

## **Hardy, Dietrich**

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### **OCCUPATIONAL DISEASE (RCW 51.08.140)**

#### **Hearing loss**

A medical expert can segregate alternate causes of hearing loss so long as the segregation is based on the worker's specific circumstances and generally accepted understanding of the nature of hearing loss. ....*In re Dietrich Hardy*, BIIA Dec., 08 12990 (2009)

Scroll down for order.

**BEFORE THE BOARD OF INDUSTRIAL INSURANCE APPEALS  
STATE OF WASHINGTON**

1 **IN RE: DIETRICH HARDY** ) **DOCKET NO. 08 12990**  
2 **CLAIM NO. SB-36457** ) **DECISION AND ORDER**

3 APPEARANCES:  
4

5 Claimant, Dietrich Hardy, by  
6 Sylvia A. Miller & Associated Attorneys, PLLC, per  
7 Sylvia A. Miller

8 Self-Insured Employer, The Boeing Company, by  
9 Craig, Jessup & Stratton, PLLC, per  
10 Gibby M. Stratton

11 The provider, South Seattle Otolaryngology Head & Neck Surgery, filed an appeal on behalf  
12 of the claimant, Dietrich Hardy, with the Board of Industrial Insurance Appeals on February 28,  
13 2008, from an order of the Department of Labor and Industries dated February 26, 2008. In this  
14 order, the Department affirmed a Department order dated November 30, 2007, in which it closed  
15 the claim with a permanent partial disability award equal to 12.19 percent for the complete loss of  
16 hearing in both ears, ordered that the self-insured employer be responsible for the purchase and  
17 maintenance of hearing aids, and directed the self-insured employer to deny responsibility for the  
18 remaining 24.38 percent binaural hearing loss which was caused by a non-occupational disease  
19 process. The Department order is **AFFIRMED**.

20 **DECISION**

21 Pursuant to RCW 51.52.104 and RCW 51.52.106, this matter is before the Board for review  
22 and decision on a timely Petition for Review filed by the claimant to a Proposed Decision and Order  
23 issued on March 13, 2009, in which the industrial appeals judge affirmed the order of the  
24 Department dated February 26, 2008. All contested issues are addressed in this order.

25 The Board has reviewed the evidentiary rulings in the record of proceedings and finds that  
26 no prejudicial error was committed. The rulings are affirmed.

27 In the Petition for Review, the claimant, Dietrich Hardy, argues that our industrial appeals  
28 judge erred in affirming a Department order in which it segregated a portion of his binaural hearing  
29 loss as non-occupational. We agree with the judge's resolution of this appeal. Review was granted  
30 to address Mr. Hardy's contention and to correct a typographical error in Finding of Fact No. 1.

31 The following is a summary of the evidence necessary to explain our decision. Mr. Hardy  
32 started working for The Boeing Company (Boeing) on January 8, 1986. His primary responsibility

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1 from 1986 through 1992 was repairing the ground aircraft power equipment at the Renton,  
2 Washington plant. He was also responsible for maintaining the high temperature flow facility. The  
3 work was varied and performed all over the factory. From 1992 through November 1994, Mr. Hardy  
4 worked in a Boeing management position. He experienced minimal noise exposure during this  
5 time, as he was not servicing the motor generators. Mr. Hardy then returned to the hourly position  
6 of electronic maintenance, which he continues to perform. His previous employment repairing  
7 dictation equipment at Lanier, and service in the Navy Color Guard prior to the Boeing employment,  
8 did not expose him to high noise levels.

9 Mr. Hardy was never monitored for noise exposure while at Boeing. His hearing was tested  
10 by the company prior to starting employment and about once every year. Initially, he used earplugs  
11 around the motor generators but would remove the plugs when holding a conversation or when he  
12 needed to hear something. He also wore ear muffs without noise-canceling capabilities. Mr. Hardy  
13 needs to listen to the compressors start up in order to diagnose and repair the problems. This is  
14 difficult to do while wearing hearing protection. Noise-cancelling headsets, which effectively reduce  
15 noise levels, were provided to him within the past three years.

16 Mr. Hardy testified that during the last couple of years, he was unable to participate in  
17 improvement teams because he could not hear the discussions. When he goes to classes he has  
18 to sit in front to hear the instructor. He was unaware of two fires in his neighborhood, as he did not  
19 hear the fire engine sirens and people banging on his door. He cannot hear the radio or television  
20 at normal levels; nor can he hear his cell phone when it rings, even when set at the highest level.  
21 Mr. Hardy has difficulty hearing some conversations, especially female voices. His left ear is  
22 constantly ringing and his right ear frequently rings. He first started to notice his loss of hearing in  
23 1994 or 1995.

24 Danielle J. Santman is Mr. Hardy's 26 year-old daughter. Her ability to communicate with  
25 her father has gotten progressively worse, especially in group situations or when there is  
26 background noise. She started to notice these problems approximately 16 years ago.

27 Patrick McClean, M.D., certified otolaryngologist, first examined Mr. Hardy on November 28,  
28 1994. Dr. McClean's impression was that Mr. Hardy suffered a sudden fluctuating sense of hearing  
29 loss, possibly related to antidepressant use. Although he had been working at Boeing since 1986,  
30 Mr. Hardy did not mention noise exposure as a source of his complaints. The audiogram  
31 performed in Dr. McClean's office revealed a mild to severe mid-frequency loss, improving to mild in  
32 the high frequencies on the right, dropping to profound in the high frequencies on the left. The

1 audiogram was rated "fair" because there were false positives when Mr. Hardy heard the tone when  
2 it was not presented to him. A second audiogram performed on December 16, 1994, in  
3 Dr. McClean's office showed that Mr. Hardy's hearing loss had improved. This supported  
4 Dr. McClean's diagnosis of sudden hearing loss.

5 Dr. McClean ordered laboratory tests, including an MRI, blood work, and biological evoked  
6 potentials, in an attempt to exclude treatable causes of the sudden hearing loss. Noise was  
7 included on the list of possible causes. The biological evoked potentials test, which is between  
8 about 82 and 92 percent accurate in detecting tumors or growths on the nerve affecting hearing,  
9 was abnormal, so an MRI was performed. The MRI showed no tumors or growths on the nerve but  
10 did reveal vascular changes of the brain. There also was an increase in number and size of deep  
11 white matter, which was related to infarct or demyelination. An auditory brain stem response  
12 potential test, performed on December 13, 1994, in an attempt to evaluate the sudden hearing loss,  
13 showed that the left ear response was significantly delayed compared with the right. Blood tests  
14 showed that Mr. Hardy had diabetes and that his glucose was elevated. Mr. Hardy suffered from  
15 ischemia, vascular changes in the brain that can accompany high blood pressure, diabetes, and  
16 other conditions.

17 On March 21, 2007, Mr. Hardy saw Dr. McClean for another episode of sudden hearing  
18 loss. On April 4, 2007, he underwent a hearing test showing a 46.563 percent binaural hearing  
19 loss. Mr. Hardy was treated with steroids, which improved the sudden hearing loss condition.

20 Dr. McClean understood that Mr. Hardy worked around significant noise at Boeing. He  
21 reviewed a folder of documents from Boeing that included hearing test results from December 17,  
22 1985, through June 26, 2003. The pre-employment test of December 17, 1985, showed that  
23 Mr. Hardy had hearing loss that was maximal in the low frequencies, at around 1000 Hz.  
24 Dr. McClean agreed that the pattern of the December 17, 1985 pre-employment audiogram showed  
25 Mr. Hardy had moderate hearing loss with a peak at 1000 Hz and a peak at 4000-8000 Hz, which  
26 was not typical of noise-induced hearing loss. Between December 17, 1985, and June 26, 2003,  
27 Mr. Hardy's hearing loss progressed from moderate in the left ear to moderate-to-profound in the  
28 left ear. In the right ear, it progressed from mild-to-moderate to severe, at all tones and  
29 frequencies.

30 Dr. McClean's diagnosis was sensorineural hearing loss and episodic fluctuating hearing  
31 loss, which has been progressive. The cause, in Dr. McClean's opinion, was likely multifactorial.  
32 He believed that Mr. Hardy's work at Boeing between January 1986 and February 26, 2008,

1 exposed him to noise that probably contributed to his hearing loss. Dr. McClean agreed that  
2 knowledge of the noise intensity in the workplace is important in forming an opinion on diagnoses  
3 and treatment of his patients and admitted that he lacked an accurate understanding of the levels  
4 and extent of Mr. Hardy's workplace exposure. Dr. McClean took note of Boeing's excellent  
5 hearing conservation program, as well.

6 Dr. McClean reviewed testing performed in the office of Richard W. Seaman, M.D., noting  
7 that it was done at a time when Mr. Hardy was not suffering from symptoms of sudden hearing loss.  
8 Therefore, Dr. McClean would rely on Dr. Seaman's test, rather than his own, to assess Mr. Hardy's  
9 hearing loss. He did not agree with the extent of permanent occupational hearing loss as  
10 calculated by Dr. Seaman and testified that he was unaware of any reliable medical basis for  
11 distinguishing occupationally related hearing loss from other causes of hearing loss.

12 Richard W. Seaman, M.D., certified otolaryngologist, saw Mr. Hardy on March 29, 2007.  
13 Dr. Seaman reviewed the audiograms performed by Boeing, which documented a progressive  
14 hearing loss over time. A test from 1985, shortly before Mr. Hardy started work at Boeing, showed  
15 binaural ratable impairment. Dr. Seaman's March 2007 testing revealed that Mr. Hardy suffered  
16 from an unusual pattern of both high and low-pitched hearing loss. He initially diagnosed bilateral  
17 high-frequency hearing loss that was probably noise-induced; sensorineural hearing loss of both  
18 ears, severe, likely congenital; and fluctuating sensorineural hearing loss. Mr. Hardy had reported  
19 left-sided high-frequency tinnitus, which is subjective and could not be documented. Dr. Seaman  
20 believed at the time of the initial examination that Mr. Hardy's work for Boeing was a proximate  
21 cause of high-frequency noise-induced hearing loss. Based on the AMA, *Guides to the Evaluation*  
22 *of Permanent Impairment, 5th Edition* (AMA, *Guides*), he determined that Mr. Hardy's total  
23 permanent occupational hearing loss was 36.56 percent binaural as of March 29, 2007.  
24 Dr. Seaman assisted Mr. Hardy in filing an industrial insurance claim and prepared a Physician's  
25 Initial Report for the Department.

26 After reviewing the treatment records of Patrick McClean, M.D., which showed sudden  
27 unexplained onsets of hearing loss, Dr. Seaman changed his opinion regarding the extent of  
28 occupational hearing loss. He concluded that Mr. Hardy had a significant amount of hearing loss  
29 that was not noise-related and was probably congenital or congenitally acquired. Based on this  
30 determination, Dr. Seaman performed a corrected calculation of the extent of occupational hearing  
31 loss, using his office's March 29, 2007 audiogram as a starting point. In the corrected calculation,  
32 Dr. Seaman used 20 dB rather than zero as the starting point and eliminated the dip between

1 250 and 2,000 cycles, thereby removing low-frequency loss from the calculation. Elimination of the  
2 dip was based on generally accepted medical knowledge that low-frequency loss is not  
3 noise-induced. Dr. Seaman acknowledged that this formula was not contained in the AMA, *Guides*  
4 or any other guide; rather, it is based on the knowledge that this kind of hearing loss does not result  
5 from noise exposure. He believed the methodology was generally accepted in the otolaryngologist  
6 community to accurately rate occupational noise-induced hearing loss.

7 Based on this formula, Dr. Seaman ultimately concluded that the ratable impairment  
8 attributable to noise exposure at Boeing was 12.19 percent binaural. He also determined that the  
9 left-sided tinnitus was not likely related to injurious exposure at Boeing because commonly,  
10 occupational noise causes tinnitus in both ears. Further, the tinnitus was not ratable because it was  
11 not bothersome to Mr. Hardy. Dr. Seaman did not calculate the rating for Mr. Hardy's hearing loss  
12 at the time he started work for Boeing but testified that it was ratable and probably no more than  
13 about five percent at that time.

14 Dr. Seaman subsequently reviewed documentation of workplace sound level readings  
15 supplied by Boeing and issued an addendum to his initial report. Based on the readings and history  
16 provided, Dr. Seaman testified that the levels were insufficient to result in a hearing loss, assuming  
17 Mr. Hardy wore ear protection. If he was not always able to wear hearing protection, and was in the  
18 noisy environment long enough, "it certainly **could have** caused some damage," according to  
19 Dr. Seaman. 12/4/08 Tr. at 55. (Emphasis ours.)

20 Alan Langman, M.D., certified in otolaryngology, reviewed records that included a series of  
21 industrial tests of Mr. Hardy's hearing from 1985 through 2006; clinical audiograms from various  
22 physicians over that same period of time; an auditory brain stem evoke response test; an MRI scan  
23 from 1994; medical records from Dr. McClean and Dr. Seaman, and information about Mr. Hardy's  
24 work history and activities. Based on the historical pattern of the sudden hearing loss, Dr. Langman  
25 believed that most of the losses shown on his industrial screening tests were related to "this  
26 yet-to-be-diagnosed-fully fluctuating sensorineural hearing loss." Langman Dep. at 10.

27 Dr. Langman testified that the reports of sudden hearing losses were extremely important in  
28 the evaluation of the cause of Mr. Hardy's hearing loss. In reviewing the clinical audiograms,  
29 Dr. Langman noted that at least two included findings of a tympanometry showed excessive  
30 movement on both eardrums, suggesting a thinning of the eardrums. Ear infections can cause  
31 sensorineural hearing loss.

32

1 Noise-induced hearing loss has a typical progression: The early hearing loss will be seen in  
2 the 3,000 to 6,000 cycles per second range with normal hearing in the lower frequencies. Over  
3 time, there is a progression of the hearing loss in that range with possible worsening of hearing loss  
4 in the lower frequencies. In Mr. Hardy's case, there was initially some suggestion of noise-induced  
5 hearing loss in the higher frequencies in the 1985 audiogram. He then started work at Boeing and  
6 there was no change through the early 90's. When a change occurred in 1994, it was a sudden  
7 change in the mid-tone range with a little change in the higher tone range. This contrasts with  
8 noise-induced hearing loss, which is slowly progressive. Also, the ongoing fluctuation in his hearing  
9 did not fit the pattern of noise-induced hearing loss. The April 4, 2007 audiogram shows a relatively  
10 flat hearing loss that is about 60 dB; he has more hearing loss in the lower frequencies than is  
11 expected from noise-induced hearing loss. Dr. Langman testified that there could have been some  
12 damage to Mr. Hardy's hearing due to noise, but he was not aware of a method to identify the  
13 extent of noise-related loss.

14 In his Petition for Review, Mr. Hardy contends that the segregation method relied on by  
15 Dr. Seaman, and accepted by the Department, does not comport with *The Boeing Company v.*  
16 *Heidy*, 147 Wn.2d 78 (2002). In *Heidy*, a decision involving industrial hearing loss, our Supreme  
17 Court held, "If it is determined that a worker's disability is work-related and the employer can  
18 establish, on an individualized basis, that the full amount or a portion of a worker's disability is not  
19 work-related, the employer need not compensate that worker for the portion of the worker's disease  
20 or injury that is not work-related." *Heidy*, at 86. The method proposed by the employer in *Heidy*  
21 would have reduced his permanent partial disability award by deducting the amount of loss caused  
22 by age-related presbycusis based solely on the age of the worker. Because the methodology was  
23 not individualized to Mr. Heidy and was based solely on his age, this method of segregation of a  
24 portion of hearing loss was rejected by the court.

25 In contrast to the method of segregation proposed by the employer in *Heidy*, Dr. Seaman's  
26 methodology was individualized based on Mr. Hardy's specific circumstances: Mr. Hardy's  
27 audiograms showed that a significant amount of his hearing loss was in the low-frequency ranges.  
28 Dr. Langman and Dr. McClean agreed with Dr. Seaman that low-frequency hearing loss is not  
29 caused by noise exposure. We accept Dr. Seaman's conclusion that the ratable hearing  
30 impairment, attributable to noise exposure at Boeing, is equal to 12.19 percent binaural. We find  
31 nothing in the *Heidy* decision that prohibits a medical expert from basing an individualized  
32

1 segregation of hearing loss on a generally accepted understanding of the nature of noise-induced  
2 hearing loss.

3 After consideration of the Proposed Decision and Order and the Petition for Review, and a  
4 careful review of the entire record before us, we enter the following:

5 **FINDINGS OF FACT**

- 6 1. On April 13, 2007, the claimant, Dietrich Hardy, filed an Application for  
7 Benefits with the Department of Labor and Industries, in which he  
8 alleged he suffered an occupational disease of bilateral hearing loss as  
9 the result of exposure in the course of employment with the Boeing  
10 Company. On May 4, 2007, the Department issued an order in which it  
11 allowed the claim on a temporary and interlocutory basis.

12 On November 30, 2007, the Department issued an order in which it  
13 closed the claim, directed the self-insured employer to pay the claimant  
14 a permanent partial disability award of 12.19 percent for the complete  
15 loss of hearing in both ears, determined that the self-insured employer  
16 was responsible for the purchase and maintenance of hearing aids, and  
17 directed the self-insured employer to deny responsibility for the  
18 remaining 24.38 percent binaural hearing loss which was caused by a  
19 non-occupational disease process.

20 On January 8, 2008, Mr. Hardy appealed the Department order of  
21 November 30, 2007. The Department held that order in abeyance by a  
22 Department order issued on February 5, 2008. On February 26, 2008,  
23 the Department issued an order in which it affirmed its November 30,  
24 2007 order. On February 28, 2008, Mr. Hardy appealed the Department  
25 order of February 26, 2008. On March 7, 2008, the Board granted  
26 Mr. Hardy's appeal under Docket No. 08 12990, and agreed to hear the  
27 appeal.

- 28 2. Between 1986 and 2008, Mr. Hardy was employed as an electronics  
29 technician for The Boeing Company. During that time, Mr. Hardy  
30 performed a variety of work, including maintenance of ground aircraft  
31 power equipment and the high temperature flow facility. The work was  
32 varied and at least some of the work was performed under noisy  
conditions. While working in noisy conditions, Mr. Hardy usually wore  
hearing protection. From 1992 through November 1994, Mr. Hardy  
worked in a Boeing management position. He experienced minimal  
noise exposure during this time because he was not servicing the motor  
generators. In late 1994, Mr. Hardy returned to the hourly position of  
electronic maintenance, which he continues to perform.

3. Prior to working for The Boeing Company in 1986, Mr. Hardy had an  
unspecified amount of ratable hearing loss in both ears.

4. Between the time of his pre-employment hearing test in 1985 and 2007,  
Mr. Hardy received annual industrial hearing tests while working at  
Boeing. Mr. Hardy also received clinical hearing tests in 1994, 1999,

1 and 2007. These hearing tests show a progressive worsening of  
2 Mr. Hardy's hearing loss. The pattern of hearing loss shown in  
3 audiograms performed between 1985 and 2007 was not limited to  
4 frequencies associated with noise-induced hearing loss.

- 5 5. On March 29, 2007, a reliable audiogram demonstrated that Mr. Hardy's  
6 noise-induced hearing loss was best described as 12.19 percent  
7 complete loss of hearing in both ears. Mr. Hardy's remaining  
8 24.38 percent binaural hearing loss shown on the March 29, 2007  
9 audiogram was caused by a non-occupational disease process.
- 10 6. Mr. Hardy did not sustain a permanent partial impairment due to tinnitus.
- 11 7. As of February 26, 2008, Mr. Hardy's noise-induced hearing loss, which  
12 arose naturally and proximately from exposure to injurious noise in the  
13 course of employment at Boeing, was fixed and stable at 12.19 percent  
14 complete loss of hearing in both ears.

15 **CONCLUSIONS OF LAW**

- 16 1. The Board of Industrial Insurance Appeals has jurisdiction over the  
17 parties to and the subject matter of this appeal.
- 18 2. Mr. Hardy's occupational hearing loss of 12.19 percent total loss of  
19 hearing in both ears arose naturally and proximately from the distinctive  
20 conditions of his employment and constitutes an occupational disease  
21 under RCW 51.08.140.
- 22 3. The Department order dated February 26, 2008, is correct and is  
23 affirmed.

24 DATED: June 30, 2009.

25 BOARD OF INDUSTRIAL INSURANCE APPEALS

26 /s/ \_\_\_\_\_  
27 THOMAS E. EGAN Chairperson

28 /s/ \_\_\_\_\_  
29 LARRY DITTMAN Member