinges onto the surface, the last-mentioned injection jet being distributed both in the elevation direction and in the recess edge direction” (*see* '238 Patent, Claim 1), the Examiner should have required the Applicant to explain how these functional limitations are not disclosed by Gatellier or Danckert,

which are both structurally identical to the claimed piston geometry in all claimed respects.

The Examiner's rejection could have also simply combined Gatellier or Danckert with any of the references relied upon in the Examiner's September 19, 2008 Office Action—Nakakita, Kataoka, and/or Quigley (discussed previously). Requiring the Applicant to attempt to overcome the clear disclosures of the claimed geometry contained in Gatellier and/or Danckert, alone or combined with any of Nakakita, Kataoka, or Quigley, would also have been prudent given the claims are afforded their broadest reasonable interpretation during prosecution.

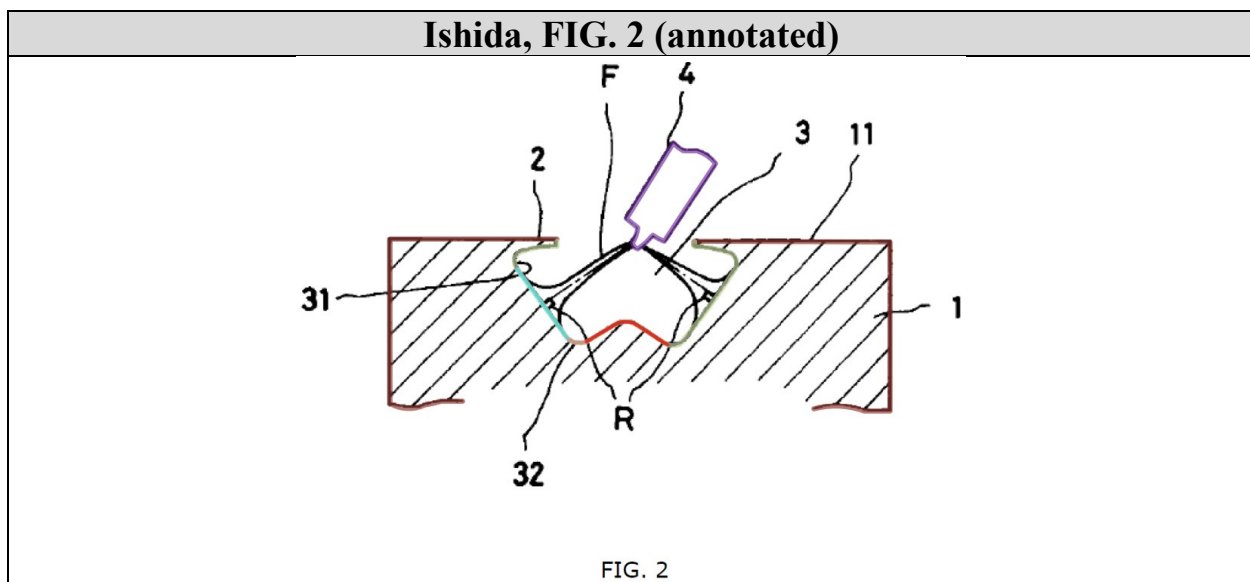
The Examiner's material error here—merely accepting that the claimed ascending planar surface adjoining the elevation is not found in the prior art of record—directly compares to the types of material errors that have been found to justify referral. *See, e.g., Taiwan Semiconductor Mfg. Co. Ltd. et al. v. Marlin Semiconductor Ltd.*, IPR2025-00847, Paper 11, 4 (PTAB Sept. 3, 2025) [hereafter *TSMC*] (“Petitioner persuasively demonstrates that **the patent examiner overlooked certain teachings in Chien770 that appear to disclose the claimed features that the patent examiner indicated were not taught by the prior art of record**, including Chien770. Although the challenged patent has been in force for fifteen years, Petitioner appears to show a material error by the Office, and it is an appropriate use

of Office resources to review the potential error.”) (emphasis added); *Anthony Inc. v. ControlTec, Inc.*, IPR2025-00559, Paper 12, at 2 (May 27, 2025) [hereafter *Anthony*] (referring to panel because examiner's failure to locate petition reference showed material error in prosecution); *Microsoft Corp. v. Partec Cluster Competence Ctr. GmbH*, IPR2025-00318, Paper 9, 3 (June 12, 2025) [hereafter *Microsoft*] (referring to the panel, despite a later trial date, because “Petitioner appears to show a material error by the Office [by overlooking the teaching of several references] and it is an appropriate use of Office resources to review the potential error”).

**B. The Examiner Erred by Overlooking Other Prior Art, including
Ishida and Takatomo (Applied in the Petition)**

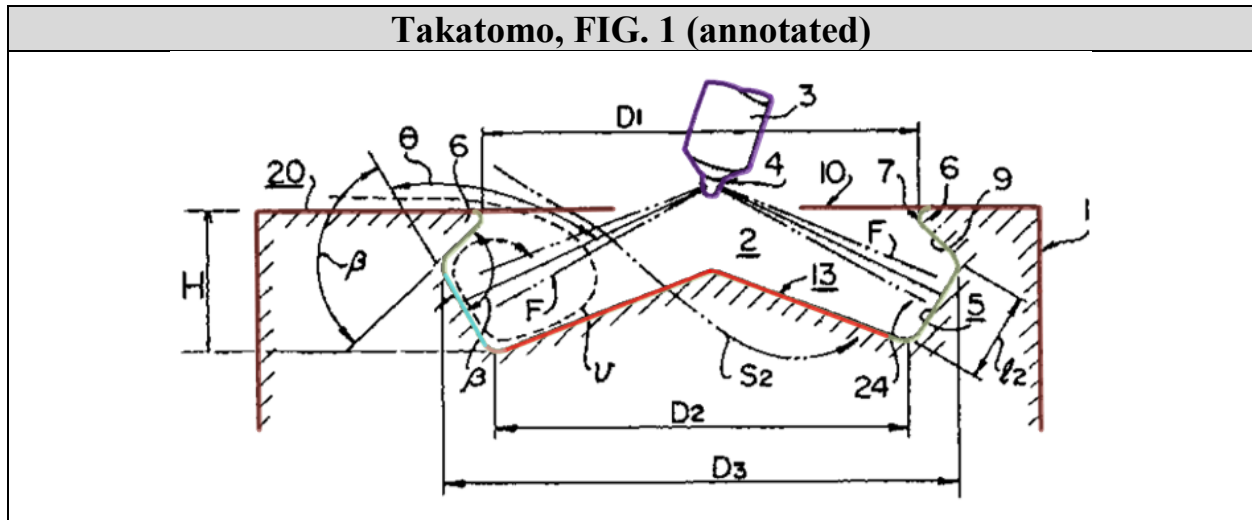
Compounding the Examiner's error in overlooking the disclosures of Gatellier and Danckert, the Examiner also should have found other anticipation and obviousness references to reject the Applicant's flawed amendment and related argument concerning the allegedly novel ascending planar surface adjoining the elevation. Indeed, the allegedly missing planar surface was not merely some isolated and obscure design feature, it was replete in the prior art, including in the two primary references relied upon in the Petition—Ishida and Takatomo—as well as in a seminal treatise on internal combustion engine design—INTERNAL COMBUSTION ENGINE FUNDAMENTALS, by Heywood.

Ishida (EX. 1005) was not referenced in prosecution and clearly shows all of the limitations of Claim 1, including the allegedly missing ascending planar surface adjoining the elevation. Ishida depicts a piston recess configuration for a diesel combustion engine and explicitly discloses a side wall 31 that is substantially planar with an ascending gradient. Ishida also shows the injection jet impinging the ascending planar surface adjoining the elevation and spreading in both the elevation and recess edge directions. EX. 1005, FIG. 2; EX. 1004, ¶¶225-26; Paper 1, 27-28. As presented in the Petition, Ishida anticipates at least Claims 1-3, 5, and 6 of the '238 Patent.

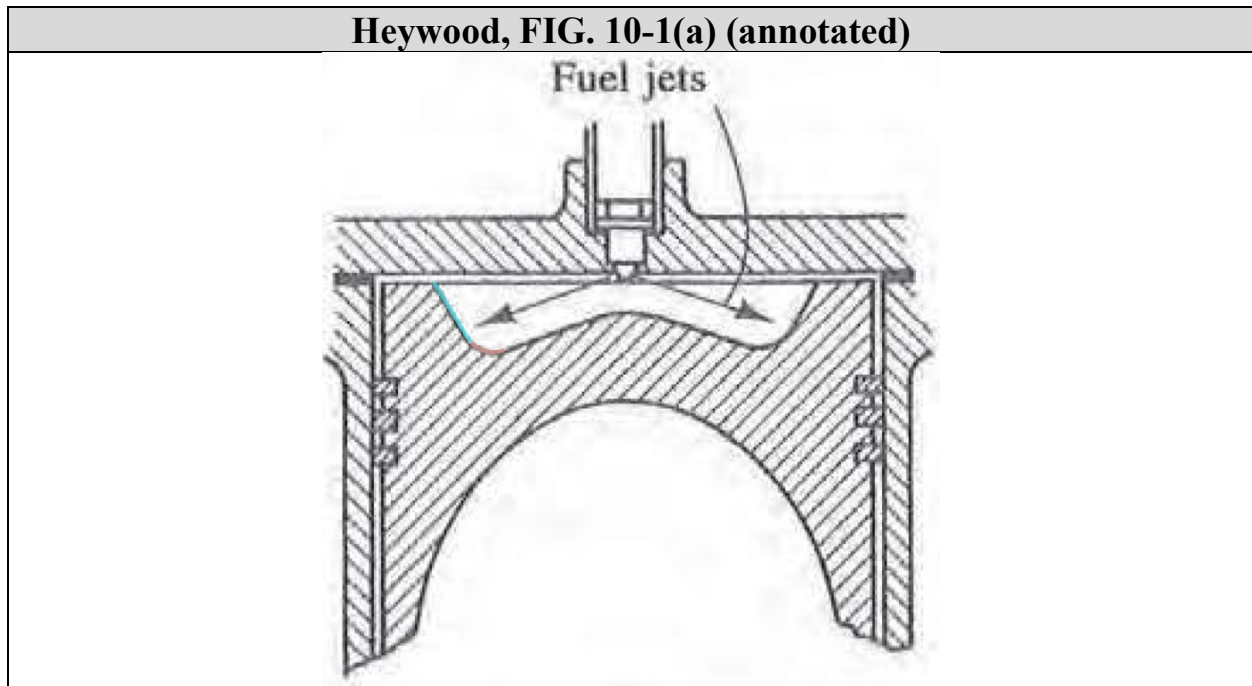


Takatomo, shown below, also discloses the allegedly novel ascending planar surface limitation of Claim 1. EX. 1006, Claim 1, 1:3, FIG. 1; EX. 1004, ¶329, Paper 1, 74-75. As presented in the Petition, Takatomo minimally renders obvious at least

Claims 1-6 of the '238 Patent.



Ishida and Takatomo are not unique, but rather straightforward examples of a well-known diesel engine piston design. INTERNAL COMBUSTION ENGINE FUNDAMENTALS by Heywood (also cited by Petitioner's expert), refers to an example of the design as a "quiescent chamber with multihole nozzle typical of larger engines" and refers to it as a "[c]ommon type[] of direct-injection compression-ignition or diesel engine combustion system[]." EX. 1015, at 526. As shown below, even this "common" piston design likewise discloses the purportedly novel planar ascending surface adjoining the elevation:



The material errors here—failing to appreciate the piston recess geometries of Gatellier and Danckert from prosecution and Ishida and Takatomo from the Petition—are similar to the material errors of identified in previous decisions referring petitions to the Board. For example, in *TSMC*, the petitioner argued that the Office erred in a manner material to patentability by failing to appreciate the teachings of art of record (*e.g.*, Chien770) and other references. *See* IPR2025-00847, Paper 10, at 4-22 (Sept. 3, 2025). Examiner error led that petition to be referred to a merits panel. *Id.*, Paper 11, at 3 (Sept. 3, 2025).

As another example, in *Anthony*, the petitioner argued that the examiner materially erred by granting the challenged claims after failing to locate a § 103 reference, called Carter, that was not of record during prosecution. IPR2025-00559,

Paper 9, at 16-17 (May 27, 2025). The petitioner explained that, “Carter is strikingly similar prior art” and operates in the same manner as the challenged patent. *Id.* at 15. The referral decision found: “Petitioner persuasively explains the patent examiner erred by overlooking the teachings of Carter.” IPR2025-00559, Paper 12, at 2. Here, the Examiner failed to apply Gatellier and Danckert, and further failed to locate Ishida, an anticipating reference, and Takatomo, minimally a single-reference obviousness reference—all strikingly similar to the '238 Patent design. Given that an Examiner overlooking a § 103 reference justified review of a patent applied for in March 2005, the Examiner overlooking Gatellier, Danckert, Ishida, and Takatomo justifies referral here.

Similarly, in *Microsoft*, the petitioner argued that “the Examiner erred in overlooking the prior art” that formed the basis for its § 103 obviousness combinations—one reference cited in prosecution and two references not previously before the examiner. IPR2025-00318, Paper 9, at 3 (June 12, 2025) (quoting *Ecto World LLC v. Rai Strategic Holdings Inc.*, IPR2024-01280, Paper 13, at 5 (May 19, 2025) (precedential)). The referral decision noted that the petitioner provided “persuasive evidence that the Office erred in a manner material to the patentability of the challenged claims by overlooking the teachings of [the prior art].” *Id.* Here, the Examiner overlooked multiple prior art references clearly disclosing the

purportedly novel ascending planar surface adjoining the elevation. If review was appropriate in *Microsoft*, despite a scheduled trial date that preceded the FWD deadline, the Examiner's oversights here should likewise justify referral.

In short, the piston recess having an ascending planar surface adjoining the elevation was a well-known geometry for diesel engine pistons at the time of the alleged invention (and much earlier). That the Examiner overlooked so many disclosures of the only allegedly missing limitation and allowed a patent on such a well-known piston structure was clearly a material error that the Board should now be given the opportunity to correct.

C. The Grounds of the Petition, Each based on Ishida and/or Takatomo, Are Technically Strong

Ishida and Takatomo both disclose the purportedly novel ascending planar surface adjoining the elevation, underscoring the Examiner's error and evidencing the strength of the Petition. Ishida or Takatomo are primary references in each of the grounds presented in the Petition. Ishida is used as an anticipation reference in Ground 1 and a primary obviousness reference in Grounds 2-10. Takatomo is used as a single reference obviousness reference in Ground 11 and as a primary obviousness reference in Ground 12.

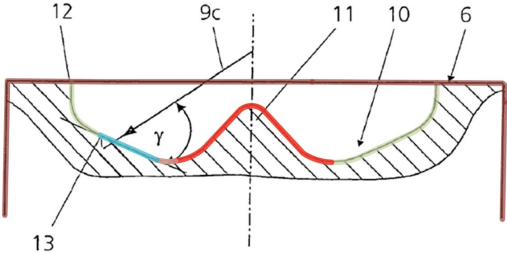
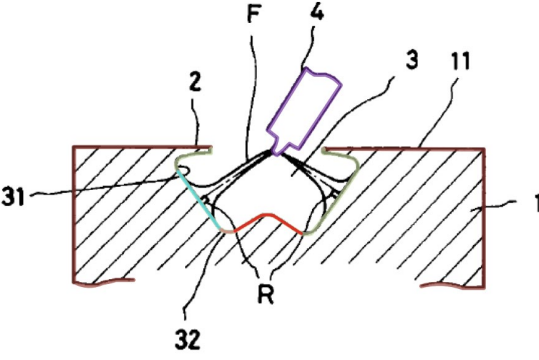
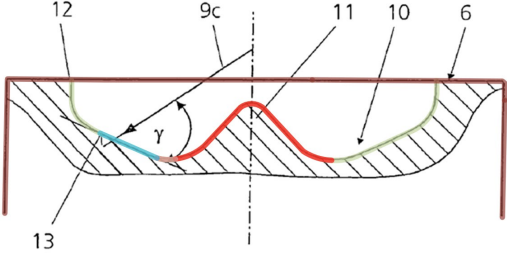
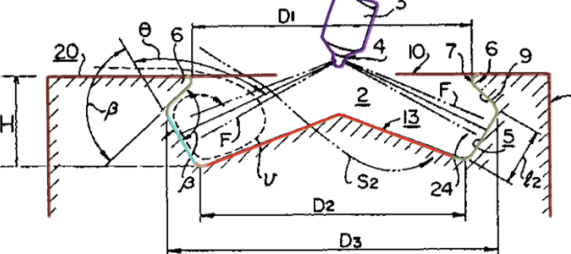
Patent Owner has had significant opportunity to consider and rebut the contentions in the Petition concerning these references, including the fundamental

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observation that the cited references anticipate and/or render obvious each of the Challenged Claims. Rather than respond on the merits, Patent Owner merely asserts that the Petition "is weak." Paper 6, at 10-11. But this conclusory attorney argument, failing to point a single actual difference, is not evidence and is entitled no weight. *See, e.g., Icon Health & Fitness, Inc. v. Strava, Inc.*, 849 F.3d 1034, at 1043 (Fed. Cir. 2017). Patent Owner tacitly acknowledges the strength of the Petition.

Nor can Patent Owner credibly mount a challenge on the merits, which are well-reasoned and straight-forward. The side-by-side figures below demonstrate the strength of Petitioner's grounds.

'238 Patent—Claim 1
A directly injecting internal combustion engine, comprising at least one cylinder which has a combustion space in which a piston executes an oscillating movement, and an injection nozzle for injection of fuel into the combustion space, wherein the piston has a piston recess, which, in a central region thereof, has an elevation extending in a cylinder head direction, and a surface of the piston recess adjoining the elevation in a recess edge direction is connected to the elevation via a radius so that an injection jet impinging the surface and injected as early as possible is distributed both in a elevation direction and in the recess edge direction, and the surface is substantially planar and has an ascending gradient in the recess edge direction such that an injection jet injected as late as possible impinges onto the surface, the last-mentioned injection jet being distributed both in the elevation direction and in the recess edge direction.

'238 Patent, FIG. 4 (annotated)	Ishida, FIG. 2 (annotated)
 Fig. 4	 FIG. 2
'238 Patent, FIG. 4 (annotated)	Takatomo, FIG. 1 (annotated)
 Fig. 4	

See Paper 1, *passim*.

III. TAKEN TOGETHER, THE *FINTIV* FACTORS WEIGH AGAINST DISCRETIONARY DENIAL

A. Factor 1 (Likelihood of a Stay) is Neutral in View of Recent Stay Trends in EDTX

Fintiv Factor 1 is neutral. As an initial matter, Patent Owner's argument that this factor favors denial is premised on a legally erroneous analysis: it focuses on the likelihood of a stay in the parallel district court proceeding¹ before the institution

¹ *Longhorn Auto. Grp. LLC v. Hyundai Motor Co.*, Case No. 2:24-cv-00554 (E.D. Tex.) (the "*Consolidated NML-Hyundai-Kia Case*").

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decision, without addressing the likelihood of a stay after the institution decision. Paper 6 at 10. Factor 1 is concerned with whether a stay exists or may be granted “if a proceeding is instituted.” *Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 11 at 6 (PTAB Mar. 20, 2020) (precedential). Where, as here, “the record contains adequate evidence that the District Court may grant a stay upon institution,” even if “not specifically directed to this proceeding,” this weighs against discretionary denial. *See Juniper Networks, Inc. v. Packet Intel. LLC*, IPR2020-00336, Paper 21 at 16 (PTAB Sept. 10, 2020); *see also, e.g., Nikon Corp. v. Optimum Imaging Techs., LLC*, IPR2024-01374, Paper 19 at 10 (PTAB Apr. 29, 2025) (concluding, “[w]e will not attempt to predict how the court in the parallel district court proceedings would proceed if a stay is requested because the court may determine whether or not to stay any individual case based on a variety of circumstances and facts beyond our control and to which the Board is not privy,” and weighing Factor 1 neutrally).

A stay remains possible in the *Consolidated NML-Hyundai-Kia Case*. While the claim construction hearing will likely have been conducted and fact discovery potentially nearly complete by the time of institution, many of the “most burdensome parts” of the *Consolidated NML-Hyundai-Kia Case* will remain. The Eastern District of Texas (EDTX), where the related case is pending, has granted stays in cases with similar timing. *See Cywee Grp. Ltd. v. Samsung Elecs. Co.*, No. 2:17-CV-00140-

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WCB, 2019 WL 11023976, at *6, *10 (E.D. Tex. Feb. 14, 2019) (Bryson, J., of the Federal Circuit sitting by designation) (granting stay although “claim construction had been conducted and discovery was nearly complete”); *Resonant Sys., Inc. v. Samsung Elecs. Co., Ltd.*, No. 2:22-cv-00423-JRG, 2024 WL 1021023, at *2-4 (E.D. Tex. Mar. 8, 2024) (Gilstrap, J.) (granting stay with claim construction briefing underway, two depositions taken, and close of fact discovery two months away).

The EDTX has also stayed litigation even when the FWD deadline lags the scheduled trial date by several months. *See, e.g., Broadphone LLC v. Samsung Elecs. Co.*, No. 2:23-cv-00001-JRG-RSP, 2024 WL 3524022, at *2-3 (E.D. Tex. July 24, 2024) (Gilstrap, J.) (three months); *Commc'n Techs., Inc. v. Samsung Elecs. Am., Inc.*, No. 2:21-cv-00444-JRG, 2023 WL 1478447, at *1, *4-5 (E.D. Tex. Feb. 2, 2023) (Gilstrap, J.) (four months (from jury selection)).

Statistics from the EDTX indicate that motions to stay are increasing and the court remains willing to grant a significant percentage of them. *See* EX. 1020, EX. 1021 (statistics showing increase in motions to stay in EDTX and granting 37% of those motions since 2024).

While Patent Owner asserts that the court “routinely denies requests to stay pending IPRs before institution on all asserted claims of all Asserted Patents” (Paper 6 at 10), that is not a rule and nothing prevents a court from staying litigation relating

to the '238 Patent. This is particularly true here, where each of the five asserted patents cover vastly different technology areas.

Thus, Factor 1, properly considered for how the district court may rule post institution, weighs neutrally.

B. Factor 2 (Parallel Trial Date) is Neutral Because the Board is Likely to Issue a FWD Near the District Court Trial

Fintiv Factor 2 is neutral. Although trial in the *Consolidated NML-Hyundai-Kia Case* is presently scheduled for June 2026, prior to the anticipated FWD in this proceeding, statistical data indicates that trial will likely not occur until later in 2026, close in time to, or even after, the anticipated FWD in this proceeding, and final judgment will not occur until much later. Patent Owner's contrary argument based on the currently scheduled trial date is artificial because it fails to account for any statistical data.

The Board routinely considers statistical time-to-trial data for cases before the district court in evaluating Factor 2. *See, e.g., Aylo Freesites Ltd v. WellcomeMat, LLC*, IPR2024-00710, Paper 13 at 14-15 (PTAB Sept. 5, 2024) (considering "recent median time-to-trial statistics for the Eastern District of Texas" making FWD date two months before expected trial date, and finding "*Fintiv* Factor 2 weighs against" discretionary denial); *Shenzhen Tuozhu Tech. Co., Ltd. v. Stratasys, Inc.*, IPR2025-00321, Paper 10 at 10 (PTAB June 18, 2025) (considering "recent median time-to-

trial statistics for Judge Gilstrap” and finding “this factor is neutral or weighs slightly against discretionary denial”); *BOE Tech. Group Co., Ltd. v. Optronic Sciences, LLC*, IPR2024-01133, Paper 16 at 10-11 (PTAB Jan. 27, 2025) (considering “median time to trial” statistics for Judge Gilstrap to conclude that trial “is around the same time or after the” FWD date, and thus “this factor weighs against” discretionary denial).

Relying on statistical data is sensible, as recent data shows that trials in EDTX are often delayed. Since 2024, all EDTX cases except one involved trial delays, with half involving delays of four months or more. *See* EX. 1023. This trend, which is based on cases filed in the 2022-2023 time period, is likely to continue due to the increasing number of cases pending in EDTX. *See id.* (showing continuously increasing time-to trial in EDTX from 2023 to 2024). EDTX filings essentially doubled since that time—a continuing trend—with almost 1,100 cases projected by the end of 2025 based on caseload to date as of September 21, 2025. *See* EX. 1024. Thus, given cases filed in EDTX in 2022-2023 are experiencing delays of 4-7 months, it is reasonable to assume that cases filed in 2024, like the *Consolidated NML-Hyundai-Kia Case*, will be delayed at least as much and likely more. This is consistent with the findings of a recent study of PTAB proceedings indicating that

scheduled trial dates are “wrong 94% of the time” compared to actual trial dates, which it found delayed typically 3-6 months.

The *Consolidated NML-Hyundai-Kia Case* is scheduled for jury selection on June 1, 2026, but 10 cases are scheduled to begin jury selection that day alone. EX 1022. Thus, in view of statistical EDTX data and the PTAB study, it is reasonable to anticipate trial in the parallel proceeding to occur in the September-December 2026 time period, which is around the time a FWD will issue in this proceeding.

Even if the scheduled trial date is rigidly applied to consideration of this factor, requests for discretionary denial have still been denied in cases where scheduled trial dates predate the anticipated FWD. *See Samsung Display Co., Ltd. v. Pictiva Displays Int'l Ltd.*, IPR2024-01222, Paper 12 at 7, 24 (PTAB Mar. 6, 2025) (seven-month difference); *SAP Am., Inc. v. Cyandia, Inc.*, IPR2024-01433, Paper 13 at 9, 27 (PTAB Apr. 7, 2025) (six-month difference); *Kia Corp. et al. v. Emerging Auto. LLC*, IPR2024-01167, Paper 14 at 15, 19, 49 (PTAB Jan. 27, 2025) (same); *IBM Corp. v. Digital Doors, Inc.*, IPR2023-00973, Paper 10 at 12, 25 (PTAB Jan. 19, 2024) (five-month difference); *MediaTek Inc. v. Daedalus Prime LLC*, IPR2025-00100, Paper 10 at 27, 34-35 (PTAB May 19, 2025) (four-month difference).

This result is particularly justified here, because this case involves significant Examiner errors and strong merits, which together outweigh trial versus FWD

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timing. *See Padagis US LLC v. Neurelis, Inc.*, IPR2025-00466, Paper 12, 3 (PTAB July 16, 2025) (despite a scheduled district court trial date that precedes the date projected for a Board final written decision, concluding “the Petitioner appears to show a material error by the Office, and it is an appropriate use of Office resources to review the potential error.”); *Microsoft*, IPR2025-00318, Paper 9 at 3 (“Although the scheduled district court trial is set to precede the expected final written decision due date by a month . . . , discretionary denial of institution is not warranted because of Petitioner’s showing of material error during patent examination.”) (internal citations omitted).

The main purpose of Factor 2 is to ensure efficiency and avoid duplicative efforts. Given Petitioner’s broad stipulation here (discussed *infra* Section III.F.1.iii), there will be no inefficient duplication of efforts: the IPR would be a true alternative for prior art challenges, as Congress intended. *See* 77 Fed. Reg. at 48612 (Aug. 14, 2012) (“The purpose of the AIA and this final rule is to establish a more efficient and streamlined patent system that will improve patent quality and limit unnecessary and counterproductive litigation costs.”); *see also Tesla, Inc. v. The U. S. of Am.*, IPR2025-00341, Paper 12 at 2-3 (PTAB June 13, 2025) (broad stipulation outweighed other *Fintiv* factors, including trial date).

Thus, Factor 2, properly considering actual time-to-trial statistics and district court delays, should weigh neutrally.

C. Factor 3 (Investment in Parallel Proceeding) Weighs Against Discretionary Denial or is Neutral Because the *Consolidated NML-Hyundai-Kia Case* Will be in a Relatively Early Stage

Factor 3 weighs against discretionary denial or is neutral. “If, at the time of the institution decision, the district court has not issued orders related to the patent at issue in the petition, this fact weighs against exercising discretion to deny institution...” *Fintiv*, IPR2020-00019, Paper 11 at 10; *see also Nikon Corp.*, IPR2024-01374, Paper 19 at 18, 49 (granting institution where “the district court has not issued any substantive orders related to the” challenged patent). Here, the institution decision deadline (December 25, 2025) is just after the Markman hearing *Consolidated NML-Hyundai-Kia Case* (December 3, 2025). The district court has also not held any hearings or issued any substantive decisions related to the '238 Patent, and no other hearing (beyond claim construction) or substantive decision is expected prior to the institution deadline. EX. 1025. Significant work will also remain, including, minimally, expert discovery, dispositive motions, pre-trial, and trial, etc. Thus, the “most burdensome parts of the case” will still “lie in the future.” *Cywee*, 2019 WL 11023976, at *6.

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The timelines in this proceeding closely track *Pictiva*, where the Board declined to exercise its discretion to deny institution under similar circumstances:

Stage	<i>Pictiva</i> (Instituted)	Parallel Case
Service of Complaint	287 days (9 ½ mos.) before IPR	257 days (<9 mos.) before IPR
Invalidity Contentions	62 days before IPR	106 days before IPR
IPR Filed		
CC Briefing ²	72 days before DI	85 days before DI
CC Hearing	30 days before DI	22 days before DI
Fact Discovery Close		3 days before DI
Decision on Institution 12-25-25		
Fact Discovery Close	4 days after DI	
Expert Discovery Close	45 months after DI	54 days after DI
Est. Trial	2.5 months before FWD	4 months before FWD ^{3,4}

² Using the due date for the Opening Claim Construction Brief.

³ Using 25.1 months from the filing of the Complaint as estimated in current federal government statistics for EDTX. EX. 1019.

⁴ Using estimated FWD of December 25, 2026.

See Pictiva, IPR2024-01222, Paper 12 at 7 (finding Factor 3 “weighs against denial”). Given the comparable timing in this proceeding, the same rationale weighs against discretionary denial.

Patent Owner's unexplained assertion of “[d]elay” by Petitioner is incorrect. *See* Paper 6, at 9. Petitioner filed the Petition several months before the one-year bar date (September 19, 2025). And, notably, petitions are deemed “expeditious” even if filed such that the institution occurs after the Markman hearing, but before a substantive court order, as the case may be here. *See Samsung Elecs. Co., Ltd. v. CardWare Inc.*, PGR2023-00012, Paper 14 at 19 (PTAB Aug. 11, 2023) (“[T]his factor weighs slightly against exercising discretion to deny institution”).

Thus, Factor 3, properly considering Petitioner's diligent and timely filing and the anticipated post-institution investment weighs against discretionary denial or is neutral.

D. Factor 4 (Overlap Between Petition and Parallel Proceeding) Weighs against Discretionary Denial Because Petitioner Commits to an Extraordinarily Broad Stipulation

Factor 4 weighs very strongly against discretionary denial because Petitioner commits to a broad stipulation that eliminates all overlap between this IPR and the *Consolidated NML-Hyundai-Kia Case*. As an initial matter, Petitioner's existing *Sotera* stipulation (Paper 2 at 4), remains a weight “strongly against” denial.

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Samsung Elecs. Co. et al. v. Truesight Commc'ns LLC, IPR2024-01477, Paper 12 at 13-14 (PTAB Apr. 21, 2025). Patent Owner identifies no issue with this stipulation, which alone weighs heavily against discretionary denial.

Notwithstanding the effect of its *Sotera* stipulation, in order to remove any possible doubt about potential overlap between this IPR and the *Consolidated NML-Hyundai-Kia Case*, Petitioner further offers a stipulation that extends beyond *Sotera*, making this IPR an absolute alternative to district court for invalidity based on prior art. Specifically, Petitioner stipulates that if the Board institutes this IPR and institution is not subsequently vacated, reversed, or otherwise withdrawn by rehearing or Director Review, Petitioner will not pursue against any of the Challenged Claims, in any pending district court litigation, the following: (i) the specific grounds raised in the instituted IPR proceeding; (ii) any other grounds that reasonably could have been raised before the Board in the instituted IPR proceeding (*i.e.*, any ground that reasonably could have been raised under pre-AIA §§102 or 103 on the basis of prior art patents or printed publications); or (iii) any other invalidity ground under pre-AIA §§102 or 103 involving any type of legally recognized prior art, including any patent, printed publication, or system art.

This stipulation weighs very heavily against discretionary denial. *See, e.g.*, *Tesla*, IPR2025-00341, Paper 12 at 2; *Tesla, Inc. v. Intell. Ventures II*, IPR2025-

00339, Paper 10 at 2-3 (PTAB June 13, 2025); *see also, e.g., Shenzhen Tuozhu Tech.*, IPR2025-00321, Paper 10 at 13-14 (noting that “Patent Owner does not address Petitioner’s updated second stipulation” and broad stipulation “weighs against exercising discretion to deny institution”).

E. Factor 5 (Whether the Parties Are the Same) is Neutral Because the Parties Are Almost Always the Same

Petitioner is a party in the *Consolidated NML-Hyundai-Kia Case*, but disputes Patent Owner’s conclusory allegation that Petitioner is a real party in interest along with any other identified automaker or proceeding. *See* Paper 6 at 5. Although the Board has taken varying approaches to the weight of this factor under such circumstances, persuasive Board authority reasons that this factor should be considered “neutral” where, as here, other *Fintiv* factors more heavily guide the analysis. *Shenzhen Root Tech. Co., Ltd. v. Chiaro Tech. Ltd.*, IPR2024-01296, Paper 9 at 20 (PTAB Feb. 25, 2025). Here, considerations like the mistakes in examination of the ’238 Patent and the related strength of the Petition should more heavily guide the analysis. Patent Owner’s position to the contrary (Paper 6 at 4), fails to account for this authority, or indeed any Board authority at all.

F. Factor 6 (Other Considerations) Weighs Against Discretionary Denial

As discussed below, all other considerations under Factor 6 weigh against discretionary denial.

1. Settled Expectations Weigh Against Discretionary Denial

i. The Material Errors by the Patent Examiner and the Strong Merits of the Petition Outweigh Patent Owner's Alleged Settled Expectations

The Board consistently finds that material errors during examination and related strong merit are sufficient reason to reject discretionary denial, regardless of a Patent Owner's alleged settled expectations. The Board's reasoning is made clear in numerous recent decisions discussed *supra* Section II. Just as in *TSMC*, where a cited prior art reference clearly disclosed the purportedly missing limitation (IPR2025-00847, Paper 11, at 4); or in *Anthony*, where a prior art reference was found to likely remedy the Examiner's error (IPR2025-00559, Paper 12 at 2); here, Petitioner explains how the Examiner overlooked Gatellier and Danckert in prosecution, and how each of overlooked Ishida and Takatomo further anticipate or render obvious the Challenged Claims (Paper 2, 19-20, 27-28, 68-69, 74-75; EX. 1004, ¶¶202-05, 225-26, 316-17, 329). Tellingly, Patent Owner does not identify any deficiency in the Petition's showing in Ishida and Takatomo of the purportedly novel ascending planar surface adjoining the elevation. *See supra* Section II.

Patent Owner's sole cited authority on this point, *Dabico Airport Sols. Inc. v. AXA Powers Aps*, is distinguishable. In *Dabico*, "Petitioner d[id] not provide any persuasive reasoning why an *inter partes* review is an appropriate use of Office resources." IPR2025-00408, Paper 21 at 3 (PTAB June 18, 2025). It was thus

appropriate, in that case, to consider “the absence of any such information” weighing in favor of discretionary denial. *Id.* But here, as explained above, the Examiner's material error during examination and the strong merits of the petition (combined with other factors, including Petitioner's broad stipulation) far outweigh Patent Owner's alleged settled expectations.

ii. Patent Owner's Alleged Settled Expectations are Conclusory, Unexplained, and Entitled to No Weight

Patent Owner references the age of the '238 Patent as the sole rationale for its purported settled expectations. Patent Owner's invocation of “settled expectations” is conclusory—the type of contention given no weight by the Board in other contexts. *Cf., e.g.,* 37 C.F.R. §§42.104(b)(4)-(5) (conclusory arguments and references to evidence in petition are inadequate); 37 C.F.R. §42.65(a) (conclusory expert testimony receives “little or no weight”); *Avant Tech., Inc. v. Anza Tech., Inc.*, IPR2018-00828, Paper 7 at 10-11 (PTAB Oct. 16, 2018) (citing *In re Magnum Oil Tools Int'l, Ltd.*, 829 F.3d 1364, 1380 (Fed. Cir. 2016) (conclusory statements cannot show obviousness)).

To the extent Patent Owner is arguing that the '238 Patent's age suggests a settled expectation of validity, this is unreasonable in view of the Examiner's mistake, made apparent by the overlooked references in the background of the '238 Patent itself, and also by the multiple prior art references the Examiner failed to

locate (and relied upon in the Petition). These errors, underscored by the strong merits of the Petition, establish that the '238 Patent should never have issued. *See supra* Section II. As a non-practicing entity that merely acquired the patent to assert it, any reasonable diligence by Patent Owner prior to purchase of the '238 Patent would surely reveal the Examiner's mistake, or, at a minimum, a question of the Examiner's mistake, and therefore unsettle any otherwise valid expectation of validity based on age.

If Patent Owner rather intends to argue that the age of the '238 Patent suggests a settled expectation that it would not face a patentability challenge, this too is implausible. Patent Owner decided to purchase and then immediately litigate the '238 Patent. Patent Owner therefore should have expected⁵ those it sued to challenge its validity. This is particularly true, here, where Petitioner's sole and exclusive authorized distributor and manufacturer of Nissan vehicles in the United States—Nissan North America—has utilized the accused technology for nearly a decade without issue.

Patent Owner further fails to provide any evidence or argument supporting settled expectations based on any amount of financial, time, or other investment

⁵ These actions by Patent Owner all predated the Office's March 26, 2025 memorandum on Interim Processes for PTAB Workload Management. Patent Owner cannot claim settled expectations derived from that memorandum.

dedicated to research, development, or other activities. *Cf. Amgen Inc. v. Bristol-Myers Squibb Co.*, IPR2025-00601, Paper 9 at 2-3 (PTAB July 24, 2025) (considering such factors).

iii. Petitioner’s Broad Stipulation and Patent Owner’s Sprawling Assertion of Five Disparate Patents Weigh Against Discretionary Denial

Petitioner’s broad stipulation and Patent Owner’s sprawling infringement allegations in the *Consolidated NML-Hyundai-Kia Case*—covering five widely disparate technology areas—also counter any alleged settled expectations and weigh against discretionary denial.

In *Tesla, Inc. v. Intell. Ventures II LLC*, the petitioner “filed a broad stipulation and asserts that the merits are strong” based on prior successful validity challenges. IPR2025-00217, Paper 9 at 2 (PTAB June 13, 2025). The petitioner also noted “the complex and diverse litigation,” which spanned many patent families and involved “a diverse range of subject matter,” and helped “tip the balance against discretionary denial.” *Id.* at 2-3. “The large number and vast scope of the patents asserted in the district court litigation . . . weigh[ed] against discretionary denial.” *Id.* at 2-3. These considerations prevailed in the analysis for six challenged patents, including one 14-years old, one 9.5-years old, and one 8-years old. *Id.* at 2-3. In *Tesla, Inc. v. The U. S. of Am.*, essentially the same findings caused a similar result. IPR2025-00341,

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Paper 12 at 2-3; *see also* *Shenzen Tuozhu Tech. Co., Ltd. v. Stratasy, Inc.*, IPR2025-00438, Paper 10 at 3 (PTAB July 17, 2025) (“The large number and vast scope of the patents asserted in” litigation “weighs against discretionary denial, as the Board is better suited to review a large number of patents involving diverse subject matter.”).

Consistent with the foregoing, Petitioner filed not only a *Sotera* stipulation in its Petition (Paper 2 at 4), but also a much broader stipulation here (*supra* §III.D). These stipulations go beyond basic IPR estoppel and ensure that that this proceeding, if instituted, will serve as Petitioner's sole proceeding to adjudicate the patentability of the '238 Patent based on prior art.

Also consistent with both *Tesla* matters, Patent Owner's allegations in the *Consolidated NML-Hyundai-Kia Case* are amazingly diverse in their coverage. Patent Owner asserts five patents—each covering unrelated technology. Patent Owner alleges:

- U.S. Patent No. 8,810,803 relates to a “plurality of lenses used for focusing and projecting the light in a plurality of directions.” EX. 1002 at 4.
- U.S. Patent No. 7,987,002 relates to a “monitoring system with a plurality of monitoring units communicating with a first interface in a first protocol

which, in turn, is connected to a distributed control system using a second protocol.” *Id.*

- U.S. Patent No. 7,513,238 relates to “direct injection in internal combustion engines where the shapes of the piston allow for early or late injection to optimize the direct injection.” *Id.*, pp. 4-5.
- U.S. Patent No. 8,265,353 relates to “measuring a mobile object using a plurality of imaging techniques in synchronization to provide video images of an object’s state.” *Id.*
- U.S. Patent No. 7,634,666 relates to a “crypto-engine for cryptographic processing, with an arithmetic unit and an interface controller for managing communications between the arithmetic unit and a host processor.” *Id.* at 5.

Moreover, Patent Owner also purports to accuse over twenty Nissan vehicles of infringing these five unrelated patents, including “all trims and configurations” from 2018 to the present.⁶ *See* EX. 1002 ¶16; *see also id.* ¶¶24, 38, 53, 69, 87. This wide-ranging nature of Patent Owner’s allegations in the *Consolidated NML-*

⁶ While overly broad and covering many different technologies, Patent Owner’s accusations fail to provide the necessary particularity required by the district court’s local rules.

Hyundai-Kia Case counsels against according any weight to Patent Owner's purported settled expectations.

iv. Patent Owner's Alleged Settled Expectations are Undermined by Lack of Alleged Commercialization, Marking, or Assertion

In *Intel Corp. v. Proxense LLC*, the Board explained that, "[t]here may be persuasive reasons why the Board should review challenged claims several years after their issuance date," including when a patent is in force, but not "commercialized, asserted, marked, licensed, or otherwise applied in a petitioner's particular technology space." IPR2025-00327, Paper 12 at 2-3 (PTAB June 26, 2025).

Patent Owner, itself a non-practicing entity, acquired the '238 Patent from another non-practicing entity, AI-Core Technologies, on October 6, 2023. Ex 1018. Prior to this assignment, the '238 Patent was owned by a series of non-practicing entities and holding companies. *Id.* (owned by Intellectual Ventures Assets 190 LLC, Chemtron Research LLC, Buranai Consulting Limited Liability Company). Patent Owner does not contend that the '238 Patent has been commercialized, marked, or otherwise asserted before its assertion against Petitioner. *See* Paper 6 at 9-10.

Moreover, Patent Owner did not apply for or create the technology underlying the '238 Patent. Rather, Patent Owner acquired it shortly after its own formation and shortly before filing the district court lawsuit. Patent Owner thus cannot have had

“settled expectations” when it has only existed and owned the ’238 Patent mere months before bringing suit.

v. Petitioner and Others have Settled Expectations that the ’238 Patent will not be Enforced

Petitioner, in contrast, does have settled expectations—namely, that it has freedom to operate based on continuous and unchallenged commercialization of the products accused of infringing the ’238 Patent in the *Consolidated NML-Hyundai-Kia Case* for nearly ten years. The Board has found that an unasserted patent may “weigh against a patent owner’s claim of settled expectations and bears on the Director’s discretion.” *See Intel*, IPR2025-00327, Paper 12 at 2-3 (lack of assertion as one of “non-exclusive examples”). Despite the ’238 Patent issuing in 2009, it was not asserted in any venue against any party until 2024, when it was asserted against Petitioner (among others).

As a new owner of the ’238 Patent, Patent Owner cannot overwrite the settled expectations of Petitioner, its customers, and others in the industry. Analogizing to real property law, the settled expectations of others would exceed those of a new property owner under such circumstances. *See Restatement (First) of Prop.* §459 cmt. A (1993) (“Through lapse of time old rights become obscure. A long continued use raises reasonable expectations of its continuance.”); *Anaheim Gardens, L.P. v. U. S.*, 953 F.3d 1344, 1350-51 (Fed. Cir. 2020) (noting that “the timing of the

purchase and knowledge of the purchaser”—especially “a sophisticated investor”—“are relevant considerations in determining whether a purchaser had reasonable investment-backed expectations” in the takings context).

vi. Public Policy Counsels against Discretionary Denial

Public policy counsels against discretionary denial. For example, considering purely the age of a challenged patent in the settled expectations analysis incentivizes patent monetization entities to acquire and assert old, expiring patents or to acquire patents and delay asserting them in order to artificially posture their settled expectations. To ensure a balanced system where the PTAB improves the overall efficiency, the settled expectations analysis should weigh the impact on both the patent owner and the public.

Under the circumstances here, on balance, the age of the '238 Patent should weigh *against* discretionary denial, where nine automakers have been sued in the twilight years of a patent, never before asserted, based on alleged infringement of a wide range of products commercialized for many years (for about ten years in Petitioner's case). *See Anthony*, IPR2025-00559, Paper 12 (petitions involving 17- and 18-year-old patents referred to merits panel); *Tesla*, IPR2025-00341, Paper 12 (18-year-old patent); *Tesla*, IPR2025-00339, Paper 9 (14-year-old patent); *Amazon.com, Inc. v. NL Giken, Inc.*, IPR2025-00250, Paper 14 (PTAB May 16,

2025) (13-year-old patent); *Amazon.com, Inc. v. NL Giken, Inc.*, IPR2025-00407, Paper 14 (PTAB May 16, 2025) (11-year-old patent); *Savant Techs. LLC v. Feit Elec. Co.*, IPR2025-00260, Paper 16 (PTAB June 12, 2025) (11-year-old patent).

2. The Strength of Petitioner's Grounds Weighs Against Discretionary Denial

Patent Owner's assertion that "the Petition is weak," Paper 6 at 10, is not only conclusory, but demonstrably false. According to Patent Owner, "[t]he substantive portion of the Petition setting forth the challenging grounds is approximately sixty-nine (69) pages long," "[t]his portion of the Petition is effectively a copy-and-paste of the expert declaration, which is approximately ninety-one (91) pages of substantive grounds," and "Petitioner, therefore, relies almost entirely on the expert declaration, evidencing its weakness." Paper 6 at 10-11.

This argument is not explained and is simply not true. First, Patent Owner's argument is conclusory and does not address the merits of the Petition at all. This is unsurprising, however, because the Examiner materially erred allowing the claims, as evidenced by the multiple prior art references disclosing pistons having planar ascending surfaces adjoining the elevation (provided with the Petition and in the background of the '238 Patent itself). Patent Owner's conclusion without analysis actually suggests that any counterarguments Patent Owner may have are weak. *See Samsung Elecs. Co., Ltd., v. SiONyx, LLC*, IPR2024-01431, Paper 21 at 17 (PTAB

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Apr. 10, 2025) (“On the present record, the merits of the Petition are strong We emphasize that Patent Owner provides very little argument, on the merits, with regard to the Haddad138 reference.”).

Second, the Petition is not a copy of the declaration. While there is a symbiotic relationship between Dr. Bower's declaration and the Petition insomuch as he offers expert testimony closely tied to and supporting positions taken by Petitioner, it is not copied. And any correspondence or comparison in length to the petition, alone, should not be considered a weakness without Patent Owner's substantive explanation.

There are numerous differences between Dr. Bower's analysis and the Petition. For example, Dr. Bower's declaration (EX. 1004) includes an overview of compression ignition internal combustion engines (EX. 1004 at ¶¶39-48) and an overview of compression ignition internal combustion engine emission reduction techniques (*id.* at ¶¶49-60), both of which are not in the Petition. Additionally, Dr. Bower's discussion of Ishida with respect to claim 1 (*id.* at ¶¶89-93, 192-240) includes analysis that is not merely “copied-and-pasted” in the Petition (Paper 2 at 16-35). For example, Dr. Bower explains why a POSITA would understand that the engine of Ishida includes a cylinder with a combustion space (EX. 1004 at ¶¶192-193), and this explanation is referenced, but not “copied and pasted” in the Petition

(Paper 2 at 16-17). The same is true with respect to Dr. Bower's discussion of Takatomo with respect to claim 1. *Compare* EX. 1004 at ¶¶142-50, 307-31 with Paper 2, 66-77. Moreover, Dr. Bower includes extensive discussion of the various combinations of the prior art relied upon in the Petition. *See* EX. 1004 at ¶¶94-190.

This appropriate presentation of expert opinion should actually weigh against discretionary denial. *See iRhythm Tech., Inc. v. Welch Allyn, Inc.*, IPR2025-00363, Paper 10 at 2-3 (PTAB June 6, 2025) (finding use of “expert to explain the background knowledge of a person of ordinary skill in the art” and “provide[] citations to evidence in support of his statements in the required manner” weighed against discretionary denial).

3. There is No Prospect of Further Adjudication of Any Claim of the '238 Patent, Which Weighs Against Discretionary Denial

No claim of the '238 Patent has been reexamined, and the '238 Patent has not been reissued. There is also no prospect of “multiple, serial” petitions here. *See Code200, UAB et al. v. Bright Data Ltd.*, IPR2022-00861, Paper 18 at 3-6 (PTAB Aug. 23, 2022) (citing *Gen. Plastic Indus. Co. v. Canon Kabushiki Kaisha*, IPR2016-01357, Paper 19 (PTAB Sept. 6, 2017) (discussing considerations for discretionary denial involving serial challenges)). This too weighs against discretionary denial.

IV. INTER PARTES REVIEW OF THE '238 PATENT IS AN APPROPRIATE USE OF OFFICE RESOURCES IN VIEW OF COMPELLING ECONOMIC AND POLICY CONSIDERATIONS

Compelling economic and public policy considerations also make IPR of the '238 Patent an appropriate and valuable use of the Office's resources and therefore weigh against discretionary denial. Although Petitioner does not itself manufacture or sell vehicles or parts that it manufactures directly to consumers anywhere in the United States, Petitioner's U.S. subsidiary, Nissan North America ("NNA") makes a significant positive impact on and contribution to the U.S. economy.

NNA recently celebrated the assembly of its 700,000th Nissan Murano in the U.S. *See* EX. 1026, 1. These vehicles were assembled at both NNA's Canton Mississippi plant and NNA's Smyrna, Tennessee plant. As of June 24, 2025, NNA "has invested \$8.8 billion USD in the Smyrna plant" and "[w]ith more than 5,700 employees and an annual production capacity of 500,000 vehicles, NNA's Smyrna operations represents the largest U.S. manufacturing site within the company's network and one of Nissan's largest factories in the world." *Id.* Indeed, NNA's investment in U.S. manufacturing is well-known, with recent reporting that "Nissan Motor's new Americas leader said the automaker is aiming to 'max out' production at its largest American production plant amid President Donald Trump's 25% auto tariffs." EX. 1027, 1.

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In view of this significant positive impact on and contribution to the U.S. economy, sound economic and public policy rationales support this proceeding continuing to merits-based consideration by the Board. By contrast, Petitioner is aware of no comparable evidence of Patent Owner's contributions.

V. CONCLUSION

For the foregoing reasons, and under the particular facts of this case, this Petition should be referred to the Board panel with instructions to consider the merits.

Respectfully submitted,

Dated: September 25, 2025

By: / Pavan K. Agarwal /

Pavan K. Agarwal, Reg. No. 40,888
Counsel for Petitioner
FOLEY & LARDNER LLP
3000 K Street, NW, Suite 500
Washington Harbor
202-945-6162
pagarwal@foley.com

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Certificate Under 37 C.F.R. §42.24(d)

The undersigned certifies that the foregoing Petitioner's Opposition to Patent Owner's Request for Discretionary Denial contains 8,424 words according to the word-processing program used to prepare this document (Microsoft Word), which is less than the 14,000 allowed.

By: / Pavan K. Agarwal /

Pavan K. Agarwal
Reg. No. 40,888
Counsel for Petitioner

CERTIFICATE OF SERVICE

The undersigned hereby certifies that a copy of the foregoing Petitioner's Opposition to Patent Owner's Request for Discretionary Denial together with all exhibits and other papers filed therewith was served on September 25, 2025 to counsel of record by electronic mail to:

Vincent J. Rubino, III (Reg. No. 68,594)
FABRICANT LLP
411 Theodore Fremd Avenue, Suite 206 South Rye, New York 10580
Tel. 212-257-5797
Fax. 212-257-5796
PTAB@fabricantllp.com
vrubino@fabricantllp.com

Peter Lambrianakos (Reg. No. 58,279)
FABRICANT LLP
411 Theodore Fremd Avenue, Suite 206 South Rye, New York 10580
Tel. 212-257-5797
Fax. 212-257-5796
plambrianakos@fabricantllp.com

Alfred R. Fabricant (subject to motion to appear pro hac vice)
FABRICANT LLP
411 Theodore Fremd Avenue, Suite 206 South Rye, New York 10580
Tel. 212-257-5797
Fax. 212-257-5796
ffabricant@fabricantllp.com

Enrique W. Iturralde (Reg. No. 72,883)
FABRICANT LLP
411 Theodore Fremd Avenue, Suite 206 South Rye, New York 10580
Tel. 212-257-5797
Fax. 212-257-5796
eiturralde@fabricantllp.com

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John A. Rubino (Reg. No. 71,543)
RUBINO IP
51 J.F.K. Parkway Short Hills, NJ 07078
Telephone: (201) 341-9445
Facsimile: (973) 535-0921
jarubino@rubinoip.com

By: / Pavan K. Agarwal /

Pavan K. Agarwal
Reg. No. 40,888
Counsel for Petitioner