

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SUBARU OF AMERICA, INC., TOYOTA MOTOR NORTH AMERICA,
INC., FORD MOTOR COMPANY, JAGUAR LAND ROVER NORTH
AMERICA LLC, and VOLVO CARS OF NORTH AMERICA LLC,
Petitioner,

v.

CRUISE CONTROL TECHNOLOGIES LLC,
Patent Owner.

Case IPR2014-00279
Patent 6,324,463 B1

Before JOSIAH C. COCKS, HYUN J. JUNG, and GEORGE R. HOSKINS,
Administrative Patent Judges.

JUNG, *Administrative Patent Judge.*

FINAL WRITTEN DECISION
35 U.S.C. § 318(a) and 37 C.F.R. § 42.73

I. INTRODUCTION

Subaru of America, Inc., et al. (collectively, “Petitioner”) filed a Petition (Paper 1, “Pet.”) requesting institution of an *inter partes* review of claims 1–5, 12–16, 18–21, 23, 25–31, and 34–36 of U.S. Patent No. 6,324,463 B1 (Ex. 1001, the “’463 patent”) pursuant to 35 U.S.C. §§ 311–19. Cruise Control Technologies LLC (“Patent Owner”) filed a preliminary response. Paper 15 (“Prelim. Resp.”). Based on these submissions, we instituted trial as to claims 1–5, 12–16, 18–21, 23, 25–31, and 34–36 of the ’463 patent. Paper 19 (“Dec. on Inst.”).

After institution, Patent Owner filed a Patent Owner’s Response (Paper 27, “PO Resp.”), and Petitioner filed a Reply (Paper 34, “Reply”). In addition, Petitioner proffered the Declaration of David A. McNamara (Ex. 1007, “McNamara Declaration” or “McNamara Decl.”) with the Petition. Patent Owner does not rely on any expert declaration, and no deposition transcript was filed for Mr. McNamara.

An oral hearing in this proceeding was held on March 24, 2015, and a transcript of the hearing is included in the record (Paper 45, “Tr.”).

We have jurisdiction under 35 U.S.C. § 6(c). This Final Written Decision is issued pursuant to 35 U.S.C. § 318(a) and 37 C.F.R. § 42.73. For the reasons that follow, we determine that Petitioner has shown by a preponderance of the evidence that claims 1–5, 12–15, 18–20, 23, 25–31, and 34–36 of the ’463 patent are unpatentable.

A. The '463 Patent (Ex. 1001)

The '463 patent discloses cruise control systems for use in a human operated vehicle. Ex. 1001, Abst. Figures 1 and 2 of the '463 patent are shown below:

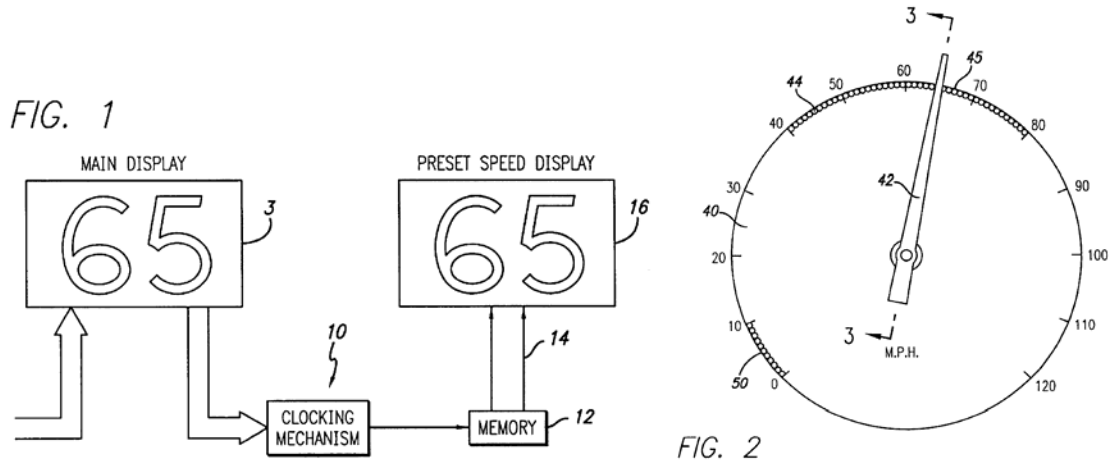


Figure 1 illustrates a digital speed display, while Figure 2 illustrates an analog speedometer. *Id.* at 3:8–13. In Figure 1, main speed display 3 shows the current speed at which the vehicle is operating. *Id.* at 3:49–53. When a cruise control set button (not shown in Figure 1) is pressed, the vehicle speed is stored in digital memory 12 as a preset speed. *Id.* at 3:53–60. Second speed display 16 shows that preset speed. *Id.*

Figure 2's analog speedometer 40 incorporates several LED assemblies 45. *Id.* at 4:19–26. Each LED assembly 45 has an LED and a detector. *Id.* at 4:29–30. When a cruise control set button (not shown in Figure 2) is pressed, all of the detectors are activated, and all of the LEDs momentarily light up. *Id.* at 4:48–51. The back of needle 42 reflects the light of the lit LEDs behind the needle, and that reflected light is detected by the detector of the LED assembly disposed at the location of needle 42. *Id.*

at 4:51–57. The LED of that assembly is then activated and remains lit to indicate the speed at which cruise control was engaged. *Id.* at 4:57–64.

B. Illustrative Claim

The '463 patent has 36 claims, of which claims 1–5, 12–16, 18–21, 23, 25–31, and 34–36 are being challenged. Of the challenged claims, claims 1, 2, 12, 13, 18, 21, 25, 26, and 34 are independent. Claims 1, 2, and 26 are system claims, and claims 12, 13, 18, 21, 25, and 34 are method claims. Claim 1 is reproduced below.

1. A cruise control system for vehicle having a human operator, comprising:
a speed controller that automatically maintains the vehicle speed at a preset speed;
an enable switch associated with said controller for enabling the system;
a set speed input in communication with said controller for manually setting the speed of the vehicle at said preset speed, thereby engaging the system;
a memory which stores information indicative of said preset speed; and
a feedback system for communicating said information in said memory to the operator of the vehicle.

Ex. 1001, 6:7–20.

C. Prior Art Relied Upon

Petitioner relies upon the following prior art references:

JP S58-52708 (“Mizuno”)	March 29, 1983	Ex. 1003
(translation, Ex. 1004) ¹		

¹ Our decision cites to the translations of the prior art relied upon and the exhibit page numbers.

JP H8-220118 (“Miura”)
(translation, Ex. 1006)

August 30, 1996

Ex. 1005

D. The Asserted Grounds of Unpatentability

We instituted the instant *inter partes* review on the following grounds of unpatentability.

Reference[s]	Basis	Claims Challenged
Mizuno	§102(b)	1–3, 5, 12–14, 18, 21, 25, 26, and 34–36
Miura	§102(b)	1, 2, 12–16, 21, 25–27, and 29–31
Mizuno and Ordinary Skill in the Art	§103(a)	4, 19, 20, 23, 27, and 28

II. CLAIM CONSTRUCTION

In an *inter partes* review, “[a] claim in an unexpired patent shall be given its broadest reasonable construction in light of the specification of the patent in which it appears.” 37 C.F.R. § 42.100(b); *In re Cuozzo Speed Techs., LLC*, 778 F.3d 1271, 1279–83 (Fed. Cir. 2015). There is a “heavy presumption” that a claim term carries its ordinary and customary meaning. *CCS Fitness, Inc. v. Brunswick Corp.*, 288 F.3d 1359, 1366 (Fed. Cir. 2002); *In re Translogic Tech., Inc.*, 504 F.3d 1249, 1257 (Fed. Cir. 2007).

A. Previously Interpreted Terms

In the Decision on Institution, we interpreted various claim terms of the ’463 patent as follows:

Term	Interpretation
“engaging the system”	“operating the cruise control system to automatically control the vehicle at the preset speed”
“engaging the cruise control system”	“operating the cruise control system to automatically control the vehicle at the preset speed”
“enabling”	“a ‘system on’ state for the cruise control system”
“enabled”	“a ‘system on’ state for the cruise control system”
“indicating to the operator the unset status of the preset speed”	“a state or status in which there is no preset speed for the cruise control system”
“displaying a symbol indicative of an unset state of the preset speed”	“a state or status in which there is no preset speed for the cruise control system”
“activating the cruise control system”	“turning on the cruise control system”
“deactivated”	“the cruise control system is turned off”

See Dec. on Inst. 5–9.

The parties do not dispute these interpretations in their papers. *See also* Tr. 7:15–20, 36:16–37:10 (parties acknowledging alternative constructions have not been proposed since institution). We do not perceive any reason or evidence that now compels any deviation from these interpretations. Accordingly, we incorporate our previous analysis of the terms above. *See* Dec. on Inst. 5–9.

III. ASSERTED GROUNDS UNDER 35 U.S.C. § 102

To prevail in its challenges to claims 1–3, 5, 12–14, 18, 21, 25, 26, and 34–36 as anticipated by Mizuno and claims 1, 2, 12–16, 21, 25–27, and 29–31 as anticipated by Miura, Petitioner must prove unpatentability by a preponderance of the evidence. *See* 35 U.S.C. § 316(e); 37 C.F.R. § 42.1(d).

In finding a claim anticipated, “[t]he identical invention must be shown in as complete detail as is contained in the . . . claim.” *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236 (Fed. Cir. 1989). Moreover, “[a] claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *Verdegaal Bros. v. Union Oil Co. of Cal.*, 814 F.2d 628, 631 (Fed. Cir. 1987). A finding of inherency “requires that the missing descriptive material is ‘necessarily present,’ not merely probably or possibly present” in the anticipating reference. *Trintec Indus., Inc. v. Top-USA Corp.*, 295 F.3d 1292, 1295 (Fed. Cir. 2002) (quoting *In re Robertson*, 169 F.3d 743, 745 (Fed. Cir. 1999)).

A. Anticipation by Mizuno

1. Mizuno (Ex. 1004)

Mizuno relates to a speed controlling method for automatically controlling a vehicle so that vehicle speed follows a target speed. Ex. 1004, 1.² Figure 1 of Mizuno is reproduced below:

² Our decision cites the exhibit page numbers in the lower right-hand corners of Exhibit 1004.

Figure 1

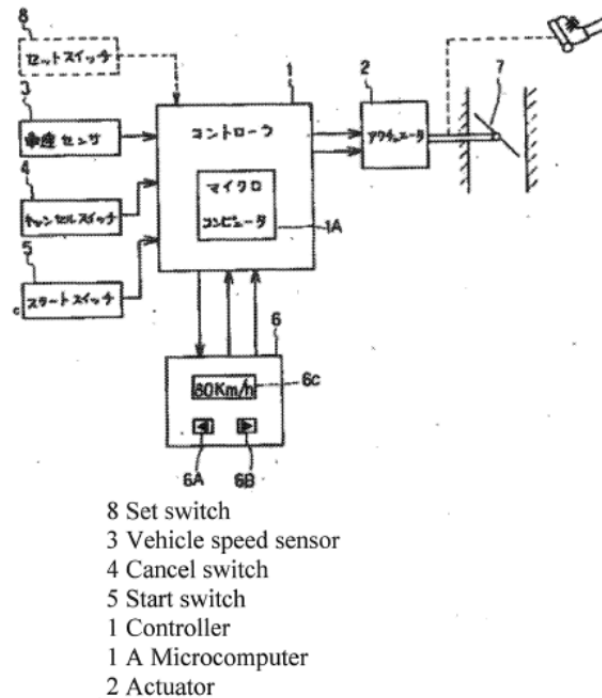


Figure 1 is a block diagram showing one embodiment of Mizuno's device. *Id.* at 7. The embodiment includes electrical signal processing circuit or controller 1 that is provided with microcomputer 1A. *Id.* at 3. Microcomputer 1A is provided with a memory, a part of which is used to store temporarily a digital set value indicating a target speed. *Id.* Controller 1 sends a signal to actuator 2 that displaces position of throttle valve 7. *Id.* at 3, 5. Controller 1 also communicates with control panel 6 that comprises display device 6C, which displays the set value. *Id.* at 3.

Speed sensor 3 generates pulse signals that indicate the speed of the vehicle. *Id.* Cancel switch 4 is linked to a clutch pedal and a brake pedal and can be installed in control panel 6. *Id.* Self-reset start switch 5 is provided to conduct a set operation to start speed control and can be installed in control panel 6. *Id.*

When a key switch of the vehicle is turned on, power is supplied to the electrical system of Figure 1, and microcomputer 1A is reset. *Id.* at 4, 5. Set value VM is preset to a value corresponding to 80 km/H and transferred to control panel 6 to be displayed in the seven-segment light-emitting display of display device 6C. *Id.* Actual vehicle speed Vs is calculated from the pulse signal sent by speed sensor 3. *Id.* at 4. Set value VM can be changed by operating up and down switches 6A and 6B, and the new set value is stored in memory and displayed at display device 6C. *Id.* at 4, 5. The embodiment shown also can be used with a one-touch stored set operation. *Id.* at 5. For example, as shown in Figure 1, set switch 8 can be added as an input for controller 1. *Id.* The display continues whether under speed control or not. *Id.* If start switch 5 is in an “on” status, flag F value becomes 1, and speed control is conducted. *Id.* If cancel switch 4 is in an “on” status, flag F becomes 0, and speed control is stopped. *Id.* The value of flag F can be used to indicate speed control and can be used to change the flashing of control panel 6. *Id.*

2. Independent Claim 1

Claim 1 recites a cruise control system comprising, *inter alia*, “an enable switch associated with said controller for enabling the system.”

Petitioner argues that Mizuno discloses all the limitations of claim 1. Pet. 18–22 (citing Ex. 1004 at 1, 3–5, 7, Figs. 1–4). In particular, Petitioner argues that Mizuno discloses the recited “enable switch” because Mizuno states “if the key switch of the vehicle is turned on, . . . the microcomputer (1A) is power-on reset in controller (1)” and “the initial value ‘80km/H’ is

displayed on the display device 6C by turning on the key switch.” *Id.* at 19–20 (citing Ex. 1004 at 3, 4, 5, 7, Figs. 1–3).

Patent Owner responds that Petitioner “incorrectly alleges that either ‘key switch’ or the ‘start switch (5)’ in Mizuno is the claimed ‘enable switch.’” PO Resp. 5 (citing Pet. 19–20). Specifically, for the key switch, Patent Owner argues that Petitioner relies on the key switch of a digital embodiment, but not key switch 9 of an analog embodiment. *Id.* at 5–6 (citing Pet. 19). Patent Owner asserts that the key switch of the digital embodiment is not shown in Figure 1 and Mizuno does not describe a key switch as a component of the digital embodiment, “except to say that it is ‘the key switch *of the vehicle*,’ implying that the key switch is the vehicle ignition switch.” *Id.* at 6 (citing Ex. 1004 at 5 ¶ 9); Tr. 31:21–25. Patent Owner thus argues that “it is unclear from Mizuno, whether the key switch is the ignition switch or a switch that is part of the digital embodiment of the speed control system shown in Figure 1.” PO Resp. 6.

Also, Patent Owner argues that Mizuno discusses only two actions attributed to turning on the key switch: causing display device 6C to show a value and providing power to supply the digital system. PO Resp. 6; Tr. 32:1–14. Patent Owner asserts that activating display device 6C is not putting a cruise control system into a “system-on state” because display device 6C is not a cruise control system. PO Resp. 6. Patent Owner further argues that powering the digital system does not mean necessarily that the digital system is in a system-on state. Patent Owner, thus, argues that Mizuno does not describe expressly or inherently that the key switch puts the cruise control system in a system-on state. *Id.* at 6–7; Tr. 32:15–33:8.

Petitioner replies that the “system must be on if the system is drawing power and a display device is operating.” Reply 2. Petitioner also states that its expert “confirmed the same” and that Patent Owner offers no evidence to rebut Petitioner’s expert testimony. *Id.* (citing Pet. 17–20; McNamara Decl. ¶¶ 44, 55). Petitioner further argues that “Mizuno discloses that when the key switch is turned on ‘power source is supplied to the electric system of Figure 1’” and “Figure 1 includes the ‘1 Controller’ and ‘2 Actuator.’” *Id.* at 2–3 (citing Pet. 19 (citing Ex. 1004 at 4, Figs. 1, 2)). Petitioner, thus, argues that the “key switch . . . powers on not just the display device 6C, as Patent Owner claims, but the entire system” and “Figure 2 confirms that the ‘key switch’ causes the entire cruise control process to start at ‘step 11’ (labeled ‘power ON switch’).” *Id.* at 3; see Tr. 12:18–13:10. Petitioner further argues that Petitioner cites key switch 9 of the analog embodiment. Reply 3 (citing Pet. 19 (citing Ex. 1004 at 7, ¶ 9)).

Mizuno explicitly discloses that “if the key switch of the vehicle is turned on, the power source is supplied to the electric system of Figure 1.” Ex. 1004 at 7. Figure 1 is a “block line drawing depicting one embodiment of the device implementing the present invention methodology” (*id.*) and Mizuno’s “invention relates to a speed controlling method for vehicle controlling automatically so that the vehicle speed . . . follows the target speed, and especially applies to the cruise control system” (*id.* at 1). Figure 1 of Mizuno shows a controller 1, actuator 2, display device 6C, and other components. Thus, Figure 1 shows Mizuno’s device that especially applies to a cruise control system and that includes at least display device 6C. As Patent Owner acknowledges, turning on the key switch turns on display

device 6C. *See* PO Resp. 6; Ex. 1004 at 5. Therefore, in view of the cited disclosures, we determine that, as argued by Petitioner, Mizuno discloses that its key switch supplies power to, at least, display device 6C and controller 1 of Figure 1 that are part of Mizuno’s device for cruise control systems, or “an enable switch associated with said controller for enabling the system.” *See* Pet. 19–20.

Accordingly, based on the complete record before us, we determine that Petitioner has shown by a preponderance of the evidence that, under 35 U.S.C. § 102(b), claim 1 is anticipated by Mizuno.

3. *Independent Claim 2*

Claim 2 recites, with emphasis added:

2. A cruise control system for a variable speed vehicle controlled by a human operator, comprising:

(a) a speed controller for automatically maintaining the vehicle at a substantially constant cruising speed selected by the operator;

(b) *a cruise control enable switch associated with the controller for enabling and disabling the controller;*

(c) a set speed input in communication with the controller for selecting the cruising speed of the vehicle when the controller is enabled;

(d) a memory that stores information representative of the selected cruising speed; and

(e) a feedback system that substantially continuously communicates the selected cruising speed information to the operator of the vehicle until either the operator selects a subsequent cruising speed or the controller is disabled.

Ex. 1001, 6:21–38. Petitioner contends that Mizuno discloses all the

limitations of claim 2. Pet. 23–24 (citing Ex. 1004 at 4, 5, 7, Figs. 1, 2, 4). Specifically, Petitioner argues that the same portions of Mizuno identified for the enable switch of claim 1 correspond to the recited cruise control enable switch of claim 2. Pet. 23. Petitioner additionally argues that Mizuno discloses “a cruise control enable switch associated with the controller for enabling and disabling the controller” because Mizuno describes that “controller (1) checks the status of cancel switch (4) and start switch (5)” and “a self-reset cancel switch can be provided in the vicinity of the start switch.” *Id.* at 23 (citing Ex. 1004 at 4, 5, Fig. 1; McNamara Decl. ¶ 58).

Patent Owner counters that “claim 2 requires a ‘**cruise control** enable switch . . . for enabling and disabling the controller,’ which must be interpreted more narrowly than the ‘enable switch’ of claim 1.” PO Resp. 8–9. Patent Owner argues that the “‘cruise control enable switch’ requires a switch dedicated to the cruise control system and for enabling (putting in a system-on state) and disabling (putting in a system-off state) the controller, as opposed to the ‘key switch of the vehicle’ in Mizuno.” *Id.* at 9 (citing Ex. 1004 at 5 ¶ 9); Tr. 30:8–13.

Patent Owner also argues that “[t]here is no discussion in Mizuno of how turning the key switch off could be interpreted as disclosing ‘disabling the controller’” and “Mizuno only discusses turning the key switch off with respect to the memory storing the set value VM.” PO Resp. 9 (citing Ex. 1004 at 7, ¶ 1). Patent Owner further argues that “there is no discussion, express or inherent, of how turning the key switch off impacts operation of the electrical signal processing circuit (1) and the actuator (2)” and “Mizuno

does not discuss using the key switch to disable any component of the digital system.” *Id.*

Petitioner replies that Patent Owner does not explain the patentable distinction between the switches of claims 1 and 2 and, if there is a patentable distinction, the distinctions are what is enabled and that claim 2 adds a disabling function. Reply 3–4. Petitioner also argues that “the key switch in Mizuno controls whether or not any power is provided to the controller as well as to the whole cruise control system.” *Id.* at 4; Tr. 14:11–24.

Mizuno explicitly discloses that “if the key switch of the vehicle is turned on, the power source is supplied to the electric system of Figure 1.” Ex. 1004 at 7. Figure 1 is a “block line drawing depicting one embodiment of the device implementing the present invention methodology” (*id.* at 7) and Mizuno “especially applies to the cruise control system” (*id.* at 1). Figure 1 of Mizuno shows a controller 1 and other components. Also, Mizuno discloses that “in order to continue to store the memory of the set value VM, during the off time of the key switch, a backup power supply can be provided only to RAM,” not the controller. Ex. 1004 at 7. Thus, as argued by Petitioner, we determine that Mizuno discloses a key switch that enables and disables at least controller 1 of Figure 1, or “a cruise control enable switch associated with the controller for enabling and disabling the controller.” *See* Pet. 23.

Accordingly, based on the complete record before us, we determine that Petitioner has shown by a preponderance of the evidence that, under 35 U.S.C. § 102(b), claim 2 is anticipated by Mizuno.

4. Independent Claim 12

Claim 12 recites, with emphasis added:

12. A method for visually communicating to the human operator of a vehicle having a cruise control system a cruising speed at which the vehicle is set, comprising:

determining the speed at which the vehicle is traveling;

activating the cruise control system at a desired cruising speed;

displaying a symbol indicative of the speed at which the cruise control system is activated;

maintaining the activated cruise control speed symbol upon temporary acceleration or deceleration of the vehicle;

removing said symbol when the cruise control system is deactivated or a new cruising speed is selected.

Ex. 1001, 7:25–38. Petitioner argues that Mizuno discloses all the limitations of claim 12. Pet. 25–28 (citing Ex. 1004 at 3–5, 7, Figs. 1–3; McNamara Decl. ¶¶ 56, 57, 59, 62). Specifically, for “maintaining the activated cruise control speed symbol upon temporary acceleration or deceleration of the vehicle,” Petitioner argues that Mizuno discloses “display [(6C)] continues while the key switch is turned on regardless of whether under speed control or not” and “the latest value is constantly maintained as the speed request by the driver.” *Id.* at 26 (citing Ex. 1004 at 5, Fig. 2; McNamara Decl. ¶¶ 59, 62).

Patent Owner responds that the “‘activated’ cruise control speed symbol refers to the previous step of ‘displaying a symbol indicative of the speed at which the cruise control system is activated’” and “the express

claim language requires that the ‘activated cruise control speed symbol’ include a symbol indicative of the selected cruising speed and some separate indicia indicating that the cruise control system is activated.” PO Resp. 10 (citing Ex. 1001, 3:63–4:4). Patent Owner argues that the “Petition does not cite to any separate indicia in Mizuno indicating the cruise control system is activated” and “Mizuno does not disclose this claim element, because the initial value on the display device 6C is not an ‘activated cruise control speed symbol.’” *Id.* at 10–11.

Claim 12 only requires “displaying a symbol indicative of the speed at which the cruise control system is activated.” We are not persuaded that this particular recitation of claim 12 further requires separate indicia that the cruise control system is activated, as argued by Patent Owner. Also, we are not persuaded that the subsequently recited “activated cruise control speed symbol” requires a symbol and separate indicia, as asserted by Patent Owner. Patent Owner’s argument cites column 3, line 63 to column 4, line 4 of the ’463 patent. The cited portion does not support Patent Owner’s argument because it discusses disengaging cruise control, not activating the cruise control system. Ex. 1001 3:63 (stating “When the cruise control is disengaged . . .”). Moreover, the cited portion describes a preferred embodiment, and Patent Owner presents no arguments that claim 12 is limited to the preferred embodiment. Thus, we are not persuaded that Mizuno must disclose separate indicia indicating that the cruise control system is activated.

Patent Owner also responds that “Mizuno never discusses, expressly or inherently, the impact of temporary acceleration or deceleration of the

vehicle on the display device 6C.” PO Resp. 11. Patent Owner argues that Petitioner “alleges that Mizuno meets this claim element, because the display device 6C ‘continues while the key switch is turned on regardless of whether under speed control or not’ but Mizuno “does not expressly or inherently discuss temporary acceleration or deceleration.” *Id.*

Patent Owner’s argument is not persuasive because Petitioner also cites Mizuno for disclosing that “the latest value is constantly maintained as the speed request by the driver.” Pet. 26 (citing Ex. 1004 at 5). Mizuno also discloses that “[e]very time the set value changes, the display of the display device (6C) is changed and the latest target speed is displayed.” Ex. 1004 at 5. The cited portion of Petitioner’s expert declaration also states that the “preset speed display continues regardless of whether speed control is engaged or not” and cites Mizuno’s disclosure that “[t]his display continues while the key switch is turned on regardless of whether under speed control or not.” McNamara Decl. ¶ 59 (citing Ex. 1004 at 5); Pet. 26 (citing McNamara Decl. ¶ 59). Petitioner, thus, presents evidence that a person of ordinary skill in the relevant field would view no difference between claim 12 and Mizuno. *See Scripps Clinic & Research Found. v. Genentech Inc.*, 927 F.2d 1565, 1576 (Fed. Cir. 1991) (anticipation requires “no difference between the claimed invention and the reference disclosure, *as viewed by a person of ordinary skill* in the field of the invention”) (emphasis added). Thus, Patent Owner’s arguments do not persuade us that Mizuno fails to disclose expressly the impact of temporary acceleration or deceleration of the vehicle on the display device 6C.

Regarding the citations to the expert testimony in the Petition (Pet. 26 (citing McNamara Decl. ¶¶ 59, 62)), Patent Owner argues that paragraphs 59 and 62 of the McNamara Declaration: (1) fail to state whether its assertion “applies to both of Mizuno’s embodiments;” (2) fail to state whether the assertion “is express in Mizuno or inherent;” (3) fail to state whether the assertion “is allegedly obvious based on Mizuno’s discussion;” (4) “fail[] to cite to any statement in Mizuno or knowledge of one of ordinary skill in the art as support;” and (5) fail to “indicate whether either embodiment of Mizuno is a ‘completely standard . . . cruise control system.’” PO Resp. 11–12.

We are not persuaded by these arguments that we should conclude the McNamara Declaration to be materially deficient. Paragraph 59 of the McNamara Declaration cites page 5, first paragraph of Mizuno, and paragraph 62 cites page 3, seventh through ninth paragraphs of Mizuno. Paragraphs 59 and 62 of the McNamara Declaration also declare that Mizuno discloses or inherently discloses certain features.

In view of the foregoing and based on the complete record before us, we determine that Petitioner has shown by a preponderance of the evidence that, under 35 U.S.C. § 102(b), claim 12 is anticipated by Mizuno.

5. Independent Claim 13

Claim 13 recites, with emphasis added:

13. A method for indicating to a human operator of a vehicle having a cruise control system a preset speed for which the cruise control system is set, the method comprising:
 setting the preset speed;
 displaying to the operator a symbol

indicative of the preset speed;
maintaining the display of the symbol
indicative of the preset speed; and
*discontinuing display of the symbol
indicative of the preset when the cruise control
system is deactivated or a new preset speed is
selected.*

Ex. 1001, 7:39–50. Petitioner argues that Mizuno discloses all the limitations of claim 13. Pet. 26–28 (citing Ex. 1004 at 4, 5, 7, Figs. 1, 3; McNamara Decl. ¶¶ 56–57). Specifically, for “discontinuing display of the symbol indicative of the preset speed when the cruise control system is deactivated or a new preset speed is selected,” Petitioner asserts that Mizuno states “if the key switch . . . is turned on, the power source is supplied to the electric system” and thus, “[w]hen the key switch is off, power is no longer provided to the display device, and it will turn off.” *Id.* at 27–28 (citing Ex. 1004 at 4, 5, 7, Figs. 1, 3; McNamara Decl. ¶¶ 56–57).

Patent Owner argues that “the Petition cites only to its declarant’s assertion” for the discontinuing step and “Petitioner’s declarant does not provide any explanation of his basis for this assertion, but merely cites to several portions of Mizuno.” PO Resp. 12 (citing Pet. 27–28).

Petitioner cites Mizuno’s disclosures that “if the key switch of the vehicle is turned on, the power source is supplied to the electric system of Figure 1” (Ex. 1004 at 4), that an “initial value . . . is displayed on the display device 6C by turning on the key switch” (*id.* at 5), and that “during the off time of the key switch, a backup power supply can be provided only to RAM.” (*id.* at 7). Pet. 27–28. The portions of the McNamara Declaration cited by Petitioner also cite these disclosure and state that “[w]hen the key

switch is turned off, the display will likewise turn off as a natural and inherent effect of having no power to light the display” and “Mizuno displays a given preset speed substantially continuously until . . . the system is powered off, in which case the display turns off.” McNamara Decl.

¶¶ 55–56 (citing Ex. 1004 at 4, 5, Figs. 6A, 6B); *see also* Tr. 16:7–13 (Petitioner arguing support for McNamara Declaration).

Considering together the cited portions of Mizuno and the McNamara Declaration, we are not persuaded by Patent Owner’s argument that Petitioner’s declarant fails to provide “any explanation.” Specifically, Mizuno discloses that turning on its key switch causes display device 6C to show a value, and during an off time of the key switch, power is supplied only to RAM and thus, not display device 6C, as averred in the McNamara Declaration. Patent Owner does not provide any arguments or evidence addressing why these disclosures of Mizuno fail to anticipate “discontinuing display of the symbol indicative of the preset speed when the cruise control system is deactivated or a new preset speed is selected.”

Accordingly, based on the complete record before us, we determine that Petitioner has shown by a preponderance of the evidence that, under 35 U.S.C. § 102(b), claim 13 is anticipated by Mizuno.

6. Independent Claim 18

Claim 18 recites, with emphasis added:

18. A method for indicating to a human operator of a vehicle having a cruise control system a preset speed for which the cruise control system is set, the method comprising:
 setting the preset speed;
 displaying to the operator a symbol

indicative of the preset speed while maintaining the vehicle speed at substantially the preset speed;
maintaining the display of the symbol indicative of the preset speed;
braking the vehicle;
upon braking the vehicle, discontinuing maintaining the vehicle speed at substantially the preset speed while keeping data corresponding to the preset speed in a memory device; and
at a time after braking and during which time the vehicle is not being maintained at substantially the preset speed, displaying to the operator a symbol indicative of the preset speed.

Ex. 1001, 8:1–19. Petitioner contends Mizuno discloses all the limitations of claim 18. Pet. 29–30 (citing Ex. 1004 at 3, 5, 7, Figs. 1, 2). In particular, for “upon braking the vehicle, discontinuing maintaining the vehicle speed at substantially the preset speed while keeping data corresponding to the preset speed in a memory device,” Petitioner contends that Mizuno discloses “(4) is the cancel switch which is linked to . . . the brake pedal” and “by having the set value VM non-volatile to the off operation of the key switch, a temporary stop when the speed is under control occurs, which is advantageous in the case of resuming the speed control at the same target speed again afterwards.” *Id.* at 29–30 (citing Ex. 1004 at 3, 7, Figs. 1, 2).

Patent Owner responds that “Mizuno never discusses what happens ‘upon braking the vehicle’” and Petitioner “only indicates that the cancel switch and the brake pedal are somehow ‘linked,’ but does not provide any further discussion of how such link is accomplished . . . or what the effect of such ‘link’ is.” PO Resp. 12–13 (citing Pet. 29). Patent Owner also argues that Figure 1 “does not aid in this analysis, since the brake pedal is shown

only as connected to a line between actuator 2 and the throttle valve 7” and “Mizuno does not make clear whether the . . . operation of the brake and clutch pedals are somehow related to the cancel switch.” Patent Owner specifically argues that “Mizuno does not explain how the ‘on’ and ‘off’ indications [generated by the brake and clutch pedals] are tied, if at all, to operation of the cancel switch.” *Id.* at 13. Patent Owner further argues that the portion of Mizuno cited by the Petition does not refer clearly “to the impact of turning off the key switch on the stored set value VM, and does not expressly or inherently mention braking.” *Id.* (citing Pet. 29). Patent Owner further contends that “it is unclear whether the ‘temporary stop’ refers to stopping the vehicle or stopping the speed control” because “it is unclear whether the key switch is the vehicle ignition switch or some other switch.” *Id.* at 13–14.

Petitioner replies that Mizuno “discloses that the cancel function uses a discrete on/off indication (including OR logic) to cancel cruise control if either the brake or the clutch is pushed.” Reply 5 (citing Pet. 29 (citing Ex. 1004 at 3)); Tr. 16:14–17:3. Petitioner also argues that “Mizuno discloses that the non-volatile memory stores the preset speed at *all* times, even when the car is turned off.” Reply 6 (citing Pet. 29–30).

The Petition cites Mizuno’s disclosure that, in its Figure 1, “(4) is the cancel switch which is linked to the clutch pedal and the brake pedal; here, at least the time of operation of one of each pedal is ‘on’ and the time of non-operation of both is referred to as ‘off.’” Pet. 29 (quoting Ex. 1004, 3). The Petition also cites Figure 2 of Mizuno that shows, when the cancel switch is on, speed control is stopped. Pet. 29 (citing Ex. 1004, Fig. 2 (steps

19, 21, 25)). The cited portions disclose that, if one of the clutch pedal or brake pedal is operated, the cancel switch is on and speed control is stopped, and if neither pedal is operated, then the cancel switch is off. Petitioner, thus, shows that Mizuno discloses that braking stops speed control.

Also, as cited by Petitioner (Pet. 29–30), Mizuno discloses that “by having the set value VM non-volatile to the off operation of the key switch, a temporary stop when the speed is under control occurs, which is advantageous in the case of resuming the speed control at the same target speed again afterwards.” Ex. 1004 at 3. Moreover, Mizuno discloses that “the value of the set value VM is . . . transferred to the control panel . . . for display in the display device 6C” and “[t]his display continues while the key switch is turned on regardless of whether under speed control or not.” Ex. 1004 at 4, 5. Thus, the cited portions of Mizuno describe that set speed data is maintained when not under speed control. Therefore, we are not persuaded by Patent Owner’s arguments that Mizuno fails to disclose “upon braking the vehicle, discontinuing maintaining the vehicle speed at substantially the preset speed while keeping data corresponding to the preset speed in a memory device.”

Accordingly, based on the complete record before us, we determine that Petitioner has shown by a preponderance of the evidence that, under 35 U.S.C. § 102(b), claim 18 is anticipated by Mizuno.

7. Independent Claim 21

Claim 21 recites, with emphasis added:

21. A method for indicating to a human operator of a vehicle having a cruise control system a preset speed for which the cruise control

system is set, the method comprising:
 engaging the cruise control system;
 setting the preset speed;
 displaying to the operator a symbol
indicative of the preset speed;
 maintaining the display of the symbol
indicative of the preset speed;
 discontinuing display of the symbol
indicative of the preset speed after the cruise
control system is deactivated or a new preset speed
is selected; and
 *after the cruise control system is
deactivated, displaying a symbol indicative of an
unset state of the preset speed.*

Ex. 1001, 8:32–47. Petitioner contends that Mizuno discloses all the limitations of claim 21. Pet. 30–32 (citing Ex. 1004 at 3–5, 7, Fig. 1; McNamara Decl. ¶¶ 49, 66–67, 70–71). Specifically, for “after the cruise control is deactivated, displaying a symbol indicative of an unset state of the preset speed,” Petitioner argues that Mizuno discloses a key switch to supply power to the electric system, and “when the key switch is off, power is no longer provided to the display device, and it turns off,” and “flashing of the display lamp (for example, set up on the control panel (6) can be changed[)].” *Id.* at 31–32 (citing Ex. 1004 at 4, 5, 7, Fig. 1; McNamara Decl. ¶¶ 49, 66–67, 70–71).

Patent Owner responds Petitioner cites the key switch for the “symbol” but “the key switch is not a symbol that is displayed.” PO Resp. 14 (citing Pet. 31–32). Patent Owner also argues that Petitioner cites a “display lamp” of Mizuno that “is not shown in any of the figures of Mizuno” and “is only mentioned in a single sentence.” *Id.* (citing Ex. 1004

at 5 ¶ 12). Patent Owner asserts that “if the cruise control system is deactivated (turned off), Mizuno does not provide any indication of whether the display lamp would still be on or capable of flashing” and provides no indication that “the flashing of the lamp is related to whether or not the vehicle is under speed control,” not “the state of the preset speed.” *Id.* at 15 (citing Ex. 1004 at 5 ¶¶ 1, 9, Fig. 2); Tr. 35:3–36:15, 37:11–38:8.

Petitioner replies that Mizuno discloses that, if the key switch is turned off, the display lamp of Mizuno must be turned off. Reply 9; Tr. 17:4–18:13. Petitioner also notes that Patent Owner provides no evidence contesting its expert testimony that the display device turns off after the key switch is off. Reply 9 (citing Pet. 31; McNamara Decl. ¶¶ 55, 67).

Petitioner does not explain suitably why the powering off of the display in Mizuno does not eliminate the presence of any indicia upon the display, and thus the display, in that particular reference, discontinues the presentation of any indicia or symbols. That an operator may be able to devise from the off condition of the display that the preset speed is not set does not mean that a “symbol” of that unset state is displayed.

Thus, based on the complete record before us, we determine that Petitioner has not shown by a preponderance of the evidence that, under 35 U.S.C. § 102(b), claim 21 is anticipated by Mizuno.

8. Independent Claim 25

Claim 25 recites, with emphasis added:

25. A method for indicating to a human operator of a vehicle having a cruise control system a preset speed for which the cruise control

system is set, the method comprising:
 setting the preset speed;
 displaying to the operator a symbol
 indicative of the preset speed;
 *accelerating the vehicle to a speed above the
 preset speed*; and
 maintaining the display of the symbol
 indicative of the preset speed while the vehicle is
 at the speed above the preset speed.

Ex. 1001, 8:56–67. Petitioner contends that Mizuno discloses all the limitations of claim 25. Pet. 32–33. In particular, Petitioner argues Mizuno inherently discloses “accelerating the vehicle to a speed above the preset speed” (“accelerating step”) because Mizuno discloses “an actuator which displaces the position of the throttle valve, which is a speed control element of a vehicle, by the signal of the controller (1),” and “vehicles will naturally deviate above the preset speed . . . such that the actual speed must be controlled by changing throttle position.” *Id.* at 32 (citing Ex. 1004 at 3; McNamara Decl. ¶ 62).

Patent Owner argues that paragraph 62 of the McNamara Declaration “fails to cite to any statement in Mizuno or knowledge of one of ordinary skill in the art” to support the assertion that the accelerating step “was completely standard in every cruise control system that existed during the Period” and “whether either embodiment of Mizuno is a ‘completely standard . . . cruise control system,’ such that this assertion would be applicable.” PO Resp. 15 (citing Pet. 33; McNamara Decl. ¶ 62).

Petitioner replies that Patent Owner challenges the basis of paragraph 62 of the McNamara Declaration, but does not challenge the cited portion of

Mizuno. Reply 6. Petitioner also contends Patent Owner does not provide any evidence to rebut paragraph 62 of the McNamara Declaration. *Id.*

Paragraph 62 cites page 3 of Mizuno for disclosing throttle valve 7 shown in Figure 1. Paragraph 62 further states that “vehicles will naturally deviate above the preset speed (*e.g.*, accelerate above the preset speed, such as when driving down a hill or decline).” Mizuno states that it “especially applies to the cruise control system which maintains the vehicle speed at set constant speed.” Ex. 1004 at 1. To maintain vehicle speed at a set constant speed, Mizuno’s speed controlling method must address speed changes above set speed, that is, accelerations above set speed, such as when driving downhill. *See id.* Mizuno’s method, thus, necessarily includes “accelerating the vehicle to a speed above the preset speed.” *See* McNamara Decl. ¶ 62. Figure 1, thus, supports that a vehicle under speed control might be accelerated above preset speed, as averred in paragraph 62 of the McNamara Declaration.

Accordingly, based on the complete record before us, we determine that Petitioner has shown by a preponderance of the evidence that, under 35 U.S.C. § 102(b), claim 25 is anticipated by Mizuno.

9. *Independent Claims 26 and 34*

Claim 26 recites, with emphasis added:

26. A cruise control system for a variable speed vehicle controlled by a human operator, comprising:

a speed controller for automatically maintaining the vehicle at a substantially constant preset speed;

a set speed input in communication with the controller for selecting the preset speed;

a memory device operable to store information representative of the preset speed;

first visual display apparatus operable to display the indicative of the actual speed of the vehicle; and

second visual display apparatus operable to display the visual information indicative of an operation status of the speed controller, wherein the visual information displayable by the second visual display apparatus includes visual information indicative of the preset speed.

Ex. 1001, 9:1–17. Petitioner contends that Mizuno discloses all the limitations of claim 26. Pet. 33–35. Specifically, Petitioner contends that Mizuno inherently discloses a “first visual display apparatus operable to display the [information] indicative of the actual speed of the vehicle” because “Mizuno discloses the drawbacks of a driver having to increase or decrease the preset cruise speed” and, thus, “inherent in [Mizuno] is a display of the actual speed for the driver to read so that the driver can determine when his/her desired speed has been reached.” *Id.* at 33–34 (citing McNamara Decl. ¶¶ 60–61); *see id.* at 34–35 (citing Ex. 1004 at 1–2, 3), Tr. 20:9–21 (arguing similarly).

Claim 34 recites, with emphasis added:

34. A method for providing an operator of a vehicle equipped with a cruise control device with information reflecting the operating status of the cruise control device, comprising:

providing a cruise control device including:

(a) a speed controller for automatically maintaining the vehicle at a substantially constant preset speed;

(b) a set speed input in

communication with the controller for selecting the preset speed;

(c) a memory device operable to store information representative of the preset speed;

(d) *first visual display apparatus operable to display the indicative of the actual speed of the vehicle*; and

(e) second visual display apparatus operable to display the visual information indicative of an operation status of the speed controller, wherein the visual information displayable by the second visual display apparatus includes visual information indicative of the preset speed; activating the cruise control device; and

operating the second visual display apparatus to indicate the active status of the cruise control device.

Ex. 1001, 10:11–33. Petitioner argues that Mizuno discloses all the limitations of claim 34. Pet. 35–37 (citing Ex. 1004 at 4, 5, 7, Figs. 1, 3; McNamara Decl. ¶ 49). Petitioner also relies on its arguments for the first visual display apparatus of claim 26, for claim 34’s recited “first visual display apparatus.” *Id.* at 36.

Patent Owner states that “[f]or the reasons explained . . . with regard to claim 34, Mizuno does not anticipate claim 26.” PO Resp. 16. For claim 34, Patent Owner responds that Mizuno does not disclose the recited “first visual display apparatus” because “Mizuno does not discuss a speedometer or any other device that displays actual speed of the vehicle” and the Petition refers to Mizuno’s discussion of a prior patent publication that does not refer to “a ‘visual display’ of actual speed of the vehicle.” *Id.* at 16–17 (citing Pet. 34); Tr. 39:1–4 (acknowledging the first visual display apparatus is the

speedometer). Patent Owner also argues that Petitioner's expert testimony mischaracterizes Mizuno and cites a portion of Mizuno that "never mentions any display, much less a speedometer or any display of actual vehicle speed." PO Resp. 17 (citing McNamara Decl. ¶ 60; Ex. 1004 at 2 ¶ 2). Patent Owner further argues that "Mizuno discusses the drawbacks of having to press acceleration and deceleration switches with one hand." *Id.* (citing Ex. 1004 at 2 ¶ 2). Patent Owner finally argues that the McNamara Declaration does not provide any support for the statement "[a]ll vehicles included speedometers that displayed actual speed." *Id.* at 17–18 (citing Pet. 33, McNamara Decl. ¶¶ 25, 61); Tr. 39:12–18.

Patent Owner's arguments are not persuasive. Because "the initial value '80km/H' is displayed on the display device 6C by turning on the key switch" and "[i]f start switch 5 is turned on, actuator (2) is displaced by using the set value" displayed on device 6C (Ex. 1004 at 4, 5), Mizuno must include necessarily an indication of actual speed so that the operator can adjust the set value before turning on start switch 5 to avoid undesirable changes in speed. Moreover, the '463 patent states that "[a]utomobiles currently provide one of two types of speed displays . . . the traditional speedometer, and the digital display." Ex. 1001, 3:42–44.

Accordingly, based on the complete record before us, we determine that Petitioner has shown by a preponderance of the evidence that, under 35 U.S.C. § 102(b), claims 26 and 34 are anticipated by Mizuno.

10. Claims 3, 5, 14, 35 and 36

Petitioner argues that Mizuno discloses all the limitations of claims 3 and 5, which both depend from claim 2; claim 14, which depends from claim

13; and claims 35 and 36, which both depend, directly or indirectly, from claim 34. Pet. 24–25 (citing Ex. 1004 at 3, 4, 5, 8, Figs. 1–2), 28–29 (citing Ex. 1004 at 3–5, 7, Figs. 1–4), 37–38. For claim 35, Petitioner relies on its arguments and evidence for claims 34 and 5, and for claim 36, Petitioner relies on its arguments and evidence for claim 14. Pet. 37–38. For institution, we determined that Petitioner demonstrated a reasonable likelihood of prevailing on the challenge that claims 3, 5, 14, 35, and 36 are anticipated by Mizuno.

Patent Owner does not provide any arguments disputing that Mizuno anticipates claims 3, 5, 14, 35, and 36, apart from the arguments presented for their respective parent independent claims. PO Resp. 5–18. For the reasons above, we are not persuaded by Patent Owner’s arguments regarding the respective parent independent claims.

Based on the complete record before us, we determine that Petitioner has shown by a preponderance of the evidence that, under 35 U.S.C. § 102(b), claims 3, 5, 14, 35, and 36 are anticipated by Mizuno.

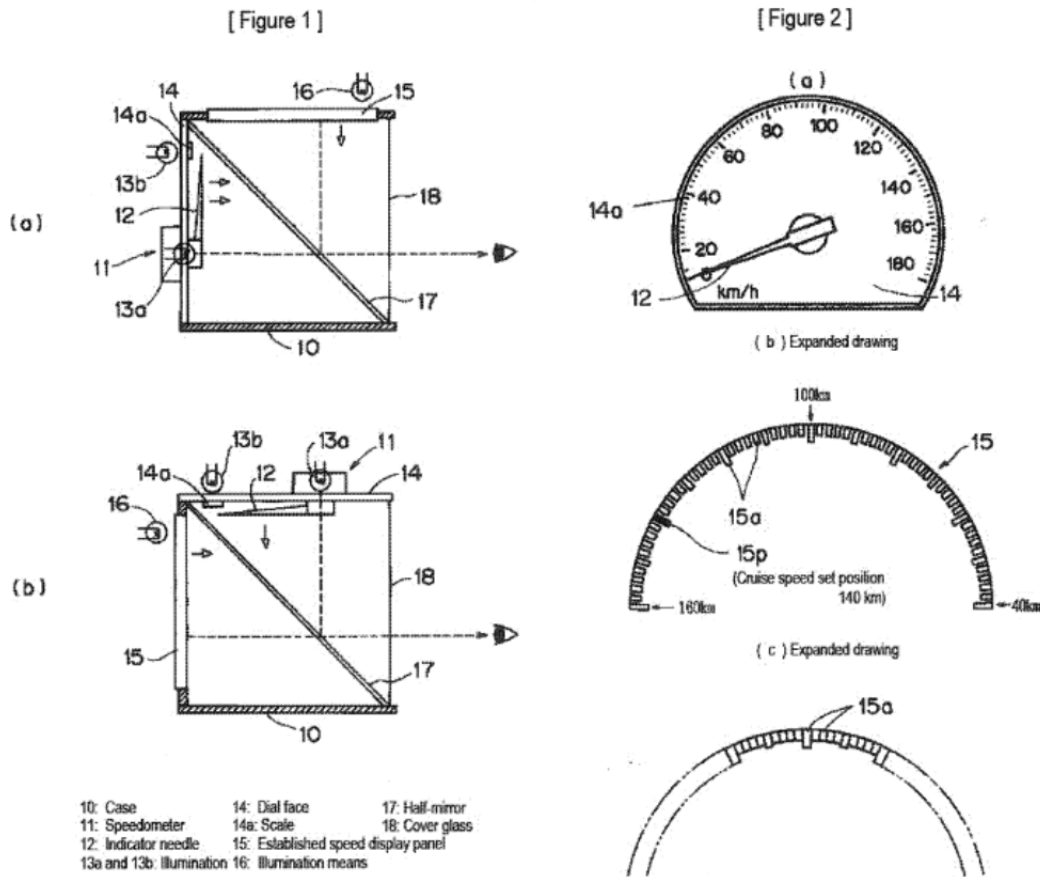
B. Anticipation by Miura

1. Miura (Ex. 1006)

Miura discloses a “set speed readout of a cruise travel speed unit, . . . displaying the established speed during cruise travel on a speedometer scale.” Ex. 1006, 3³.

Figures 1a, 1b, and 2a–2c of Miura are reproduced below:

³ Our decision cites the exhibit page numbers in the lower right-hand corners of Exhibit 1006.



Figures 1a and 1b are sectional views, and Figures 2a–2c are a view and expanded drawings of a speedometer display design. *Id.* at 11. Speedometer 11 has indicator needle 12 and dial face 14 with scale 14a. *Id.* at 7. In Figure 1a, speedometer 11 is arranged rearward of half-mirror 17. *Id.*

Set speed display panel 15 displays the vehicle speed established by a cruise control device. *Id.* at 7. Illumination means 16 lights speed control panel 15, and light from illumination means 16 is reflected by half-mirror 17, thereby superimposing speed control panel 15 on dial face 14 of speedometer 11. *Id.* Speed control panel 15 can have scale 15a that emits

light. Scale 15a can be formed by arranging light-emitting diodes in, for example, 1 Km increments over a range of speed. *Id.* at 8.

Figure 3 of Miura is reproduced below:

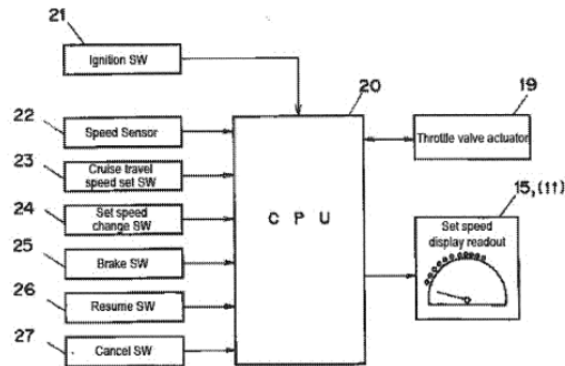


Figure 3 shows a circuit diagram for controlling the set speed display readout. *Id.* at 9. CPU 20 includes RAM. *Id.* Ignition SW 21 is a switch for controlling engine start and stop. *Id.* Speed sensor 22 generates a pulse corresponding to vehicle speed. *Id.* Cruise travel set SW 23 performs the ON/OFF of cruise speed travel. *Id.* The established speed change SW or set speed change SW 24 changes the established speed of cruise speed travel. *Id.* Brake SW 25 cancels cruise speed travel. *Id.* Resume SW 26 enters cruise speed travel. *Id.* CPU 20 is connected to throttle valve 19 that drives the throttle valve of the engine. *Id.* CPU 20 is also connected to established speed display indicator or set speed display 15. *Id.*

The engine starts when ignition SW 21 is on, and power is applied to CPU 20. *Id.* When cruise travel set SW 23 is set, CPU 20 calculates vehicle speed and stores vehicle speed data in RAM when SW 23 is ON. *Id.* If cancel SW 27 is ON, scale 15a is turned off, and if cancel SW 27 is OFF, scale 15a turns on and indicates the stored vehicle speed data. *Id.* at 9, 10. If cruise travel speed change SW 24 is ON, the speed stored in memory is

changed, and scale 15a changes to match the stored speed data. *Id.* at 10. A brake operation is similar to a cancel SW operation. *Id.*

2. Independent Claim 1

Claim 1 recites a cruise control system comprising, *inter alia*, “an enable switch associated with said controller for enabling the system.” Petitioner contends that Miura discloses all the limitations of claim 1. Pet. 44–48 (citing Ex. 1006 at 3, 4–11, Figs. 2a–10). Specifically, Petitioner argues that Miura discloses the recited enable switch because Miura describes that “[t]he engine starts when ignition SW (21) is on and power is applied to the CPU (20).” Pet. 45 (citing Ex. 1006 at 9, Fig. 3).

Patent Owner responds that the “‘ignition switch’ of Miura is not the claimed ‘enable switch,’ because Miura expressly states, ‘ignition switch (21) . . . is the switch for controlling engine start and stop.’” PO Resp. 19 (citing Ex. 1006 at 9). Patent Owner argues that “Miura expressly states that the cruise control speed travel unit is not in a system-on state until it is determined that the vehicle speed is within a threshold range” and “though the CPU 20 may receive power when the engine starts, the supply of power does not mean that the cruise speed travel unit is in a system-on state, especially when Miura states that the unit cannot work until the vehicle speed is within a threshold range.” *Id.* at 19–20 (citing Ex. 1006 at 3, 9).

Patent Owner also argues that “Miura clearly states that the cruise travel set SW (23) is used to activate speed control, not put the cruise control system into a system-on state” and cruise travel set switch 23 cannot be the claimed “enable switch” because Petitioner asserts that the cruise travel set

switch 23 is the claimed “set speed input.” *Id.* at 20 (citing Pet. 45; Ex. 1006 at 9).

Petitioner replies that Patent Owner’s argument “assumes ‘enable’ means ‘engage,’” and “Figure 3 of Miura shows that the CPU is located in between, and therefore . . . power to it controls whether the whole system is enabled or not.” Reply 10 (citing Pet. 45).

We agree with Patent Owner that Petitioner cites Miura’s cruise travel set switch 23 for claim 1’s “set speed input.” *See* Pet. 45–46. However, we do not agree with Patent Owner that Miura’s ignition switch 21 fails to disclose claim 1’s “enable switch.” As Petitioner argues, Miura discloses that the “engine starts when ignition SW (21) is on and power is applied to the CPU (20).” Pet. 45 (citing Ex. 1006 at 9). Ignition switch 21 is shown in Miura’s Figure 3 which is “a circuit schematic diagram of the cruise travel speed device” of Miura, and Figure 3 shows that ignition switch 21 provides an input to CPU 20. *See* Ex. 1006 at 11, Fig. 3. Thus, Figure 3 of Miura discloses that CPU 20 is part of Miura’s cruise travel speed device, and when ignition switch 21 applies power to CPU 20, ignition switch 21 applies power to at least a portion of the cruise travel speed device of Miura, as shown in Figure 3. Therefore, Miura discloses “an enable switch associated with said controller for enabling the system,” as recited by claim 1.

As for Patent Owner’s argument that power applied to CPU 20 does not mean Miura’s cruise control device is enabled because it must be within a speed range to be in a “system on state,” Miura states that Figure 4 “is a flow chart for explaining the operation of the cruise control device” and describes that Figure 4 explains the operation of the circuit schematic

diagram of Figure 3. Ex. 1006 at 9, 11. At step 1 of Figure 4, Miura discloses that the determination of whether the speed of the vehicle is between a low speed limit and high speed limit sets a cruise speed travel flag. *Id.* at 9. Figure 3 shows speed sensor 22 providing an input to CPU 20. Figure 3 also depicts cruise travel speed set switch 23, set speed change switch 24, brake switch 25, resume switch 26, and cancel switch 27 providing inputs to CPU 20, but does not show a cruise speed travel flag as an input to CPU 20. Considering Figures 3 and 4 together, we determine that CPU 20 sets the cruise speed travel flag based on its input from speed sensor 22, and thus, CPU 20 is enabled or in a system on state to set that flag. Thus, as argued by Petitioner, we determine that Miura discloses an ignition switch that enables and disables at least CPU 20 of Figure 3 or “an enable switch associated with said controller for enabling the system.”

Accordingly, based on the complete record before us, we determine that Petitioner has shown by a preponderance of the evidence that, under 35 U.S.C. § 102(b), claim 1 is anticipated by Miura.

3. *Independent Claim 2*

Claim 2 recites a cruise control system comprising, *inter alia*, “a cruise control enable switch associated with the controller for enabling and disabling the controller.” Petitioner argues that Miura discloses the limitations of claim 2, specifically that ignition switch 21 of Miura identified for the enable switch of claim 1 discloses the cruise control enable switch of claim 2. Pet. 48–49 (Ex. 1006 at 4, 7, 10, 11, Figs. 4–6).

Patent Owner responds that “[e]ven if the ‘enable switch . . . for enabling the system’ of claim 1 could be interpreted broadly to encompass

Miura's ignition switch (which Patent Owner disputes), claim 2 requires a '**cruise control** enable switch . . . for enabling and disabling the controller,' which must be interpreted more narrowly than the 'enable switch' of claim 1." PO Resp. 21. Patent Owner thus argues that "'cruise control enable switch' requires a switch dedicated to the cruise control system and for enabling . . . and disabling . . . the controller, as opposed to the 'ignition switch 21' in Miura which is expressly for turning the engine on and off." *Id.* at 22 (citing Ex. 1006 at 9).

Patent Owner also argues that "[t]here is no discussion in Miura of how turning the ignition switch off could be interpreted to disclose 'disabling the controller'" and "Miura does not include any discussion about turning the ignition switch off." *Id.* Patent Owner disputes Petitioner's expert testimony and argues "simply because the preset speed display is turned off when the power is turned off, does not necessarily require that the controller is disabled." *Id.* (citing Ex. 1007 ¶ 67); Tr. 42:18–43:15.

Petitioner replies that Patent Owner's arguments fail for the same reasons discussed with respect to claim 2 and Mizuno. Reply 11; Tr. 22:9–23:12. Petitioner also notes that "Patent Owner offers no evidence to rebut Mr. McNamara that the cruise control system in every vehicle is off when the ignition switch is off." Reply 11 (citing PO Resp. 22).

As cited by Petitioner (Pet. 45, 48), Miura explicitly discloses that the "engine starts when ignition SW (21) is on and power is applied to the CPU (20)." Ex. 1006 at 9. Figure 3 "depicts the circuit schematic diagram controlling the vehicle display read out provided for the established speed display read out of the cruise travel speed travel speed device" and "CPU

(20) is connected to the ignition SW (21).” *Id.* at 9. Thus, as argued by Petitioner, we determine that Miura discloses an ignition switch that enables and disables at least CPU 20 of Figure 3, or “a cruise control enable switch associated with the controller for enabling and disabling the controller.”

Accordingly, based on the complete record before us, we determine that Petitioner has shown by a preponderance of the evidence that, under 35 U.S.C. § 102(b), claim 2 is anticipated by Miura.

4. *Independent Claim 12*

Claim 12 recites a method for visually communicating to the human operator of a vehicle having a cruise control system a cruising speed at which the vehicle is set comprising, *inter alia*, “maintaining the activated cruise control speed symbol upon temporary acceleration or deceleration of the vehicle.”

Petitioner contends that Miura discloses all the limitations of claim 12. Pet. 49–52, 55–56 (citing Ex. 1006 at 4, 7, 9–11, Figs. 3–6; McNamara Decl. ¶¶ 66–67, 69–71, 75–78). In particular, Petitioner argues that Miura discloses “[a] set speed display readout . . . shows the set speed display only during the cruise travel speed” and “control similar to that of the cancel SW is performed when the brake is operated equal to or more than a predetermined deceleration value.” Pet. 50 (citing Ex. 1006 at 4, 7, 10, 11, Figs. 4–6; McNamara Decl. ¶¶ 69–70, 77–78).

Patent Owner responds that “the express claim language requires that the ‘activated cruise control speed symbol’ must include a symbol indicative of the selected cruising speed and some separate indicia indicating that the cruise control system is activated.” PO Resp. 23. Patent Owner argues that

“the Petition does not cite to any separate indicia in Miura indicating the cruise control system is activated” and “the set speed display alone is not an ‘**activated**’ cruise control speed symbol.’” *Id.* Petitioner replies that the separate indicia argument fails for the same reasons discussed in connection with the ground that Mizuno anticipates claim 12. Reply 12.

As discussed above, claim 12 only requires “displaying a symbol indicative of the speed at which the cruise control system is activated.” We are not persuaded that this particular recitation of claim 12 further requires separate indicia that the cruise control system is activated, as argued by Patent Owner, and thus, we are not persuaded that Miura must disclose separate indicia indicating that the cruise control system is activated.

Patent Owner also argues that “Miura never discusses, expressly or inherently, the impact of temporary acceleration or deceleration of the vehicle on the set speed display panel 15” and the portion of Miura cited by Petitioner “is unclear as to whether the set speed display panel 15 shows the cruise travel speed upon temporary acceleration or deceleration.” PO Resp. 24 (citing Pet. 50 (quoting Ex. 1006 at 4)).

Petitioner replies that the one or more lit diodes of Miura indicate cruise control activation and the arrangement provides separate indicia. Reply 11 (citing Pet. 50)). Petitioner also argues that Figures 4 and 5 of Miura show that, after the set switch is operated, the display persists until cruise control is canceled or turned off. *Id.* at 12 (citing Pet. 50). Petitioner further contends that Patent Owner offers no evidence against Petitioner’s expert testimony that “Miura’s disclosure of controlling the throttle during

speed control confirms that the vehicle will deviate from the set speed during cruise control.” *Id.* (citing McNamara Decl. ¶ 78).

Patent Owner’s argument is not persuasive because Petitioner cites at least Figure 4 of Miura that includes step 5, “Turn on light emitting diode corresponding to set speed,” if the cruise travel speed set is on. Pet. 50 (citing Figs. 4, 5; stating “*see, e.g.*, steps S5–S7 indicating that diodes remain turned on until cruise control is canceled”). Petitioner cites paragraph 78 of the McNamara Declaration, which states that the “‘throttle actuator controlling the amount of fuel supply to maintain a certain vehicle speed’ . . . is necessary to maintain a certain speed because vehicles will naturally deviate above the preset speed (. . . such as when driving down a hill or decline) or below the preset speed (. . . such as when driving up a hill or incline) such that the actual speed must be controlled by changing throttle position.” McNamara Decl. ¶ 78; *see* Pet. 50 (citing *id.*). Thus, Patent Owner’s arguments do not persuade us that Miura fails to disclose expressly the impact of temporary acceleration or deceleration of the vehicle on the display device 6C.

Accordingly, based on the complete record before us, we determine that Petitioner has shown by a preponderance of the evidence that, under 35 U.S.C. § 102(b), claim 12 is anticipated by Miura.

5. *Independent Claim 13*

Claim 13 recites a method for indicating to a human operator of a vehicle having a cruise control system a preset speed for which the cruise control system is set, comprising, *inter alia*, “discontinuing display of the

symbol indicative of the preset when the cruise control system is deactivated or a new preset speed is selected” (“the discontinuing display step”).

Petitioner argues that Miura discloses the limitations of claim 13. Pet. 51–52. Specifically, for the discontinuing display step, Petitioner asserts that, because Miura discloses ignition SW (21) applies power to CPU (20), when power is no longer provided, the display must turn off. *Id.* (citing Ex. 1006 at 9, Fig. 3; McNamara Decl. ¶¶ 66–67, 70–71, 75–76). For the discontinuing step’s alternative condition of “when . . . a new preset speed is selected,” Petitioner asserts that “[d]isplay of a currently set symbol is discontinued when a new preset speed is selected.” *Id.* (citing McNamara Decl. ¶¶ 70, 75).

Patent Owner responds only to Petitioner’s assertion that the “[d]isplay of a currently set symbol is discontinued when a new preset speed is selected.” PO Resp. 25 (citing Pet. 51–52). Patent Owner argues that the “Petition cites only its declarant’s assertion” but the “declarant does not provide any explanation of his basis for this assertion, but merely cites one paragraph in Miura.” *Id.* (citing McNamara Decl. ¶ 75–76). Patent Owner does not provide any other arguments disputing that Miura discloses “discontinuing display of the symbol indicative of the preset when the cruise control system is deactivated.” *See id.* Petitioner replies that Patent Owner does not address its expert declaration’s paragraphs 66, 67, 70, 71, and 76, which were cited in the Petition. Reply 12. Petitioner also argues that paragraph 75 cites steps in Figures 4 and 5 of Miura. *Id.* at 12–13.

Patent Owner’s argument is not persuasive, because Petitioner additionally cites paragraph 76 of the McNamara Declaration. Pet. 51–52.

Paragraph 76 cites various portions of Miura, including paragraph 23 on page 10, which states:

Determine whether the cruise travel speed change SW24 in ON in step S13 and proceed to step S14 in the case of YES. Determine the vehicle speed rise or fall in step S14 and increment in speed memory in step S15 when the speed rises. Moreover, proceed to step S16 when the speed is lowered and decrement the speed memory. Light the scale composed of light emitting diodes corresponding to the predetermined vehicle speed data according to the vehicle speed data established in the memory unit in step S17.

Thus, Petitioner shows that Miura discloses “discontinuing display of the symbol indicative of the preset when . . . a new preset speed is selected,” as well as “when the cruise control system is deactivated.”

Accordingly, based on the complete record before us, we determine that Petitioner has shown by a preponderance of the evidence that, under 35 U.S.C. § 102(b), claim 13 is anticipated by Miura.

6. *Claim 15*

Claim 15 depends from claim 13 and recites “before setting the preset speed, activating the cruise control system; and after activating the cruise control system, but before setting the preset speed, indicating to the operator the unset status of the preset speed.”

Petitioner argues that Miura disclose all the limitations of claim 15. Pet. 53 (citing Ex. 1006 at 1, 4, 9, 10, 11, Figs. 3–6). In particular, for “indicating to the operator the unset status of the preset speed,” Petitioner argues that Miura discloses that its display shows set speed only during cruise control. *Id.* (citing Ex. 1006 at 1, 4, 10, 11, Figs. 4–6).

Patent Owner responds that a “lack of providing any indication cannot meet the affirmative claim requirement of ‘indicating to the operator the unset status of the preset speed.’” PO Resp. 26. Petitioner replies that Patent Owner does not offer a construction of the disputed terms and “Miura discloses unlit LEDs as negative indications.” Reply 13–14.

As discussed in our Decision on Institution, we are not persuaded that claim 15, which broadly recites “indicating,” requires the indication to be a visual indication. Dec. on Inst. 8. Patent Owner’s argument relies on a claim construction we determined as too narrow. *See id.* Because Patent Owner’s Response provides no reasons or evidence for a narrower construction, it is not persuasive. Moreover, claim 16, which depends from claim 15, recites that “wherein indicating the unset status of the preset speed includes displaying a visual symbol to the operator.” Thus, the scope of claim 15 must be broader than “displaying a visual symbol to the operator.”

Therefore, based on the complete record before us, we determine that Petitioner has shown by a preponderance of the evidence that, under 35 U.S.C. § 102(b), claim 15 is anticipated by Miura.

7. *Claim 16*

Claim 16 depends from claim 15 and recites “wherein indicating the unset status of the preset speed includes displaying a visual symbol to the operator.” Petitioner argues that “Miura discloses a symbol indicative of an unset state of the preset speed after the cruise control system is deactivated because the LEDs are off by having power removed when the ignition switch is turned off.” Pet. 53–54 (citing Ex. 1006 at 9, Figs. 4–5).

Patent Owner responds that “the vehicle cannot ‘display’ anything when it is off” and that the Petition “does not identify how Miura discloses a ‘symbol,’ other than essentially a parked car.” PO Resp. 26. Patent Owner also argues that “there is no indication in Miura that the off LEDs would be displayed ‘to the operator’” because the “car is off,” “there is no operator,” and “there is no operation possible.” *Id.* at 26–27. At oral hearing, Patent Owner additionally argued that, by its dependency, claim 16 requires that the cruise control system is activated because it recites “indicating the unset status of the preset speed” which refers to claim 15’s recitation “after activating the cruise control system, but before setting the preset speed, indicating to the operator the unset status of the preset speed.” Tr. 45:5–25.

Petitioner replies that Patent Owner does not offer a construction of the disputed terms. Reply 13. Petitioner also argues Miura discloses that its LEDs are associated with its cruise control device, that unlit LEDs are “negative indications,” that “unlit LEDs are displayed,” and “that the user can distinguish the placement of lit LEDs from unlit ones.” *Id.* at 13–14 (citing Pet. 53–56, Ex. 1006, Figs. 4, 5).

Patent Owner’s arguments are persuasive. Petitioner argues Miura discloses a symbol indicative of an unset state of the preset speed because the ignition switch is turned off and thus, the LEDs are turned off. Pet. 53–54; Tr. 53:14–24. However, claims 15 and 16 together require “after activating the cruise control system, but before setting the preset speed,” indicating the unset state includes a visual symbol. Ex. 1001, 7:55–64.

Accordingly, based on the complete record before us, we determine that Petitioner has not shown by a preponderance of the evidence that, under

35 U.S.C. § 102(b), claim 16 is anticipated by Miura.

8. Independent Claim 21

Claim 21 recites a “method for indicating to a human operator of a vehicle having a cruise control system a preset speed for which the cruise control system is set” that comprises, *inter alia*, “after the cruise control system is deactivated, displaying a symbol indicative of an unset state of the preset speed” (“the displaying a symbol step”). Petitioner argues Miura discloses all the limitations of claim 21, with references to its arguments for similar limitations in claims 1 and 12–14. Pet. 53–56 (citing Ex. 1006 at 4, 9, 10, Figs. 3–6; McNamara Decl. ¶¶ 66–71). In particular, for the displaying a symbol step, Petitioner contends that “[a]s can be seen from Miura, when the key switch is off, power is no longer provided to the display device.” Pet. 55–56 (citing Ex. 1006 at 4, 9, 10, 22, Figs. 3–6; McNamara Decl. ¶¶ 66–71).

Patent Owner cites its reasons for claim 16 to assert that “Miura does not discuss ‘displaying a symbol indicative of an unset state of the preset speed.’” PO Resp. 27. Patent Owner also responds that “Miura does not discuss that the symbol is displayed ‘after the cruise control system is deactivated’” because “after the ignition switch 21 is turned off, nothing is displayed.” *Id.* Patent Owner also argues that Petitioner previously cited turning off ignition switch 21 for discontinuing display of a symbol as required by claim 13 and “incorrectly asserts that turning off the vehicle simultaneously ‘discontinues’ a display and causes a display.” *Id.*

Petitioner replies that Patent Owner does not offer a construction of the disputed terms. Reply 13. Petitioner also argues Miura discloses that its

LEDs are associated with its cruise control device, that unlit LEDs are “negative indications,” that “unlit LEDs are displayed,” and “that the user can distinguish the placement of lit LEDs from unlit ones.” *Id.* at 13–14 (citing Pet. 53–56, Ex. 1006, Figs. 4, 5); Tr. 26:13–27:15.

We agree with Patent Owner that Petitioner cannot rely on Miura’s disclosure that turning off ignition switch 21 turns off its display for “discontinuing display of the symbol indicative of the preset when the cruise control system is deactivated or a new preset speed is selected” as recited by claim 13, and for “after the cruise control system is deactivated, displaying a symbol indicative of an unset state of the preset speed,” as recited by claim 21.

Also, Petitioner does not explain suitably why the powering off of the display in Mizuno does not eliminate the presence of any indicia upon the display, and thus the display, in that particular reference, discontinues the presentation of any indicia or symbols. That an operator may be able to devise from the off condition of the display that the preset speed is not set does not mean that a “symbol” of that unset state is displayed.

Accordingly, based on the complete record before us, we determine that Petitioner has not shown by a preponderance of the evidence that, under 35 U.S.C. § 102(b), claim 21 is anticipated by Miura.

9. *Independent Claim 25*

Claim 25 recites a “method for indicating to a human operator of a vehicle having a cruise control system a preset speed for which the cruise control system is set” that comprises, *inter alia*, “maintaining the display of

the symbol indicative of the preset speed while the vehicle is at the speed above the preset speed.”

Petitioner argues that the portion of Miura cited for “maintaining the activated cruise control speed symbol,” as recited by claim 12, discloses “maintaining the display of the symbol indicative of the preset speed while the vehicle is at the speed above the preset speed,” as recited by claim 25. Pet. 57. For the similar limitation in claim 12, Petitioner cites pages 4, 7, 10, 11 and Figures 4–6 of Miura. *See id.* at 50. Petitioner also cites paragraph 78 of the McNamara Declaration. *See id.*

Patent Owner responds that “Miura never expressly addresses the impact of acceleration on the set speed display panel 15” and “states that the set speed display is shown **only** during the cruise travel speed.” PO Resp. 8.

Patent Owner’s argument is similar to its argument for claim 12. For the same reasons above in connection with claim 12, we are not persuaded in view of Figure 4 of Miura, which shows step 5 “Turn on light emitting diode corresponding to set speed” if the cruise travel speed set is on, and paragraph 78 of the McNamara Declaration, which states the “‘throttle actuator . . . ’ . . . is necessary to maintain a certain speed because vehicles will naturally deviate above the preset speed . . . or below the preset speed . . . such that the actual speed must be controlled by changing throttle position.”

Accordingly, based on the complete record before us, we determine that Petitioner has shown by a preponderance of the evidence that, under 35 U.S.C. § 102(b), claim 25 is anticipated by Miura.

10. Claim 27

Claim 27 depends from claim 26 and recites “wherein the visual information displayed by the second visual display apparatus includes information reflecting whether the speed controller is operating to maintain the vehicle at the cruising speed at the time the display is made.”

Petitioner relies on the portions of Miura cited for the “feedback system that substantially continuously communicates the selected cruising speed information . . . ” of claim 2, “maintaining the activated cruise control speed symbol upon temporary acceleration and deceleration of the vehicle” of claim 12, and the “second visual display apparatus” of claim 26. Pet. 58.

Patent Owner responds that Petitioner cites the illuminated LED of the set speed display for both the recited “second visual display” of claim 26 and the limitation of claim 27, which depends from claim 26. PO Resp. 29 (citing Pet. 56–57). Patent Owner also argues that the “LED is either on or off, and the set speed display does nothing except turn an LED on or off.” *Id.*

Petitioner replies that “Miura discloses lighting of multiple LEDs.” Reply 14. Petitioner also argues that Patent Owner “does not contest that one or more LEDs being lit constitutes information reflecting that the speed controller is operating and that all LED(s) being unlit constitutes information that the speed controller is not operating.” *Id.*

Claims 26 and 27 together require the recited second visual display apparatus to display information indicating “operation status of the speed controller” (Ex. 1001, 9:12–14), “preset speed” (*id.* at 9:14–17), and “whether the speed controller is operating to maintain the vehicle at the cruising speed at the time the display is made” (*id.* at 9:18–22). As

Petitioner argues (Pet. 48–49, 50, 57–58), Miura discloses a set speed display that displays the set speed “at the time the cruise travel speed is set” and “shows the set speed display only during the cruise travel speed according to the cruise travel speed unit.” Ex. 1006 at 4, 11. Petitioner also cites to Figure 4 of Miura that shows a step 5 (“Turn on light emitting diodes corresponding to set speed”) if a cruise travel speed set switch in on at step 2. Thus, Miura discloses a visual display apparatus that indicates a speed controller is operating, that indicates a preset speed, and that the speed controller is operating at the time the preset speed is displayed.

Accordingly, based on the complete record before us, we determine that Petitioner has shown by a preponderance of the evidence that, under 35 U.S.C. § 102(b), claim 27 is anticipated by Miura.

11. Claim 31

Claim 31 depends from claim 29, which depends from independent claim 26. Claims 26, 29, and 31 together require “a second visual display apparatus operable to display the visual information indicative of an operation status of the speed controller [and] includes visual information indicative of the preset speed,” “wherein the second visual display apparatus comprises a plurality of individual indicators, wherein each of said individual visual indicators is associated with a particular vehicle speed,” and “wherein the individual visual indicators are disposed on the indicator dial of the analog speedometer.”

Petitioner directs us to the portions of Miura cited for the plurality of visual indicators of claim 29 (*see* Pet. 60), which in turn, directs us to the portions of Miura cited for the feedback system of claim 1 and the

displaying a second symbol step of claim 14 (*see* Pet. 59). *See also* Pet. 52 (citing Ex. 1006 at 9–10, Figs. 3–6; McNamara Decl. ¶¶ 75–76), 59 (citing Ex. 1006 at 4, 8, 10, Figs. 2–5, 10; McNamara Decl. ¶¶ 72–74), 60 (citing Ex. 1006 at 4–5, Fig. 10; McNamara Decl. ¶¶ 66, 72–73). Petitioner additionally cites the set speed display of Figure 10. *See* Pet. 47 (citing Ex. 1006 at 4, 7–8, 10–11, Figs. 2a–2c, 7–10).

Patent Owner responds that “the LEDs are not ‘disposed on’ the dial face 14 of the speedometer 11” and “light from only a single LED is reflected off the half-mirror 17 to appear superimposed over the dial face 14,” thus Miura’s display “would not show ‘a plurality of visual indicators.’” PO Resp. 30. As for Petitioner’s citation to Figure 10 of Miura and its associated description, Patent Owner argues that Petitioner “improperly alleges anticipation based on a combination of embodiments discussed in Miura and an embodiment from a different reference, which Miura expressly disparages.” *Id.* at 31 (citing Ex. 1006 ¶ 5).

Petitioner replies that light from Miura’s indicator LEDs are the visual indicators and that half-mirror 17 of Miura superimposes this visual indicator onto dial face 14 so that the set speed is “displayed on the scale position of dial face of the speedometer.” Reply 14–15 (citing Pet. 60; quoting Ex. 1006 ¶¶ 7, 17); Tr. 27:20–28:17. Petitioner also argues that Miura discloses multiple LEDs and thus, multiple visual indicators. *Id.* at 15 (citing Ex. 1006 ¶¶ 16–17).

In the embodiment shown in Figure 1(a) and described in paragraphs 14–17, Miura discloses that “light transmit[s] from the indicator needle (12) of speedometer (11) and the scale (14a),” that “the driver can visually

identify the transmitted light of the half-mirror (17) as vehicle information,” that “the established travel speed display light reflected with the half-mirror (17) is superimposed on the display of the speedometer,” and that the “driver visually identifies this superimposed display design as vehicle information.” Ex. 1006 at 8. Paragraph 16 also discloses that “scale (15a) is formed arranging . . . light emitting diodes” and “[i]n order for the scale to display the established vehicle speed by the cruise speed travel device, scale (15a) of the established speed display panel . . . is arranged in a super imposed position corresponding to the speedometer scale (14a) depicted in Figure (2a).” The cited portions of Miura support Petitioner’s contention that light from LEDs forming scale 15a is a visual indicator.

Miura also shows in its Figure 2(b) reference number 15p which is “(Cruise speed set position 140 km).” Figure 5 of Miura shows step 5, “Turn on light emitting diodes up to set speed.” Miura, thus, supports Petitioner’s further contention that Miura discloses “individual visual indicators are disposed on the indicator dial of the analog speedometer,” as recited by claim 31.

Accordingly, based on the complete record before us, we determine that Petitioner has shown by a preponderance of the evidence that, under 35 U.S.C. § 102(b), claim 31 is anticipated by Miura.

12. Claims 14, 26, 29 and 30

Petitioner argues that Miura discloses all the limitations of claim 14, which depends from claim 13; independent claim 26; and claims 29 and 30, which depend directly and indirectly from claim 26. Pet. 52 (citing Ex. 1006, 9–10, Figs. 3–6), 57–58 (citing Ex. 1006 at 3–8, 10, 11, Figs. 1–

10), 58–59 (citing Ex. 1006 at 4, 7, 8, 10–11, Figs. 2a–5, 7–10; referring to analysis of claim 14), 59 (citing Ex. 1006 at 4, 8, 9–10, Figs. 2a–2c, 10). For institution, we determined that Petitioner demonstrated a reasonable likelihood of prevailing on the challenge that claims 14, 26, 29, and 30 are anticipated by Miura.

Patent Owner does not provide any arguments disputing that Miura anticipates claims 14, 26, 29, and 30, apart from the arguments presented for the applicable parent independent claims. PO Resp. 18–31. For the reasons above, we are not persuaded by Patent Owner’s arguments regarding the parent independent claims.

Based on the complete record before us, we determine that Petitioner has shown by a preponderance of the evidence that, under 35 U.S.C. § 102(b), claims 14, 26, 29, and 30 are anticipated by Miura.

IV. ASSERTED GROUND UNDER 35 U.S.C. § 103

To prevail in its challenge of claims 4, 19, 20, 23, 27, and 28 as rendered obvious over Mizuno and ordinary skill in the art, Petitioner must prove unpatentability by a preponderance of the evidence. 35 U.S.C. § 316(e); 37 C.F.R. § 42.1(d).

A claim is unpatentable under 35 U.S.C. § 103(a) if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007). To establish obviousness of a claimed invention, all the claim

limitations must be taught or suggested by the prior art. *See CFMT, Inc. v. Yieldup Int'l Corp.*, 349 F.3d 1333, 1342 (Fed. Cir. 2003); *In re Royka*, 490 F.2d 981, 985 (CCPA 1974).

A patent claim composed of several elements, however, is not proved obvious merely by demonstrating that each of its elements was known, independently, in the prior art. *KSR*, 550 U.S. at 418. In that regard, for an obviousness analysis it is important to identify a reason that would have prompted one of skill in the art to combine prior art elements in the way the claimed invention does. *Id.* A precise teaching directed to the specific subject matter of a challenged claim, however, is not necessary to establish obviousness. *Id.* Moreover, obviousness can be established when the prior art, itself, would have suggested the claimed subject matter to a person of ordinary skill in the art. *In re Rinehart*, 531 F.2d 1048, 1051 (CCPA 1976).

A. Obviousness over Mizuno and Ordinary Skill in the Art

Petitioner argues that claim 4, which depends indirectly from claim 2; claims 19 and 20, which depend from claim 18; and claims 27 and 28, which depend from claim 26, would have been obvious over Mizuno and ordinary skill in the art. Pet. 40–41 (citing Ex. 1004 at 4, 5, 7, Figs. 1, 2; McNamara Decl. ¶¶ 47–53), 41 (citing Ex. 1004 at 5, 8, Fig. 1; McNamara Decl. ¶¶ 44–54), 42–43 (citing McNamara Decl. ¶ 54). Petitioner provides a rationale for modifying Mizuno to arrive at the subject matter of claims 4, 19, 20, 23, 27, and 28. Pet. 38–39 (citing McNamara Decl. ¶¶ 50–51, 53), 41–42. For institution, we determined that Petitioner demonstrated a reasonable likelihood of prevailing on the challenge that these claims are unpatentable over Mizuno and ordinary skill in the art.

Patent Owner responds that “Mizuno serves as the primary reference” and “[b]ecause none of the alleged grounds of obviousness in the Petition addresses the deficiencies of Mizuno discussed above,” the Petition does not show that Mizuno in view of ordinary skill in the art renders obvious claims 4, 19, 20, 23, 27, and 28. PO Resp. 31; *see also* Reply 15 (noting “Patent Owner does not separately contest [obviousness] ground[]”). For the reasons discussed above, we determine Mizuno is not deficient for independent claims 2, 18, and 26, from which claims 4, 19, 20, 27, and 28 depend. Thus, Patent Owner’s arguments are not persuasive.

For claim 23, which depends from claim 21, we agree with Patent Owner. Petitioner’s challenge of claim 23 as unpatentable over Mizuno and ordinary skill in the art cites its argument for claims 4 and 18–21 and paragraph 54 of the McNamara Declaration. Pet. 42. The cited arguments for claims 4 and 18–20 and paragraph 54 of the McNamara Declaration do not address “after the cruise control system is deactivated, displaying a symbol indicative of an unset state of the preset speed,” as recited by claim 21. For the reasons discussed above, we are not persuaded by Petitioner’s arguments for claim 21 because they do not explain suitably why the powering off of the display in Mizuno does not eliminate the presence of any indicia upon the display, thereby discontinuing presentation of any indicia or symbols.

Accordingly, based on the complete record before us, we determine that Petitioner has shown by a preponderance of the evidence that, under 35 U.S.C. § 103(a), claims 4, 19, 20, 27, and 28 would have been obvious over Mizuno and ordinary skill in the art. Petitioner has not shown by a

preponderance of the evidence that claim 23 is unpatentable over Mizuno and ordinary skill in the art.

V. CONCLUSION

Based on the complete record before us, we determine that Petitioner has demonstrated, by a preponderance of the evidence, that, under 35 U.S.C. § 102, claims 1–3, 5, 12–14, 18, 25, 26, and 34–36 are anticipated by Mizuno and claims 1, 2, 12–15, 25–27, and 29–31 are anticipated by Miura, and that, under 35 U.S.C. § 103, claims 4, 19, 20, 27, and 28 are unpatentable over Miura and ordinary skill in the art.

We determine that Petitioner has not shown by a preponderance of the evidence that, on this record, claims 21 and 23 are unpatentable.

VI. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that, on the record of this proceeding, claims 1–5, 12–15, 18–20, 25–31, and 34–36 of the '463 patent have been shown to be unpatentable; and

FURTHER ORDERED that, because this is a final written decision, the parties to the proceeding seeking judicial review of the decision must comply with the notice and service requirement of 37 C.F.R. § 90.2.

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