

Keywords: 35 U.S.C. § 102(b); On-Sale Bar; Experimentation; Customer Awareness

General: Factors to be considered in determining the existence of experimentation include customer awareness.

Electromotive Division of General Motors Corp. v. Transportation Systems Division of General Electric Co.

75 U.S.P.Q. 2d 1650 (Fed. Cir. 2005)

Decided July 28, 2005

I. Facts

Electromotive Division (“EMD”) of General Motors Corporation designs and manufactures locomotives, including locomotive engines and their component parts. As part of its development process, EMD employs a two-phase testing program that consists of an in-house program to test durability and reliability and a field program to verify durability.

In the present case, EMD designed two types of bearings, a compressor bearing and a planetary bearing, which were embedded in turbochargers which were in turn embedded in locomotive engines sold by EMD. On July 17, 1989, James Blase, an inventor of the two bearings, reported that the compressor bearing had completed testing in the in-house program and could proceed to field program testing by substituting the compressor bearing into locomotive orders previously placed by customers. The customers agreed to accept the new compressor bearings in their purchases, as reflected in EMD internal memos drafted on July 19 and 25, 1989. In addition, on August 28, 1989, EMD modified its specification for the order of one of the customers, agreeing to supply more new compressor bearings than required in the prior order as spare parts.

On November 27, 1990, EMD filed a patent application covering the new compressor bearings. The application issued as U.S. Patent No. 5,169,242 (“the ‘242 patent”). Based on this filing date, the critical date for applying the on-sale bar to the ‘242 patent was November 27, 1989.

The planetary bearing was designed by EMD in September 1992 and was advanced to test in the field program in March 1993. For field testing EMD asked Union Pacific to allow the new planetary ball bearings to be placed in two locomotives ordered by Union Pacific in early 1992. Union Pacific allegedly agreed. On July 6, 1993 EMD ordered the new planetary ball bearings from the corporate precursor of Daido Industrial Bearings, Ltd (“Daido”) and on August 6, 1993 EMD installed planetary bearings on the locomotives to be delivered to Union Pacific and shipped the locomotives.

On September 29, 1994, EMD filed a patent application covering the new planetary bearings. The application issued as U.S. Patent No. 5,567,056 (“the ‘056 patent”). Based on this filing date, the critical date for applying the on-sale bar to the ‘056 patent was September 29, 1993.

With regard to the field program, EMD did not engage in ongoing monitoring or periodic inspections of the new bearings and inspected the bearings only if a turbocharger failed and was sent back to EMD. Likewise, EMD’s customers did not sign a confidentiality agreement or any other contract consenting to participate in the field program nor were they given design details regarding the new bearings. In addition, the customers were not restricted or supervised in their use of the bearings or obligated to collect data, keep records, or even operate the locomotives having the bearings during the time of the field program.

In March 2003, EMD filed a patent infringement suit against the Transportation Systems Division of General Electric Company (“GE”) and Daido based on the ‘242 and ‘056 patents. In December

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2003, GE and Daido separately moved for summary judgment of invalidity under 35 U.S.C. § 102(b) for sales prior to the critical date of both patents. EMD filed a cross-motion for summary judgment that neither patent was invalid under the on-sale bar because the alleged sales were for purposes of experimentation. In May 2004, the district court granted GE and Daido's motions and denied EMD's cross motion. EMD timely appealed.

II. Issues

- A. Were EMD's sales of the compressor and planetary bearings sufficient to raise the on-sale bar?
- B. Were any such sales made primarily for experimentation?

III. Discussion

- A. Yes. A patent claim is invalid under the on-sale bar of 35 U.S.C. § 102 (b) if, prior to the critical date: (1) the claimed invention is the subject of a commercial sale; and (2) the claimed invention is ready for patenting at the time of the alleged commercial sale. In the present case, EMD did not challenge that the bearings of the '242 and '056 patents were ready for patenting at the time of their respective sales. Thus, the only question before the panel was whether a commercial sale occurred for each type of bearing prior to the critical date. Traditional contract law principles are applied to determine whether a commercial sale or offer for sale has occurred. A single sale or offer for sale is sufficient to bar patentability.

With regard to the compressor bearings, the panel agreed with GE and Daido that EMD's agreement to supply spare compressor bearings to one of its customers constituted a commercial sale. This agreement was reflected in the Specification Supplement dated August 28, 1989, three months before the critical date. With regard to the planetary bearings, the panel agreed with GE that the purchase of planetary bearings from Daido was a commercial sale before the critical date. Thus both the compressor and planetary bearings were the subject of commercial sales prior to their respective critical dates.

- B. No. The first query in analyzing a case for an on-sale bar entails an assessment of whether the circumstances of a pre-critical date sale objectively show that the sale was primarily made for experimentation. If the sale was primarily for experimentation rather than commercial gain, the sale is not invalidating under 35 U.S.C. § 102(b).

With regard to the compressor bearings, the record did not reveal when or how the customer intended to use the spare compressor bearings or that the customer replaced even one of the bearings found in locomotives that EMD considered part of the field program with the spare compressor bearings. If such replacement occurred after the production release of the compressor bearings in August 1991, it would not qualify as experimentation. In view of these factors, the panel concluded that the sale of spare compressor bearings could not have been for the purpose of experimentation.

With regard to the planetary bearings, EMD argued four points: (1) that completion of the field program was required before the bearing was released for production; (2) neither monitoring nor inspection were necessary because the field program was intended to verify durability; (3) inspection was not possible because the bearing was embedded within the engine; and (4) failed turbochargers were returned to EMD where they were torn down and inspected. GE argued that the field program was unnecessary in view of the in-house program and that despite EMD's subjective intent to experiment, the objective evidence

revealed that EMD's sale to Union Pacific was not primarily for experimentation in view of EMD's lack of control and the absence of customary objective indicia associated with experimentation, such as test records.

With regard to experimentation, the panel noted that the ability of experimentation to negate a pre-critical date public use or sale is limited to instances where the testing was performed to perfect claimed features or to perfect features inherent to the claimed invention, such as durability. The inventor's subjective intent to experiment is not sufficient to render his activities experimental. Instead the court generally looks to objective factors that represent various kinds of evidence relevant to the issue of whether pre-critical date activities were primarily experimental and not commercial. In discussing the factors, the panel focused on the issues of control and customer awareness as being generally dispositive. Indeed, in discussing the experimentation factors, the panel held that customer awareness was a critical factor and concluded "that control and customer awareness ordinarily must be proven if experimentation is to be found."

In the present case, the panel found that the record was devoid of evidence that EMD or Union Pacific under EMD's direction controlled the field program for the planetary bearings. EMD did not provide protocols or otherwise supervise or restrict Union Pacific's use of the planetary bearings in any way. In addition, EMD made no attempt to monitor the conditions under which Union Pacific used the locomotives fitted with the bearings and did not obligate Union Pacific to provide comments or data concerning the operation or durability of the planetary bearings. Absent such showings, the panel concluded that EMD could not reasonably be said to have exercised any monitoring over the field program.

The panel further noted that Union Pacific was not required to return failed turbines to EMD for teardown and inspection and instead voluntarily returned them under the existing warranty. Thus Union Pacific would have returned all failed turbochargers regardless of whether or not they were participating in the field program. In addition, EMD's teardown reports did not correlate the condition of the bearings to field conditions and, thus were indistinguishable from other failure reports prepared outside the field program. These findings further demonstrated EMD's lack of control in monitoring the field program.

With regard to customer awareness, the panel found the record insufficient, even on summary judgment, to objectively establish Union Pacific's awareness of the field program. The only evidence regarding communications with Union Pacific about the field program was based on deposition testimony and an internal memo from James Blase, neither of which were sufficiently specific as to what Union Pacific was told. In view of the absence of evidence of control or monitoring over the field program and of evidence of customer awareness, the panel concluded as a matter of law that EMD did not engage in any experimentation on its planetary bearings.

IV. Conclusion

In evaluating whether a party engaged in experimentation which might obviate an on-sale bar, one objective factor to review is customer awareness. Control and customer awareness may be viewed as generally dispositive factors in assessing the presence or absence of experimentation.