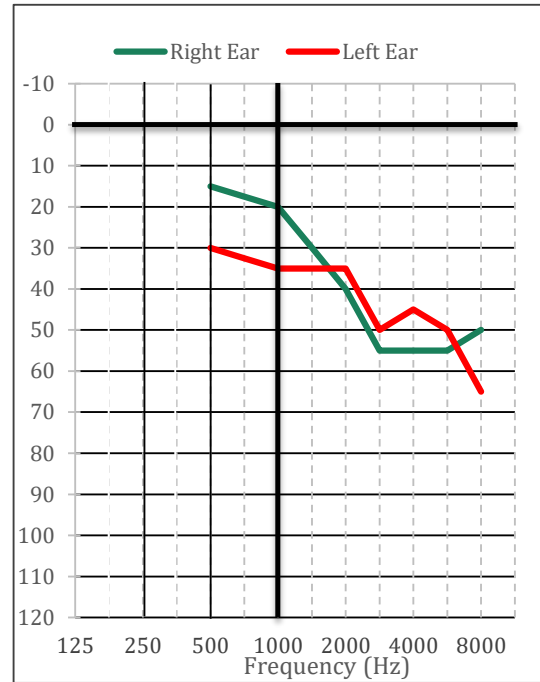




## Military Noise Induced Hearing Loss

**Client Name**  
**Gender** Male  
**Date of Birth** 1962  
**Date of Audiogram** 15/08/2022  
**Source of Audiogram** Medicolegal  
**Reason for Audiogram** Moore et al 2020/2022  
**Age at date of audiogram** 60  
**TDH39 headphones used?** No  
**Bekesy correction required?** No

Data set ISO 7029 2017



Hearing Threshold Levels (HTLs)	0.5	1	2	3	4	6	8
Measured HTLs for Right Ear	15.0	20.0	40.0	55.0	55.0	55.0	50.0
Measured HTLs for Left Ear	30.0	35.0	35.0	50.0	45.0	50.0	65.0

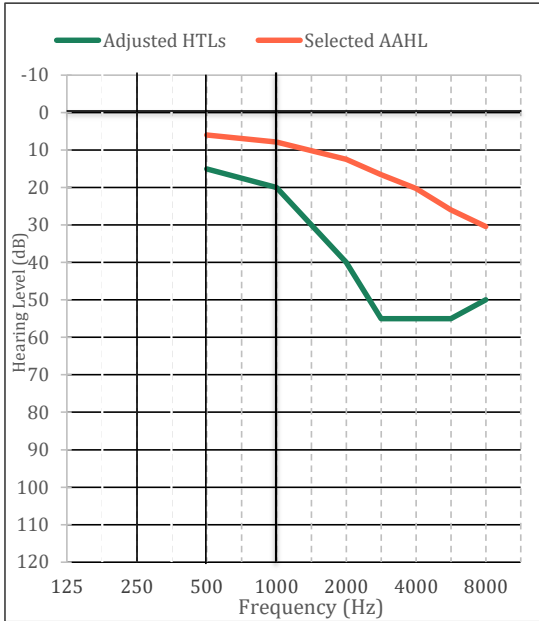
Selected Percentile
50
50

Adjustment for TDH39 Headphones	0.5	1	2	3	4	6	8

Adjustment for Bekesy Correction	0.5	1	2	3	4	6	8

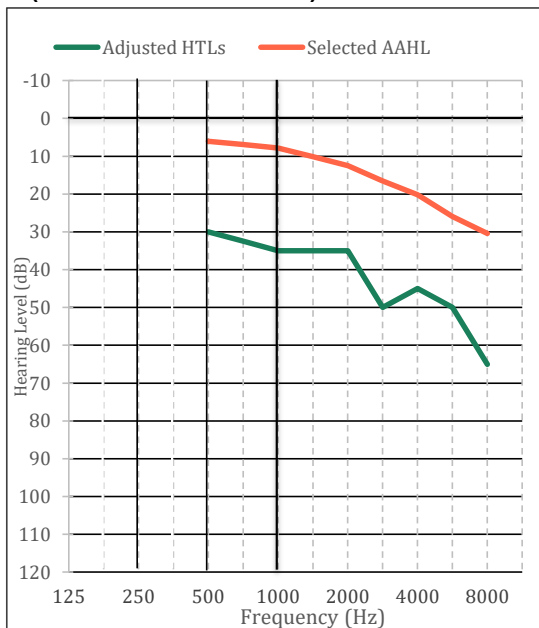


## Right Ear (HTLs vs Selected AAHL)



	0.5	1	2	3	4	6	8	kHz
Adjusted HTLs	15.0	20.0	40.0	55.0	55.0	55.0	50.0	dB
Selected AAHL	6.0	7.8	12.5	16.6	20.2	25.9	30.4	dB

## Left Ear (HTLs vs Selected AAHL)



	0.5	1	2	3	4	6	8	kHz
Adjusted HTLs	30.0	35.0	35.0	50.0	45.0	50.0	65.0	dB
Selected AAHL	6.0	7.8	12.5	16.6	20.2	25.9	30.4	dB



<b>Client Name</b>	
<b>Gender</b>	Male
<b>Date of Birth</b>	1962
<b>Date of Audiogram</b>	15/08/2022
<b>Age at date of audiogram</b>	60
<b>Source of Audiogram</b>	Medicolegal
<b>Reason for Audiogram</b>	Moore et al 2020/2022
<b>TDH39 headphones used? Y/N</b>	No
<b>Optional Beksey Correction</b>	No

<b>Right Ear</b>						
<b>Selected Percentile</b>	50					
	<b>Frequency</b>					
	1kHz	2kHz	3kHz	4kHz	6kHz	8kHz
Hearing threshold level, dB HL (#)	20.0	40.0	55.0	55.0	55.0	50.0
Median Age Associated Hearing Loss (AAHL), dB HL	7.8	12.5	16.6	20.2	25.9	30.4
Magnitude mR1M at each frequency			35.0	35.0	35.0	30.0
Requirement mR1M met?			Yes	Yes	Yes	Yes
<b>Max R1</b>	<b>35.0</b>					
Magnitude Notch at each frequency			18.8	15.2	9.5	
Requirement mR2aM met?			Yes	No	No	
Max Notch	18.8					
<b>Is Max Notch &gt;= 14.5 dB?</b>	<b>Yes</b>					
Magnitude ExcessHF at each frequency				34.8	29.1	19.6
Requirement mR2bM met?			No	Yes	Yes	No
Excess HF	27.8					
<b>Is Excess HF &gt;= 19 dB?</b>	<b>Yes</b>					
<b>Requirement mR1M and mR2aM or mR2bM met i.e. Military NIHL?</b>	<b>Yes</b>					
Age-associated hearing loss (AAHL). Selected percentile, dB HL	7.8	12.5	16.6	20.2	25.9	30.4
<b>Estimated noise-induced hearing loss(NIHL),dB</b>	12.2	27.5	38.4	34.8	29.1	19.6
Set NIHL to 0 if NIHL < 0	12.2	27.5	38.4	34.8	29.1	19.6
<b>Estimated Mean M-NIHL at 1, 2, and 3 kHz, dB</b>	<b>26.0</b>					
<b>Estimated Mean M-NIHL at 1, 2, and 4 kHz, dB</b>	<b>24.8</b>					



Left Ear		Frequency					
Selected Percentile	50	1kHz	2kHz	3kHz	4kHz	6kHz	8kHz
Hearing threshold level, dB HL (#)		35.0	35.0	50.0	45.0	50.0	65.0
Median Age Associated Hearing Loss (AAHL), dB HL		7.8	12.5	16.6	20.2	25.9	30.4
Magnitude mR1M at each frequency				15.0	10.0	15.0	30.0
Requirement mR1M met?				Yes	Yes	Yes	Yes
<b>Max R1</b>	<b>30.0</b>						
Magnitude Notch at each frequency				-1.2	-9.8	-10.5	
Requirement mR2aM met?				No	No	No	
Max Notch	-1.2						
<b>Is Max Notch &gt;= 14.5 dB</b>	<b>No</b>						
Magnitude ExcessHF at each frequency					24.8	24.1	34.6
Requirement mR2bM met?				No	Yes	Yes	Yes
Excess HF	27.8						
<b>Is Excess HF &gt;= 19 dB?</b>	<b>Yes</b>						
<b>Requirement mR1M and mR2aM or mR2bM met i.e. Military NIHL?</b>	<b>Yes</b>						
Age-associated hearing loss (AAHL). Selected percentile, dB HL		7.8	12.5	16.6	20.2	25.9	30.4
<b>Estimated noise-induced hearing loss(NIHL),dB</b>		27.2	22.5	33.4	24.8	24.1	34.6
Set NIHL to 0 if NIHL < 0		27.2	22.5	33.4	24.8	24.1	34.6
<b>Estimated Mean M-NIHL at 1, 2, and 3 kHz, dB</b>	<b>27.7</b>						
<b>Estimated Mean M-NIHL at 1, 2, and 4 kHz, dB</b>	<b>24.8</b>						

(#) - Adjusted when necessary for use of TDH 39 headphones and Beksey



**Notes:**

- 1 The calculations are based on a comparison with the data derived from the "Statistical distribution of hearing thresholds related to age and gender" (ISO 7029:2017).
- 2 The values shown are all calculated to at least 2 decimal points throughout the process.
- 3 The diagnosis and quantification of military NIHL set out above is based on the paper by Professor B C J Moore FRS. Diagnosis and quantification of military noise-induced hearing loss J. Acoust. Soc. Am. 148 (2), August 2020. This also applies the revised Moore Method (2022)
- 4 The methodology provides estimates of military noise induced hearing loss for each ear.
- 5 Some Experts may wish to use a binaural assessment of M-NIHL. The binaural loss set out below is 4/5 of the smaller loss plus 1/5 of the greater loss. The binaural assessment is not part of the methodology set out in Moore 2020.
- 6 The estimated Binaural M-NIHL averaged over 1,2&3kHz is about 26 dB
- 7 The estimated Binaural M-NIHL averaged over 1,2&4kHz is about 25 dB
- 8 The estimated Binaural M-NIHL loss at 4kHz is 27 dB
- 9 The Pure Tone Average calculations at 2kHz and 4kHz (PTA<sub>2,4</sub>) set out below, are based on ‘Speech reception in quiet and in noisy conditions by individuals with noise-induced hearing loss in relation to their tone audiogram’. Smoorenburg. J.Acoust.Soc.Am.91(1) January 1992

	Right Ear	Left Ear
Pure Tone Average at 2kHz and 4kHz (PTA <sub>2,4</sub> ) dB	47.5	40.0
Age Related (PTA <sub>2,4</sub> ) dB	16.3	16.3
The percentage of sentences in which the Claimant will hear a part of said sentence incorrectly in background noise due to noise exposure.	53%	40%

- 10 Some experts may consider a binaural assessment reflects the impairment of the Claimant, as usually understanding speech in noisy situations depends on the use of both ears.

The estimate of the Claimant's overall ability to understand sentences in noise has decreased by approximately.	43%
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- 11 Experts may consider that if one ear meets the diagnostic 'requirements', that any hearing loss in excess of that expected for age in both ears, is due to the effects of noise exposure. The binaural estimate assists the expert if that is their view. However, the M-NIHL is estimated for both ears separately. If the expert considers that noise damage is limited to one ear, the estimate is set out appropriately in the output.