SERVED: October 3, 2022

NTSB Order No. EA-5939

UNITED STATES OF AMERICA
NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, D.C.

Adopted by the NATIONAL TRANSPORTATION SAFETY BOARD
at its office in Washington, D.C.
on the 28th of September, 2022

BILLY NOLEN,[1] Acting Administrator, Federal Aviation Administration, Complainant,	)	
v.	)	Docket SE-30108
FOREST M. KIRST, Respondent.	)	

OPINION AND ORDER

I. Background

Respondent appeals the oral initial decision of Administrative Law Judge Alfonso J. Montaño, issued on August 5, 2016.[2] By that decision, the law judge determined the Administrator proved respondent violated 14 C.F.R. § 43.12(a)(1),[3] when he installed a Teledyne

[1] The original caption for this matter was Michael P. Huerta, Administrator, Federal Aviation Administration v. Forest M. Kirst.

[2] A copy of the initial decision, an excerpt from the hearing transcript, is attached.

[3] Section 43.12(a)(1) states, "[n]o person may make or cause to be made … [a]ny fraudulent or intentionally false entry in any record or report that is required to be made, kept, or used to show compliance with any requirement under this part."

Continental Motors model E225-4 aircraft engine on a civil aircraft and made false entries in the engine's logbook that the engine had been overhauled. The law judge ordered revocation of respondent's airman mechanic certificate with airframe and powerplant (A&P) ratings and inspection authorization (IA). Respondent timely appealed. For the reasons set forth below, we deny respondent's appeal and affirm the law judge's decision.

A. Facts

Between 2010 and 2014, respondent owned Kirst Aviation, where he provided Part 91 tours and Part 135 air taxi services in his Ryan Navion A N4827K ("Navion") and/or Cessna 152.[4] Respondent operated Kirst Aviation out of the Arctic Aviation's hangar, a business owned by Frederick Distad, who is a mechanic with A&P and IA ratings.[5] Mr. Distad served as the Director of Operations for respondent's Part 91 business and as the Director of Maintenance for respondent's Part 135 business.[6]

In March or April 2011, respondent experienced a propeller strike while flying the Navion.[7] On April 4, 2011, FAA Inspector Hardy M. Smith issued respondent a letter mandating that, prior to further flight, the engine installed in the Navion at the time of the propeller strike be disassembled or replaced.[8] As result, respondent began searching for a new engine for his Navion.[9] On May 1, 2011, respondent purchased a Teledyne Continental Motors model E-225-4

[4] *See* Tr. at 2385, 2423. *See also* Exh. A-22.

[5] *See* Tr. at 2022-23.

[6] *See id.* at 2045-46, 2385.

[7] *See id.* at 2057, 2468.

[8] Exh. A-20.

[9] *See* Tr. at 2052, 2468-69.

engine ("the engine" or "the new engine") from Francis Daniels.[10] On the same day, after Mr. Daniels's delivery of the engine to respondent, respondent started a new engine logbook and made an unfinished, unsigned entry, stating that the engine was removed from service and, per its prior logbook, had 4,287.10 TT or "total engine time" and 1,165.90 SMOH or "time since major overhaul."[11] The next entry in the logbook was recorded and signed by Mr. Daniels on May 1, 2011, stating that "this engine was disassembled, cleaned, and inspected…parts were sent out for inspection…[and] this engine was reassembled in accordance with Teledyne Continental Service Bulletin SB97-6A and Continental Overhaul Manual E-225."[12]

To be considered "overhauled," an aircraft engine must have been disassembled, cleaned, inspected, repaired as necessary, reassembled, and test-run.[13] The Continental Aircraft Engine Overhaul Manual for an E-225 engine ("Overhaul Manual") and Teledyne Continental Aircraft Engine Service Bulletin M89-7R1 ("Service Bulletin") contain the instructions that must be followed to test-run an E-225 engine to complete the overhaul process, which state that the engine may be test-run either within a cellular enclosure ("test cell") or in an airframe.[14] When performed in a test cell, the Overhaul Manual requires that the following equipment be used: 1) a wood test club;[15] and 2) remote instruments, including a water manometer[16] and a cylinder head

---

[10] *See* Tr. at 1872, 2029.

[11] *See id.* at 1753-54, 1778-79, 2395-96. *See also* Exh. A-1 at 3. The engine logbook at other times refers to the total engine time as TE, TET, ETT, ENTT, or ENGTT. *See* Exh. A-1 at 4-8.

[12] *See* Tr. at 1876-78. *See also* Exh. A-1 at 3.

[13] 14 C.F.R. § 43.2. *See, e.g.*, Tr. at 1874-75, 2030, 2060, 2184-86, 2376-78.

[14] Exh. R-Y at 4.

[15] A wood test club is a type of propeller used to put a load on the engine during a test run. Tr. at 1881.

[16] A water manometer is a gauge used to test the crankcase pressure. Tr. at 2410. A crankcase is the housing for the crankshaft, which provides the rotational movement for the aircraft's

temperature gauge with thermocouple.[17] When using an airframe, the Service Bulletin lists the steps to test-run an engine first on the ground and then in flight according to the operating test limits table contained in the Overhaul Manual.[18] One of these steps is "[c]alibration of the aircraft engine instruments."[19]

On June 7, 2011, respondent made an entry in the Navion's aircraft logbook stating that he removed the old engine, installed the new engine, and installed a new propeller.[20] On the same day, respondent made an entry in the engine logbook, stating, "installed [the new] engine in [the Navion] per Navion Manual…test run per Continental directions M89-7R1 and E225 OH Manual Oct 1978 for O/H engine ground runs performed satisfactorily."[21] In the same entry, respondent also recorded 4,287.10 total engine time; 3,699 ACTT or "aircraft total time;" and zero TSOH or "time since overhaul."[22] Between June 26, 2011, and June 14, 2014, respondent made 12 more entries in the engine logbook based on that zero TSOH.[23] For example, on June 26, 2011, respondent recorded the TSOH as 12.1 hours; on July 30, 2011, he recorded the TSOH as 36.9 hours; on September 11, 2011, he recorded the TSOH as 50.3 hours, and so on.[24] In

---

propeller. *See* Federal Aviation Administration, FAA-H-8083-25B, Pilot's Handbook of Aeronautical Knowledge, Chapter 7 Aircraft Systems, at 2-5 (2016).

[17] *See* Exh. R-Y at 1-7. A cylinder head temperature gauge and thermocouple measure the temperatures in the aircraft's cylinder to ensure they are not exceeded. *See* Pilot's Handbook, *supra* note 16, at 18; Tr. at 2504-05.

[18] Exhs. A-16 at 1-3; R-Y at 86, Table XVII.

[19] Exh. A-16 at 2-3, ¶¶ II.A.4., III.A.-B.

[20] Exh. A-19 at 4.

[21] Exh. A-1 at 4.

[22] *Id. See* Tr. at 1755, 2344. The terms SMOH and TSOH are interchangeable and mean the time that has passed since the most recent overhaul.

[23] Exh. A-1 at 4-8.

[24] *Id.* at 4.

August 2014, while flying the Navion, respondent was involved in an accident, which prompted the FAA to review the engine records and pursue the present action.[25]

B. Procedural History

On February 23, 2015, the Administrator issued an order revoking respondent's mechanic certificate. Ultimately, the Administrator filed a second amended order of revocation, which became the complaint in this case and formed the basis for the hearing in this matter.[26] The complaint alleged respondent violated 14 C.F.R. § 43.12(a)(1) by intentionally falsifying 13 entries dated from June 7, 2011, through June 14, 2014, in the engine's maintenance records because: respondent knew he did not perform the necessary test runs as he did not have a wood test club, a water manometer, a cylinder head temperature gauge with thermocouple, or calibrated test instruments; and he knew that the entries understated the TSOH by some 1165.9 hours.[27] The complaint concluded that respondent lacked the qualifications necessary to hold his airman mechanic certificate, and that safety in air commerce or air transportation and public interest required revocation of the certificate. Respondent timely filed his answer to the

---

[25] *See* Tr. at 1940-41.

[26] Although the first amended order of revocation was filed as an emergency, respondent waived the expedited procedures applicable to emergency cases prior to the hearing. *See* Tr. at 1702.

[27] Second Amended Compl. at ¶¶ 7-8, 11-12. The Second Amended Complaint also alleged that respondent intentionally falsified the 13 engine logbook entries dated from June 7, 2011, through June 14, 2014, because the engine's crankshaft was not properly overhauled, and that respondent violated 14 C.F.R. 43.15(a)(1) by failing to determine during an annual inspection whether the engine met all applicable airworthiness requirements. *Id.* at ¶¶ 9, 13-17. At the hearing, the law judge granted respondent's motion for directed verdict regarding the alleged violation of 14 C.F.R. § 43.15(a)(1). Tr. at 2358-66; Oral Initial Decision at 2721-22. In the oral initial decision, the law judge also found that the Administrator did not prove the falsity of the 13 entries at issue regarding the overhaul of the engine's crankshaft. Oral Initial Decision at 2731-33. The Administrator did not appeal either issue, and this opinion and order omits the facts and the testimony concerning respondent's annual inspection of the engine, including the results of the October 2014 engine teardown and those related to the crankshaft.

complaint on April 15, 2016, admitting that he made the 13 noted entries in the engine logbook but denying that the entries were false or intentionally false.[28]

The law judge conducted a hearing on July 11-15, 2016, and issued an oral initial decision on August 5, 2016. At the hearing, the Administrator and respondent read respondent's deposition from March 2, 2016, into the record. The Administrator called as witnesses: Jason Major, an Aviation Safety Inspector with the FAA;[29] Frederick Distad, owner of Arctic Aviation; and James Tupper, an Aviation Safety Inspector with the FAA. Respondent testified on his own behalf and called as witnesses: Richard Johns, a former warranty analyst with ECi;[30] Francis Daniels, the seller of the new engine; and Richard Walker, owner of Custom Aircraft, Inc.

1. Testimony of Frederick Distad[31]

Mr. Distad testified that he has owned Arctic Aviation since 1988.[32] He stated that he does not perform any engine overhauls or test-run engines, explaining that he gets engines already overhauled and test-run in a test cell.[33] He stated that he met respondent in 2008 when respondent began providing flight instruction out of Artic Aviation's hangar and began serving

---

[28] Answer at ¶ 1-2.

[29] We omit the testimony of Inspector Major as it concerns the issues not on appeal – the results of the October 2014 engine teardown and whether the crankshaft was overhauled. *See* Tr. at 1936-2014.

[30] We omit the testimony of Mr. Johns because it relates solely to whether the crankshaft was overhauled, which is not on appeal. *See* Tr. at 1814-1841.

[31] The hearing transcript reflects an error in pagination, with pages 2454-2544 repeating from the transcript dated on July 14, 2016, to the transcript dated on July 15, 2016. Thus, in citing to pages 2454-2544 of Mr. Distad's testimony, we refer to the hearing transcript dated July 15, 2016.

[32] Tr. at 2020-22, 2036.

[33] *Id.* at 2125.

as the Director of Operations on respondent's Part 91 business in 2010.[34] He indicated that respondent paid him rent at times but mostly provided help on aircraft in lieu of rent.[35] Mr. Distad also indicated that he and respondent checked each other's work after respondent received his A&P certificate in 2010, but did so only occasionally after respondent received his IA rating in 2013 because respondent seemed to believe he was a "superior" mechanic.[36] Mr. Distad agreed that respondent understood engines well and was mechanically inclined.[37] He explained that an A&P mechanic may perform maintenance but not major repairs and may not approve work on parts, while a mechanic with an IA rating ensures compliance with the Federal Aviation Regulations ("FARs") before return to service.[38] He stated that he recommended respondent for his A&P mechanic certificate but did not recommend him for his IA rating because he did not feel respondent was qualified.[39] He added that respondent did not ask him for a recommendation, nor was one required.[40]

Mr. Distad testified that he at times disagreed with respondent about his work, for example, when respondent flew an airplane without performing necessary maintenance out of financial gain.[41] Mr. Distad added that respondent also pointed out things Mr. Distad had missed, but explained that this is the reason mechanics check each other's work.[42] For example, Mr.

---

[34] *Id.* at 2022, 2045-46, 2049-51.

[35] *Id.* at 2022-23, 2042-43.

[36] *Id.* at 2023-24, 2045-46, 2534.

[37] *Id.* at 2050.

[38] *Id.* at 2049.

[39] *Id.* at 2049-51, 2497-98, 2533-34.

[40] *Id.* at 2533.

[41] *Id.* at 2051.

[42] *Id.* at 2051-52.

Distad acknowledged forgetting to install a hydraulic lifter for one of his customers.[43] He stated that respondent did not run out of the hangar to ground that airplane, but instead pointed out the mistake before the airplane was returned to service.[44]

Mr. Distad testified that, in March or April 2011, respondent experienced a propeller strike on the ground while flying the Navion.[45] He further stated that, in April 2011, he witnessed Inspector Smith visiting respondent and giving him a letter and a service bulletin, mandating that respondent disassemble the old engine or install a new one.[46] Mr. Distad stated that respondent disagreed that a disassembly was necessary, but that he personally believed it was warranted given the potential latent damage to the engine.[47] Mr. Distad agreed that Inspector Smith's letter was stamped and noted "certified return request," but stated that a hand-delivered letter may also be stamped.[48] He stated that respondent never mentioned receiving another letter from Inspector Smith or being threatened by the FAA regarding this incident.[49]

Mr. Distad testified that, after the propeller strike, a few people mentioned to respondent that Mr. Daniels had an engine of the type respondent needed.[50] Mr. Distad denied connecting respondent with Mr. Daniels or helping respondent in his search for a new engine.[51] He also stated that he had not met Mr. Daniels before the sale of the engine on May 1, 2011, at Arctic

---

[43] *Id.* at 2545-46.

[44] *Id.*

[45] *Id.* at 2057.

[46] *Id.* at 2463-64, 2513. *See* Exh. A-20.

[47] Tr. at 2464, 2467, 2512-13.

[48] *Id.* at 2515.

[49] *Id.* at 2465-67.

[50] *Id.* at 2057.

[51] *Id.* at 2499.

Aviation.[52] He explained that, on that day, he observed the engine logbook, receipts, and reference materials on the table in his shop's kitchen but denied reviewing them or seeing respondent review them.[53] He testified that he further observed Mr. Daniels sitting at the table and formulating an entry for the engine logbook and respondent telling Mr. Daniels to record that Mr. Daniels had performed an overhaul.[54] Mr. Distad further testified that he told respondent that Mr. Daniels could not do that if the engine had not been all the way through the overhaul process, which included test runs.[55] Mr. Distad indicated that Mr. Daniels then stated that he had not test-run the engine.[56] Mr. Distad further stated that, without dictating the entry to Mr. Daniels, he told respondent and Mr. Daniels that Mr. Daniels could only record the engine as having been cleaned, disassembled, inspected, and reassembled and referenced the parts and the work done.[57] Mr. Distad indicated that respondent said that this would not constitute an overhaul and argued with him.[58] He stated that he explained to respondent that Mr. Daniels had not finished the overhaul process and that respondent had to finish it.[59] Mr. Distad testified that he put respondent and Mr. Daniels on the phone with Inspector Smith, who told them that the engine may not be described as overhauled.[60]

Mr. Distad denied discussing with respondent the specific process of test-running the

---

[52] *Id.* at 2029, 2058.

[53] *Id.* at 2058-59, 2480-81.

[54] *Id.* at 2030, 2058-60.

[55] *Id.* at 2030, 2060.

[56] *Id.* at 2131.

[57] *Id.* at 2031, 2060-61, 2108-09, 2499.

[58] *Id.* at 2031, 2060.

[59] *Id.* at 2031, 2079-80.

[60] *Id.* at 2031-32, 2060, 2500.

engine.[61] He also stated that respondent had previously test-run engines and signed them out for operation, but that he had not seen respondent test-running an engine under the Service Bulletin.[62] He further stated that because respondent had previously installed an engine in his Cessna 152 under supervision, the regulations did not require respondent to be supervised when installing the engine at issue into the Navion.[63] He explained that the regulations require supervision by another mechanic with an equivalent rating only when an A&P mechanic performs a new task, but that the supervising mechanic is not required to sign off on providing such supervision.[64] He admitted that a mechanic may ask anyone for advice, including a mechanic with an IA rating.[65]

Mr. Distad testified that, after the propeller strike, respondent purchased a new propeller and installed it around the time respondent installed the new engine, which was within a day or a day and a half of May 1, 2011.[66] He stated that respondent was qualified and could test-run an engine but that respondent did not test-run it.[67] Mr. Distad denied having any involvement with the engine after May 1, 2011, including any test runs or seeing respondent perform any test runs.[68] He explained that he observed respondent working on the engine in his hangar but did not watch what respondent was doing.[69] He further explained that he saw respondent push the

---

[61] *Id.* at 2080-81, 2122.

[62] *Id.* at 2505, 2508.

[63] *Id.* at 2473-75, 2505, 2507-08.

[64] *Id.* at 2530-32, 2551-52.

[65] *Id.* at 2552-53.

[66] *Id.* at 2057, 2503-04.

[67] *Id.* at 2525.

[68] *Id.* at 2032, 2500, 2505.

[69] *Id.* at 2088, 2473.

airplane out of the hanger after installing the engine and that respondent later told him he had test run the engine.[70]

Mr. Distad denied assisting respondent in swapping the accessories between the old and the new engine, verifying the accuracy of the instruments for the overhaul, dictating the overhaul entry in the engine logbook, and seeing or taking any records of the test runs.[71] Mr. Distad stated that respondent's testimony about taking these records was false.[72] Mr. Distad denied owning a wood test club, a water manometer, or a calibrated cylinder head temperature gauge with a thermocouple for test-running an engine, as well as recently using a water manometer.[73] He further denied seeing respondent with these instruments but suggested that respondent could have purchased or borrowed them.[74] He confirmed that respondent had a cylinder head temperature gauge in the Navion's dashboard.[75]

Mr. Distad also denied using a heating pad or purchasing a new thermometer to compare the temperatures of the probes from the Navion's instruments.[76] He stated that he had previously done that as a diagnostic tool to determine if there is a problem with an instrument, but explained that doing so for reference is different from calibration.[77] He explained that calibration means a certification that the instrument is correct and meets the necessary standards within acceptable

---

[70] *Id.* at 2032, 2500.

[71] *Id.* at 2075, 2079, 2476, 2526-27, 2536-38.

[72] *Id.* at 2538.

[73] *Id.* at 2033, 2082, 2084, 2539-40, 2548-49.

[74] *Id.* at 2540-41, 2549.

[75] *Id.* at 2129. *See* Exh. R-MM.

[76] Tr. at 2126-27, 2132.

[77] *Id.* at 2027, 2035, 2131-32.

tolerances, and that calibration is the only way to ensure the accuracy of an instrument.[78] He denied keeping calibrated instruments in his shop, explaining that he orders them if he needs them or sends them out to a repair shop for calibration.[79] He denied calibrating respondent's instruments, stating that he does not have the reference materials for calibration, does not know what equipment is needed to perform a calibration, and is not authorized to perform calibrations under Part 65.[80] He explained that, under FAR Part 43, calibration is a "major repair" and that only a repair station may calibrate the instruments consistent with its rating.[81] He further explained that, if an instrument was calibrated, it would have been sent to an appropriate repair station, there would be logbook entries after it was reinstalled, and there would be a work order from the repair station documenting the calibration.[82] He indicated that he has assisted his clients in taking instruments out of their airplane to be sent out for calibration on numerous occasions.[83] He denied seeing respondent take the instruments out from the Navion and sending them out to a repair station but suggested respondent could have borrowed the calibrated instruments from someone or purchased them.[84]

Mr. Distad testified that, to install the engine, respondent needed a hoist, torque wrenches, and hand tools, which respondent either had or could access at Arctic Aviation.[85] He stated that respondent could install the engine on his own, explaining that, even though it weighs

---

[78] *Id.* at 2038, 2040-42, 2101.

[79] *Id.* at 2033-34.

[80] *Id.* at 2034-35, 2107, 2130.

[81] *Id.* at 2034, 2038.

[82] *Id.* at 2035, 2038, 2509.

[83] *Id.* at 2509-10.

[84] *Id.* at 2111-13.

[85] *Id.* at 2474-75.

350 pounds, it only needs to be rolled over onto a hoist and can be left hanging for a mechanic to take his time with it.[86] He indicated that this process takes him two hours but that an inexperienced mechanic may take three or four hours.[87]

Mr. Distad acknowledged that, on June 1, 2012, he signed off on respondent's annual inspection in the engine logbook and noted the engine total time based on respondent's June 7, 2011, entry.[88] He stated that he looked at the engine and did not see any problems but did not take the engine apart.[89] He explained that an annual inspection involves reviewing compliance with relevant airworthiness directives; ensuring that all the necessary forms are in the records; and inspecting the aircraft according to the inspection checklist, but that it does not include determining whether calibrated instruments were used to complete a recent overhaul or whether the engine had actually been test-run.[90] He explained that mechanics rely on the records and share a trust: if one of them records and certifies work, he or she is saying it was done correctly, and, unless there is a sign it was not, an IA does not have to tear the part down to double-check it.[91] He added that he receives aircraft all the time that other people have worked on and has to rely on what he sees in the logbooks.[92] He stated that he did not know what was necessary to overhaul the engine but believed the Navion was legal for operation since respondent's entries in the logbook reflected the engine had been overhauled.[93] He also stated that he did not need to

---

[86] *Id.* at 2475-76, 2500-03.

[87] *Id.* at 2502.

[88] *Id.* at 2073.

[89] *Id.*

[90] *Id.* at 2102-03, 2106.

[91] *Id.* at 2103, 2106.

[92] *Id.* at 2118.

[93] *Id.* at 2031, 2061-62, 2102-03, 2119.

verify the overhaul since the airplane was at the time used as a Part 91 and not a Part 135 operation.[94]

Mr. Distad further testified that, when he signed off on the annual inspection on June 1, 2012, he assumed that the magnetos and the carburetor on the engine had come from Mr. Daniels. However, Mr. Distad later discovered in the engine paperwork that they had come from the old engine that was involved in the propeller strike and that respondent had not serviced them as required by the regulations.[95] He denied telling respondent to install on the new engine the magnetos from the old engine, stating that the magnetos had to be inspected due to possible damage from the propeller strike incident.[96] He did not recall seeing in the engine logbook a document reflecting overhaul of the magnetos, adding that this would not have been sufficient to document the removal of the magnetos from the old engine and their installation on the new engine.[97]

Mr. Distad further testified that, from August 2012 until April 2015, he served as the Director of Maintenance on respondent's Part 135 business, and that respondent asked him to take on this position because respondent believed the FAA would like seeing Mr. Distad's signature on maintenance documents.[98] Mr. Distad testified that, in this position, he reviewed the maintenance records to confirm proper recording and ensured respondent met the 100-hour inspection, the TSOH on the components, and the compliance with the applicable operation

---

[94] *Id.* at 2061.

[95] *Id.* at 2478-80, 2482-83, 2518-19, 2544-45.

[96] *Id.* at 2543-44, 2550. A magneto is a rotating magnet that sends high voltage electrical current to the aircraft's spark plugs to ignite the fuel-air mixture in the engine's cylinders. *See* Pilot's Handbook, *supra* note 16, at 15.

[97] Tr. at 2521, 2542-43, 2550.

[98] *Id.* at 2023, 2044, 2046-48, 2463, 2477. *See* Exh. R-SS.

specifications and airworthiness directives.[99] He indicated that his duty was not to determine whether the 2011 overhaul was proper but to ensure that a zero-time engine had been returned to service in that aircraft, which he fulfilled by reviewing respondent's June 2011 entry.[100] He added that it was not his duty to review everything that Mr. Daniels did and everything that respondent was doing.[101]

Mr. Distad testified that he resigned from this position in April 2015 because respondent was recovering from the injuries he sustained in the August 2014 accident and the Navion was not flying, and because he felt "cut out of the position" as respondent dealt directly with the FAA after receiving his IA rating.[102] He added that he did not want the liability of associating with Kirst Aviation after finding out during the August 2014 crash investigation that respondent had been "cherry-picking" which regulations to follow.[103] He acknowledged that he did not document any concerns he had about respondent as a mechanic in the resignation letter.[104]

2. Testimony of James Tupper

Inspector Tupper testified that he is an Aviation Safety Inspector with the FAA's Fairbanks Regional Office, specializing in airworthiness.[105] He holds an A&P mechanic certificate and previously held an IA certificate for 23 years.[106] He worked as a director of maintenance for Part 135 operators, where he oversaw 100-150 overhauls of Lycoming and

---

[99] Tr. at 2527-30.

[100] *Id.* at 2114-17.

[101] *Id.* at 2118.

[102] *Id.* at 2104, 2526. *See* Exh. R-SS.

[103] Tr. at 2482, 2492, 2498.

[104] *Id.* at 2494. *See* Exh. R-SS.

[105] Tr. at 2073, 2145.

[106] *Id.* at 2146-47.

Continental engines; taught courses on maintaining aircraft to mechanics; and worked on aircraft in the military.[107] He testified that an overhaul serves to keep an engine in a safe operating condition and is comprised of a teardown, inspection, repair and replacement of parts, reassembly of the engine, and testing.[108] He stated that, in this case, the overhaul process is governed by the Overhaul Manual, which requires use of accurate remote instruments to test-run the engine in a test cell or without remote instruments by using an airframe in accordance with the Service Bulletin.[109] He admitted he did not know of any test cells in the Fairbanks area or outside of it, and that he test-ran engines using an airframe in his past work for a Part 135 operator.[110]

Inspector Tupper testified that, to test-run an engine in an airframe per the Service Bulletin, the aircraft's instruments must be calibrated.[111] He stated that calibration means accuracy based on a national standard of acceptable tolerances, and that the instruments must be sent to a certified repair station to be calibrated and returned with the documentation certifying their calibration and reflecting maintenance entries describing what work was done on the instrument.[112] He indicated that in his prior work for a Part 135 operator, every time an engine was taken out for an overhaul, the instruments were taken out, sent to repair shops for calibrations, and entries were made in the logbooks each time instruments were replaced with the

---

[107] *Id.* at 2148-52, 2181.

[108] *Id.* at 2184, 2186.

[109] *Id.* at 2185-86, 2188-91. *See* Exhs. R-Y at 83, ¶ 14-3; A-16 at 1-2, ¶ II.

[110] Tr. at 2314-18.

[111] *Id.* at 2191. *See* Exh. A-16 at 2, ¶ A.4.

[112] Tr. at 2192-93, 2319-22, 2334.

calibrated ones.[113] He admitted that the FARs do not define "calibration," but noted that 14 C.F.R. § 43.13 requires work acceptable to the Administrator and that 14 C.F.R. § 65.81 prohibits an A&P mechanic from calibrating instruments.[114] He testified that, while instruments may be tested using certain tools for troubleshooting purposes or to check their functioning, such checking is not considered "calibration" as it cannot be used to correlate the accuracy of an instrument.[115] He opined that respondent did not calibrate the instruments because there are no logbook entries or records stating that they were calibrated.[116]

Inspector Tupper testified that upon receipt of the calibrated instruments, the engine must be test-run first on the ground and then in flight and cannot be deemed overhauled until the last test run is conducted.[117] He explained that ground runs are three, four, and ten-minute runs at specific revolutions-per-minute (RPM) to ensure the engine does not have any leaks.[118] He stated that a flight run takes approximately 2.5 hours and involves recording the readings from the instruments and ensuring they fall within the operating test limits listed in the Overhaul Manual.[119] He stated that this may not be achieved on the ground because various features, such as fuel consumption at full throttle, may only be monitored in flight.[120] He also stated that it

---

[113] *Id.* at 2317-19.

[114] *Id.* at 2319-20, 2336, 2356.

[115] *Id.* at 2334-37.

[116] *Id.* at 2337.

[117] *Id.* at 2348-49.

[118] *Id.* at 2194-95. *See* Exh. A-16 at 2, ¶ III.4.-5.

[119] Tr. at 2205-06. *See* Exh. R-Y at 85, Table XVII.

[120] Tr. at 2205-06.

would not be possible to monitor these features without calibrated instruments because the pilot performing the testing would not know whether the readings are accurate.[121]

Inspector Tupper opined that respondent's June 1, 2011, logbook entry is false because neither that entry nor the preceding one by Mr. Daniels is sufficient to constitute overhaul of the engine and record zero TSOH, and because the engine was not test-run according to the Service Bulletin.[122] He stated that respondent did not test-run the engine because the total engine time did not advance from the May 1, 2011, entry to the June 7, 2011, entry, despite respondent's claim he test-ran the engine.[123] He explained that an engine's "time in service" indicates when it is due for an overhaul and is tracked according to the principle of "wheels off, wheels on," meaning the time period from takeoff to landing.[124] Based on this principle, he concluded that if respondent had conducted the test runs, the engine logbook would reflect an additional two-hour advance in the total engine time and the TSOH.[125] He added that, since test-running an engine in a test cell does not fall under the principle of "wheels off, wheels on," such an engine's total engine time would not advance and it would receive zero TSOH.[126] Inspector Tupper opined that respondent's entry of "zero TSOH" is false and deceptive.[127] He explained that a good entry would instead state that the engine was ground run and released for test flight and the TSOH would account for the time in service.[128] He agreed that mechanics vary in their entries, making

---

[121] Tr. at 2207.

[122] *Id.* at 2309-12, 2326. *See* Exhs. A-1 at 3-4; Exh. A-16.

[123] Tr. at 2338.

[124] *Id.* at 2338-42, 2348-51.

[125] *Id.* at 2339, 2349-52.

[126] *Id.* at 2340, 2342, 2349.

[127] *Id.* at 2340, 2351.

[128] *Id.* at 2349-51.

it difficult to determine what was done, and that the FAA does not spell out what an entry on engine overhaul must state.[129]

3. Testimony of Francis Daniels

Mr. Daniels testified that he holds an airline transport pilot certificate and an A&P mechanic certificate.[130] He stated that he currently works as a pilot at Everts Air Cargo and previously worked as an aircraft mechanic from 1994 to 1998.[131] Mr. Daniels indicated that he met respondent to view respondent's Navion because he was at the time interested in purchasing one.[132] Mr. Daniels stated that, in furtherance of his intent to buy his own Navion, Mr. Daniels purchased the engine at issue and proceeded to overhaul it according to the Overhaul Manual and the necessary service bulletins.[133] He indicated he had not overhauled an engine previously.[134] He specified that he disassembled and inspected the engine; sent the crankcase and the crankshaft to repair shops for overhaul; purchased newly overhauled cylinders; took the connecting rods, starter gears, and accessories to Alaska Aircraft Engines for inspection and repair and purchased from Alaska Aircraft Engines the necessary service bulletins; purchased other parts, including a new camshaft, engine oil, a bearing set, and a gasket set; and sent the lifters, push rods, adapted bodies, and the rear accessory case for inspection and repair.[135] He

---

[129] *Id.* at 2354.

[130] *Id.* at 1848.

[131] *Id.* at 1848, 1893.

[132] *Id.* at 1849.

[133] *Id.* at 1849-51, 1868. *See* Exh. R-M.

[134] Tr. at 1850.

[135] *Id.* at 1850-51, 1853-58, 1862-69.

testified that, after the parts came back from the repair shops, he reassembled the engine himself with some help from Alaska Aircraft Engines.[136]

Mr. Daniels testified that the engine was airworthy, but that he ultimately sold it to respondent because he did not have the funds for an airframe.[137] Mr. Daniels stated that, at the time of the sale on May 1, 2011, the engine still had to have accessories installed – magnetos, a carburetor, intake manifolds, an exhaust system, and a starter motor – and had to be test-run to be operational.[138] He indicated that on May 1, 2011, he showed respondent and Mr. Distad all the overhaul documentation and made an entry in the engine logbook reflecting the work he had performed on the engine to show it was airworthy and complied with the overhaul requirements.[139] He admitted that he had not test-run the engine at the time of the sale, agreeing that the test runs were a requirement and that he could not say he had overhauled the engine without having test-run it.[140] He also agreed that the entry did not expressly mention overhaul and that an engine could be reassembled for purposes other than overhaul.[141] Mr. Daniels stated that respondent was anxious for him to record that Mr. Daniels had overhauled the engine, but that Mr. Daniels told respondent he had not performed the test runs.[142] Mr. Daniels did not recall Mr. Distad dictating to him the language of the entry and denied having any conversation with Inspector Smith about the language of the entry.[143] He also denied any further involvement in the

---

[136] *Id.* at 1871-72.

[137] *Id.* at 1872.

[138] *Id.* at 1874-75.

[139] *Id.* at 1870-71, 1873-77. *See* Exhs. A-1 at 3.

[140] Tr. at 1899, 1906.

[141] *Id.* at 1914.

[142] *Id.* at 1899, 1907, 1915.

[143] *Id.* at 1877, 1879, 1897-98.

engine after selling it to respondent on May 1, 2011.[144] He indicated that the entries in an engine logbook should continue the number of engine hours before the overhaul, but did not know if respondent's entry of zero TSOH was proper.[145] Mr. Daniels also indicated that a wood test club would not be necessary if the engine was test-run in an airframe.[146]

4. Testimony of Richard Walker

Mr. Walker testified that he owns Custom Aircraft, Inc., a repair shop in Palmer, Alaska, and that he overhauls 40 to 60 Lycoming and/or Continental engines per year, performs general light plane maintenance, and had test-run 40 to 50 engines in the past.[147] Prior to his repair shop, he served for 12 years as a director of maintenance for an aircraft maintenance facility, where he oversaw engine overhauls.[148] He holds a private pilot certificate with instrument rating and an A&P mechanic certificate with an IA rating.[149] He stated that approximately 200 engines are overhauled annually in Alaska, while the state has had at most two operating test cells at various times.[150] He testified that, in overhauling an engine, he documents the process and what testing must be done pursuant to the manufacturer's instructions or service bulletins and provides these documents to the engine's owner as a guidance on how to test-run the engine to complete the overhaul process.[151]

---

[144] *Id.* at 1875.

[145] *Id.* at 1907-010. *See* Exh. A-1 at 4.

[146] Tr. at 1880-81.

[147] *Id.* at 2219-20, 2245-47.

[148] *Id.* at 2220-21, 2224-25.

[149] *Id.* at 2221.

[150] *Id.* at 2244-46.

[151] *Id.* at 2246-49.

Mr. Walker testified that the Overhaul Manual's requirement concerning the use of a wood test club and remote instruments refers to test-running an engine in a test cell and is not applicable to testing in an airframe.[152] He indicated that calibration means a verification of the accuracy of an instrument and does not require certification, but indicated he had previously been told by another mechanic that this belief was wrong.[153] He clarified that he did not take out and send instruments to a repair shop for calibration before his test runs, although he has heard of other mechanics doing it, but instead tested the instruments in an aircraft without taking them out and recorded in a logbook that he complied with the applicable service instruction.[154] He stated those who do not hold an A&P certificate may calibrate instruments if overseen by an A&P mechanic.[155]

5. Testimony of respondent[156]

Respondent testified that he began his career as an automotive mechanic in 1971, taught automotive engine overhaul at the high school and college level, and overhauled approximately 300 automotive engines in his lifetime.[157] He indicated that although the manuals, specifications, and plating methods are different, the process for overhauling an airplane engine is the same as for overhauling an automobile engine because in both cases the manual and relevant service bulletins must be followed, parts must be inspected, and an engine must be reassembled and test-

---

[152] *Id.* at 2247-48. *See* Exh. R-Y at 83-84.

[153] Tr. at 2251-52.

[154] *Id.* at 2251-52, 2276-77.

[155] *Id.* at 2274-75.

[156] The summary of respondent's testimony reflects the relevant parts of his deposition and his testimony during the hearing. In citing to pages 2454-2544 of respondent's testimony, we refer to the hearing transcript dated July 14, 2016. *See supra* text accompanying note 31.

[157] Tr. at 1792-93, 2374.

run.[158] He testified that he began working with Mr. Distad in 2005 as a shop helper and eventually performed airplane maintenance with Mr. Distad daily to earn maintenance hours for his A&P certificate.[159] He stated that he received his A&P certificate in 2010 and his IA certificate in 2013.[160] He initially stated that the hours he earned working for Mr. Distad allowed him to bypass an A&P mechanic class, but later stated that he "learned things in [his] A&P class that [Mr. Distad] didn't necessarily agree with."[161]

Respondent testified that he and Mr. Distad overall had a good relationship but had some disagreements about maintenance.[162] He stated that he followed Mr. Distad's opinions about maintenance most of the time because Mr. Distad would not have otherwise signed off on his work.[163] He stated that his concerns about Mr. Distad's maintenance practices led him to obtain the IA rating, which he stated Mr. Distad supported because he needed help in the shop.[164] Respondent explained that the FAA once grounded respondent's Navion after Mr. Distad improperly signed off as an IA on forms reflecting modifications to the Navion's parts, and that Mr. Distad on another occasion forgot to install a hydraulic lifter in an airplane before returning it to service.[165] Respondent indicated that he had run out of the hangar to stop the pilot and ground the airplane.[166]

---

[158] *Id.* at 2376-77.

[159] *Id.* at 1789, 2377-79.

[160] *Id.* at 1791-92, 2378-79.

[161] *Id.* at 2378, 2388.

[162] *Id.* at 2384, 2387-88.

[163] *Id.* at 2389.

[164] *Id.* at 2384-85, 2389.

[165] *Id.* at 2389-91.

[166] *Id.* at 2391.

Respondent denied Mr. Distad's description of their business arrangement, explaining that they only traded the time he spent helping Mr. Distad with maintenance for the use of Arctic Aviation's space to meet with his students and Mr. Distad's Director roles for his aviation businesses.[167] He also indicated that they inspected each other's work, that he taught Mr. Distad to fly, and that he paid Mr. Distad approximately $2,700 per year for annual inspections, 100-hour inspections, parts, and parking.[168] Respondent testified that, in the aftermath of the August 2014 crash investigation, Mr. Distad removed himself as the Director of Maintenance and, in the spring of 2015, told respondent to leave Arctic Aviation out of concern for liability for the crash.[169]

Respondent testified that, in March-April 2011, after the Navion experienced a propeller strike on a snow berm, Mr. Distad recommended that respondent test the engine.[170] He stated that, a few days later, Inspector Smith hand-delivered him a letter, which was different from the April 4, 2011, letter, and which stated that his certificate would be taken away "if anybody does any testing, wrenching, or flying of [the] airplane with that engine."[171] He stated the letter also warned that his and Mr. Distad's certificates would be revoked if they did not disassemble or overhaul the engine.[172] Respondent stated that Mr. Distad was afraid after receiving this letter.[173] When asked if he has since repaired the old engine, he stated, "I was getting ready to start

---

[167] *Id.* at 2385-86, 2423, 2525-26.

[168] *Id.* at 2384, 2386-87.

[169] *Id.* at 2387.

[170] *Id.* at 2468, 2477-78.

[171] *Id.* at 2468-69, 2473-74, 2478-79. *See* Exh. A-20.

[172] Tr. at 2478-79.

[173] *Id.* at 2474, 2479.

assembling it when somebody decided they needed an emergency revocation."[174] He indicated that he did not need a new engine but purchased it because he did not want to fight the FAA.[175]

Respondent testified that he had not purchased or overhauled an engine before, and that Mr. Distad advised him what to look for during his search for a new engine and what documentation is necessary to reflect overhaul.[176] He stated that Mr. Distad had overhauled engines before and was overhauling one in his shop at the time of the hearing.[177] He also stated that Mr. Distad never test-ran the engines he overhauled and did not advise his customers to follow the applicable service bulletins for test-running them.[178] Respondent indicated that he learned of the engine at issue from Mr. Distad, was told that it had been overhauled, and was assured by one of Mr. Daniels's coworkers that Mr. Daniels was trustworthy.[179]

Respondent testified that, on May 1, 2011, he and Mr. Distad reviewed the list of service bulletins and the overhaul documents Mr. Daniels brought with the engine.[180] Respondent stated that he then recorded three lines on the first page of the new engine logbook, but Mr. Distad told him to stop and instructed Mr. Daniels to write all the entries, explaining that the engine could not be called "overhauled" as it had not been test-run.[181] Respondent stated that he then stopped, got up, and Mr. Daniels sat down to record the entry starting with "this engine," while Mr. Distad

---

[174] *Id.* at 2469-70.

[175] *Id.* at 2459, 2469.

[176] *Id.* at 2393, 2395, 2453.

[177] *Id.* at 2391-92.

[178] *Id.* at 2392.

[179] *Id.* at 1785-86, 2393-94.

[180] *Id.* at 1786, 2394-97, 2480.

[181] *Id.* at 1778-79, 1800, 2395-96, 2400-01, 2481-82. *See* Exhs. A-1 at 3.

dictated to him exactly what to write.[182] Respondent indicated that he did not know what an entry on overhaul must contain because neither he nor Mr. Daniels had made one before.[183] Respondent denied having a telephone conversation with Inspector Smith about the engine, explaining that he was still angry at the inspector about needing to obtain a new engine and did not want to speak to him.[184] Respondent also denied telling Mr. Daniels that he needed to record in the engine logbook that the engine had been overhauled and arguing with Mr. Distad about what the entry needed to say.[185]

Respondent testified that Mr. Daniels left after Mr. Daniels recorded his entry, and respondent and Mr. Distad brought the new engine into the shop, removed the old engine, and started swapping the accessories from the old engine to the new one.[186] Respondent described Mr. Distad's testimony about being uninvolved in the process of swapping the accessories as "depressing."[187] Respondent asserted that he and Mr. Distad swapped the engine baffling, the hydraulic pump, the fuel pump, the alternator, the air-oil separator, all the propeller accessories, the governor, breather tubes, carburetor, and other parts.[188] He stated that Mr. Distad wanted to use the magnetos from the old engine on the new one because they knew how many hours were on them.[189] Respondent further stated that he assisted Mr. Distad in transferring the magnetos,

---

[182] Tr. at 1753, at 1778-79, 1800, 2396, 2400.

[183] *Id.* at 2400.

[184] *Id.* at 1780-81, 2401, 2469, 2482.

[185] *Id.* at 1790.

[186] *Id.* at 2401, 2480.

[187] *Id.* at 2401-02, 2486-87.

[188] *Id.* at 2483-84.

[189] *Id.* at 1767-68, 1802, 2402, 2482-83.

and Mr. Distad showed him how to set the ignition timing using a degree wheel.[190] Respondent added that he had never used a degree wheel before and did not own one; thus, they used Mr. Distad's.[191]

Respondent testified that Mr. Distad then printed the Service Bulletin and told respondent how to test the engine in the airframe.[192] He stated that he also reviewed "whatever literature [he] had" for instrument calibration, and he and Mr. Distad calibrated the instruments.[193] He stated that the air speed indicator and the altimeter are used in a flying test; the hydraulic pressure gauge is used in a ground test; the tachometer is used in a ground test and a flight test; and that the cylinder head temperature, exhaust gas temperature, oil pressure, oil temperature, and fuel pressure gauges are also used for test runs.[194] He stated that he got these instruments from the Navion's dash.[195] He also stated that he had to install a manometer and an auxiliary oil pressure gauge for the grounds runs and then removed them.[196]

Respondent testified that he and Mr. Distad calibrated the dashboard instruments and the temperature gauges on June 5 or 6, 2011, and that they calibrated the tachometer and the oil pressure gauge on June 7, 2011, the day of the engine installation and the test runs.[197] He stated that he calibrated the tachometer by using a propeller timer, and that seeing the propeller timer

---

[190] *Id.* at 1781, 2402.

[191] *Id.* at 2402, 2484.

[192] *Id.* at 1779, 1803, 2408-09.

[193] *Id.* at 1771-72, 2404, 2484-85.

[194] *Id.* at 2406-08.

[195] *Id.* at 1772.

[196] *Id.* at 2408.

[197] *Id.* at 2455-56.

had the same values assured him the tachometer was working correctly.[198] He further testified that he and Mr. Distad calibrated the cylinder head temperature, the exhaust gas temperature, and the oil temperature gauges by putting their probes into a hot plate with heated oil and comparing the readings to a new thermometer.[199] He indicated that he sat in the airplane and recorded what the gauges said as Mr. Distad read out the temperatures to him.[200] Respondent stated that this was a two-person job that he could not have done by himself and that the gauges were accurate.[201] He testified that he calibrated the pressure gauges by purchasing new certified pressure gauges, connecting them to the fuel or the oil line, and confirming that the gauges in the airplane read the same values.[202] He also testified that he calibrated the water manometer, which tests the crankcase back pressure, by feeding a tube through one hole in a piece of cardboard and out another hole, creating a U-loop; pouring water into the open end of the tube; marking on the U-loop where the water level was; measuring the water level on the ruler; and comparing it to the specifications.[203] Respondent testified that he brought this water manometer from his home, and that he took a photograph of it in his shop.[204]

Respondent testified that, while only a repair station may disassemble an instrument, an A&P mechanic may calibrate an instrument to determine whether it is accurate.[205] He indicated that nothing he read for the overhaul suggested that he had to have all instruments certified, that

---

[198] *Id.* at 2405.

[199] *Id.* at 2404, 2409, 2515.

[200] *Id.* at 2404-05, 2409.

[201] *Id.* at 2409.

[202] *Id.*

[203] Tr. at 2410-13. *See* Exh. R-W.

[204] Tr. at 1770-71, 2410, 2530. *See* Exh. R-W.

[205] Tr. at 2514.

"calibration" is different from "certification," and that the FARs do not define "calibration" or "certification.[206] Respondent asserted that the work he did on the instruments constituted calibration – but not certification – because an instrument does not need to be certified to be on an aircraft's instrument panel.[207] He explained that, for example, an altimeter is "certified" when it is removed from the airplane, taken to a repair station, and certified as correct, but that an altimeter is merely "calibrated" when a pilot adjusts it prior to flying an airplane without needing to record an entry certifying the adjustment.[208] He agreed that, while a pilot could adjust the altimeter to the atmospheric pressure on the field at that time, he or she could not check the altimeter for different atmospheric pressures.[209]

Respondent testified that, on June 7, 2011, he and Mr. Distad put the engine on a hoist, took it out to the airplane, and installed it.[210] He stated that it was a two-person job, explaining that one person could do it with a lot of difficulty in three-to-four hours, but that two people could do it in half an hour.[211] Respondent testified that he and Mr. Distad performed all the ground and flight test runs on the same day, June 7, 2011, and it took five-to-eight hours to do them.[212] He explained that the five-to-eight hour time frame began with pre-oiling the engine and ended with the final inspection after the second flight test run, including any breaks.[213] He further explained that the ground run took 40 minutes to one hour, and the flight runs were

---

[206] *Id.* at 2414-16, 2514-15.

[207] *Id.* at 2412, 2415, 2515-16.

[208] *Id.* at 2415-16.

[209] *Id.* at 2499.

[210] *Id.* at 2403-04.

[211] *Id.*

[212] *Id.* at 2462-63.

[213] *Id.* at 2463.

between two and two and a half hours.[214] Respondent stated that he did not add to the TSOH the time he test-ran the engine because the overhaul did not start until the final test run was completed.[215]

Respondent testified that he and Mr. Distad first started with the ground runs pursuant to the Service Bulletin and the operating test limits table in the Overhaul Manual.[216] He denied needing a wood test club for the test runs because the Service Bulletin indicated the airplane propeller could be used instead.[217] He stated that he and Mr. Distad made charts to record the times they ran the engine, pre-oiled the airplane by turning the propeller by hand to ensure that everything was free, and started the engine to warm it up according to the times listed in the Overhaul Manual.[218] He stated that he then test-ran the engine on the ground alone, but that Mr. Distad "was out there."[219] He testified that, after the ground runs, he and Mr. Distad performed the flight test runs per the Service Bulletin.[220] Respondent asserted that he documented both the calibration of his instruments and the test runs and kept the records in the folder with all the engine records, but that he no longer has these records because Mr. Distad removed them from the hangar.[221]

Respondent testified that, in making the June 7, 2011, entry, he believed the engine had zero TSOH because Mr. Daniels had properly overhauled the parts and because he had complied

---

[214] *Id.* at 2464, 2495.

[215] *Id.* at 2503, 2521.

[216] *Id.* at 1769, 2413, 2416, 2494-95. *See* Exhs. A-16 at 2, ¶ III.A.; R-Y at 84-85.

[217] Tr. at 1768, 2413.

[218] *Id.* at 2416-17.

[219] *Id.* at 2418, 2492-95.

[220] *Id.* at 2417, 2419, 2495. *See* Exh. A-16 at 3, ¶ III.B.

[221] Tr. at 2405, 2418-19, 2533-35.

with the Overhaul Manual and the Service Bulletin in test-running the engine.[222] He further testified that Mr. Distad told him how to write the entry on June 7, 2011, because he did not know how it had to be recorded in the engine logbook since he had never overhauled an engine before.[223] Respondent added that, unless grossly wrong, he followed Mr. Distad's instructions on how to record the entries because Mr. Distad has been in the business longer than him and because he did not want to upset Mr. Distad and have to find a new IA and a new shop to work out of.[224] Respondent agreed that Mr. Distad did not need to sign off as an IA on respondent June 7, 2011, entry and that respondent is responsible for the work respondent performed and signed off on.[225] Respondent agreed that, as a mechanic, he is accountable for the work he performs, and that he certified the work was done correctly by signing off on this work.[226] He indicated that his entries were not fraudulent and that there was a difference between a mistaken entry and a fraudulent entry.[227]

Respondent testified that he could not install the engine unsupervised without violating the FARs because the FARs require supervision on any new maintenance task.[228] Respondent explained that Mr. Distad supervised his new maintenance tasks and then respondent signed the entries related to those tasks.[229] Respondent further explained that, although the A&P examination covered overhauls of Continental E-225-4 engines, he had not previously

---

[222] *Id.* at 1763-65, 1804, 2419.

[223] *Id.* at 2419, 2527.

[224] *Id.* at 2527-29.

[225] *Id.* at 2524, 2527.

[226] *Id.* at 2519-20.

[227] *Id.* at 2520.

[228] *Id.* at 2535-38.

[229] *Id.* at 2537.

overhauled and installed such an engine.[230] He stated that Mr. Distad's denial regarding helping him overhaul the engine is false, that he and Mr. Distad worked on the engine jointly to ensure they did not miss anything, and that Mr. Distad led everything that was done on the Navion from May 1, 2011, through June 7, 2011.[231] He stated that he relied on Mr. Distad as his mentor and his IA because Mr. Distad "always had authority over what [respondent] was doing."[232] He explained that Mr. Distad approved anything purchased by him over $100, controlled the maintenance of his airplanes, and was in charge of placing and authorizing into operation the engine at issue.[233] He asserted that Mr. Distad told him what to do, and that he did everything the way Mr. Distad wanted it done because Mr. Distad was the only one who could sign off on the upcoming airworthiness annual inspection.[234] He stated Mr. Distad performed the annual inspection on June 1, 2012, and signed off on it as an IA without expressing any concerns about the overhaul.[235]

C. Law Judge's Oral Initial Decision

In the oral initial decision, the law judge determined that the Administrator proved the regulatory violation of 14 C.F.R. § 43.12(a)(1) as alleged by a preponderance of reliable and probative evidence.[236] In making this determination, the law judge summarized the regulatory violations alleged in the complaint; discussed respondent's admissions and denials in his answer;

---

[230] *Id.* at 2517-18.

[231] *Id.* at 1803, 1805, 2516-17.

[232] *Id.* at 2385, 2522.

[233] *Id.* at 1799, 2386.

[234] *Id.* at 1799, 1799-1800.

[235] *Id.* at 2420-21.

[236] Oral Initial Decision at 2742-48, 2753-54.

noted the admitted exhibits; summarized witness testimony; assessed the credibility of respondent, Mr. Daniels, and Mr. Distad; and discussed the *Hart v. McLucas* standard.

First, the law judge found that respondent's 13 entries in the engine logbook dated from June 7, 2011, through June 14, 2014, were false because respondent did not perform the ground and the flight test runs using a wood test club propeller, a water manometer, and a cylinder head temperature gauge with a thermocouple as required to complete the overhaul.[237] The law judge explained that respondent provided no evidence of the test runs, of having these remote instruments, and of using an airplane propeller instead of a wood test club.[238] The law judge found that, given the lack of evidence that respondent completed the ground and the flight test runs, whether respondent properly calibrated the necessary instruments was not relevant and need not be addressed.

Without any documentary proof respondent performed the test runs required to complete the overhaul, the law judge explained that the case must be decided on credibility.[239] He found Mr. Distad to be credible, indicating he was not the subject of any FAA enforcement action; never evasive; appeared forthright; was consistent in his answers; was reluctant to provide testimony to damage respondent and gave respondent "every benefit of the doubt;" and was genuinely surprised when confronted with respondent's testimony that Mr. Distad took the records of the test runs and lied under oath.[240] Conversely, the law judge found respondent not credible, noting his certificates were at risk in this action; his testimony was vague; he was evasive and argumentative when asked on cross-examination about the dates he calibrated the

---

[237] *Id.* at 2742, 2748.

[238] *Id.* at 2741-43.

[239] *Id.* at 2743-44.

[240] *Id.* at 2745.

instruments, deflecting the questions and focusing instead on how they were relevant to the case; could not remember some of the details of the engine installation; offered conflicting testimony regarding who provided all the tools for the testing; became very angry when questioned about the propeller strike; was quick to call his mentor, Mr. Distad, incompetent and a liar; reacted with anger when Mr. Distad was brought back to testify on rebuttal; and was "willing to compromise his integrity" by recording incorrect entries, allegedly at Mr. Distad's direction, just to avoid searching for a new mechanic with Inspection Authority.[241]

Second, the law judge found that the 13 entries in the engine logbook dated from June 7, 2011, through June 14, 2014, were material.[242] In making this finding, the law judge relied on Inspector Tupper's testimony that these entries could influence the decisions made by the Administrator and respondent's admission that he signed the entries using his name and the A&P certificate number per the regulations to bear responsibility for his work as a mechanic.[243]

Third, the law judge found that respondent made the 13 entries in the engine logbook dated from June 7, 2011, through June 14, 2014, with knowledge of their falsity.[244] The law judge explained that, despite respondent's substantial experience in automotive and aviation maintenance and his background as an educator, pilot, and owner of aviation businesses, he presented himself as inexperienced and nearly helpless in relation to the overhaul of the engine at issue.[245] The law judge also noted respondent's testimony that Mr. Distad dictated Mr. Daniels's May 2011 engine logbook entry was contradicted by Mr. Distad and Mr. Daniels, whom the law

---

[241] *Id.* at 2746-48, 2752.

[242] *Id.* at 2749.

[243] *Id.* at 2748-49.

[244] *Id.* at 2752.

[245] *Id.* at 2751-52.

judge found to be credible.[246] The law judge thus found that the Administrator proved by a preponderance of the evidence that respondent violated 14 C.F.R. § 43.12(a)(1). The law judge next assessed the Administrator's choice of sanction to determine whether revocation was appropriate.[247] Finding no mitigating factors that warranted the imposition of a lesser sanction, the law judge held that revocation was supported by the facts of the case and Board precedent.[248]

D. Issues on Appeal

Respondent argues that the law judge erred in determining that the 13 entries in the engine logbook dated from June 7, 2011, through June 14, 2014, were false.[249] Respondent contends that he had the tools necessary for the overhaul, including a water manometer; he was not required to use a wood test club; and he could and did use a cylinder temperature gauge with a thermocouple from the aircraft's instruments to complete the test runs.[250] Respondent also contends that he properly calibrated the instruments and used them in accordance with the Service Bulletin.[251] Respondent further argues that the law judge erred in finding that respondent intentionally falsified 13 entries in the engine logbook dated from June 7, 2011, through June 14, 2014, citing errors in the law judge's credibility determinations.[252] Specifically, respondent avers that the law judge's finding that his testimony was not credible and Mr. Distad's was credible

---

[246] *Id.* at 2751-53.

[247] *Id.* at 2757-58.

[248] *Id.* at 2757 (citing *Administrator v. Berry*, NTSB Order No. EA-2689 (1988), the law judge held that "Board precedent firmly establishes that even one intentional falsification compels the conclusion that the falsifier lacks the necessary care, judgment, and responsibility required to hold any Airman Certificate").

[249] Appeal Br. at 10.

[250] *Id.* at 10-13.

[251] *Id.* at 14-16.

[252] *Id.* at 16.

was arbitrary, capricious, and against the overwhelming weight of the evidence.[253] Respondent also maintains that the law judge erred in failing to determine the credibility of all other witnesses.[254] The Administrator argues the law judge committed no error and opposes respondent's arguments for reversal.

II. Decision

While we give deference to our law judge's rulings on certain issues, such as credibility determinations,[255] we review the law judge's decision *de novo*.[256] To prove intentional falsification under *Hart v. McLucas*, the Administrator must prove an airman: 1) made a false representation, 2) in reference to a material fact, and 3) with knowledge of the falsity of the fact.[257] Respondent does not appeal the law judge's determination that his 13 engine logbook entries dated from June 7, 2011, through June 14, 2014, were made in reference to a material fact. Therefore, the issue of materiality of respondent's answers to these questions is not before us, and we find that the Administrator has met his burden of proof with respect to the second prong of the *Hart v. McLucas* standard.[258]

---

[253] *Id.* at 18-20.

[254] *Id.* at 19.

[255] *Administrator v. Porco*, NTSB Order No. EA-5591 at 13 (2011), aff'd sub nom., *Porco v. Huerta*, 472 Fed.Appx. 2 (D.C. Cir. 2012) (per curiam).

[256] *Administrator v. Smith*, NTSB Order No. EA-5646 at 8 (2013); *Administrator v. Frohmuth and Dworak*, NTSB Order No. EA-3816 at 2 n. 5 (1993); *Administrator v. Wolf*, NTSB Order No. EA-3450 (1991); *Administrator v. Schneider*, 1 N.T.S.B. 1550 (1972) (in making factual findings, the Board is not bound by the law judge's findings).

[257] 535 F.2d 516, 519 (9th Cir. 1976).

[258] On January 31, 2017, respondent submitted a Propeller Failure Analysis report from George A. Morse with Failure Analysis Service Technology, Inc., purporting to show that the August 2014 accident was due to the propeller failure. We decline to consider this report on appeal. The report concerning the cause of the August 2014 accident is irrelevant to whether respondent properly conducted the 2011 engine overhaul. And, under 49 C.F.R. § 821.48(d), after the parties' briefs had been filed, we allow new submissions only upon a showing a good cause.

A. False Representation

Respondent argues that the 13 entries he made in the engine logbook between June 7, 2011, and June 14, 2014, are not false because he had the tools required by the Overhaul Manual and the Service Bulletin to complete the overhaul.[259] He explains that he had the necessary calibrated instruments and did not need a wood test club or a remote cylinder head temperature gauge with thermocouple to perform the ground and flight test runs.[260] We agree with respondent that having a wood test club and a remote cylinder temperature gauge with thermocouple was irrelevant to the issue of falsity in this case. However, we disagree with respondent that he overhauled the engine.

The regulations state, and all parties agree, that respondent was required to test-run the engine to complete the overhaul process.[261] All parties also agree that there are two acceptable ways to test-run this engine: in a rigid test cell pursuant to the Overhaul Manual, which requires the use of a wood test club and a remote cylinder head temperature gauge with thermocouple[262] or on the ground and in flight according to the steps listed in the Service Bulletin and the operating test limits table contained in the Overhaul Manual.[263] Running the engine on the

---

Even if the report was relevant to the present case, respondent provided no good cause for his inability to procure it prior to the law judge's decision. *See Administrator v. Wilke, Selva and Heath*, NTSB Order No. EA-5565 (2011) ("We have long held that we will not, on appeal, entertain new evidence or attempt to resolve factual conflicts that the parties could have, but did not, litigate before the law judge"). *See also Administrator v. Guy America Airways, Inc.*, 4 NTSB 888 n.2 (1983) (denying respondent's motion to supplement the appeal brief and stating that the documents respondent sought to introduce were not "newly discovered evidence" simply because respondent's counsel did not know of them at the time of the hearing).

[259] Appeal Br. at 10-16.

[260] *Id.* at 10-16.

[261] *See, e.g.*, Tr. at 1874-75, 2030, 2060, 2184-86, 2376-78. *See also* 14 C.F.R. § 43.2(2).

[262] *See* Exh. R-Y at 83-84.

[263] *See* Exhs. A-16 at 1-3; R-Y at 85.

ground and in flight requires use of an airframe with a flight propeller and calibrated instruments.[264]

Respondent's June 7, 2011, entry claimed that he test-ran the engine per the Overhaul Manual and the Service Bulletin, and that the "ground runs performed satisfactorily."[265] The entry does not claim that he test-ran the engine in a rigid test cell, and respondent denied test-running the engine using this method. Since a wood test club and a remote cylinder head temperature gauge with thermocouple are only required for test runs conducted using a rigid test cell, their use or lack of use by respondent is irrelevant. Instead, the June 7th entry claims that respondent test-ran the engine using an airframe, which respondent testified was his Navion with a new flight propeller, and the subsequent 12 entries in the engine logbook are based on that representation.[266] Therefore, at issue here is the veracity of respondent's representations that he test-ran the engine using an airframe. Upon review of the record, we find no reason to overturn the law judge's decision that these representations were false.

First, we agree with the law judge's conclusion that there is no evidence respondent test-ran the engine in the airframe. In arriving at this conclusion, the law judge made proper credibility determinations, finding that Mr. Distad's testimony was credible and respondent's was not.[267] The law judge's credibility findings must be explicitly based on the factual findings in the record, and we will not overturn such findings unless they are arbitrary and capricious.[268]

---

[264] *See* Exh. A-16 at 1-3.

[265] *See* Exh. A-1 at 4.

[266] *See id.* at 4-8; Tr. at 2403-06.

[267] *See* Oral Initial Decision at 2744-48.

[268] *Dillmon v. NTSB*, 588 F.3d 1085, 1094 (D.C. Cir. 2009); *Administrator v. Reynolds*, NTSB Order No. EA-5641 at 8 (2012); *Porco*, NTSB Order No. EA-5591 at 20-21.

Respondent argues that the law judge should have given less weight to Mr. Distad's testimony because he was evasive and biased against respondent.[269] However, the law judge provided sufficient basis for rejecting these arguments, explaining that Mr. Distad gave detailed and understandable explanations of his answers and had no reason for bias against respondent because Mr. Distad was never under any investigation.[270] The law judge also did not err when he found incredible respondent's claim that Mr. Distad took the records of the test runs. The law judge stated that Mr. Distad appeared genuinely surprised by the accusation, and respondent did not blame Mr. Distad until questioned by the law judge regarding the whereabouts of these records.[271] Respondent also argues that the law judge failed to consider respondent's potential emotional distress and physical pain he may have experienced during the hearing due to the threat of revocation and the injuries he sustained in the August 2014 accident.[272] However, respondent did not assert at the hearing that his testimony was being affected by any alleged emotional distress or physical pain; respondent merely postulates on appeal that he may have been suffering from them. Overall, the law judge provided an extensive and detailed analysis of respondent's and Mr. Distad's testimonies at the hearing and the evidence in the case.[273] Because

---

[269] *See* Appeal Br. at 18-20.

[270] *See* Oral Initial Decision at 2744-45.

[271] *See id.* at 2744-46. Respondent also argues that the law judge should have addressed Mr. Distad's failure to list in his April 2015 resignation letter the poor work Mr. Distad claims respondent performed as a mechanic. *See* Appeal Br. at 20. We do not find a reversible error here because we previously held that we will not withhold deference to a law judge's credibility finding simply because other evidence in the record could have been given greater weight. *See Administrator v. Swaters,* NTSB Order No. EA-5400 at n.8 (2008), citing *Administrator v. Crocker*, NTSB Order No. EA-4565 at 6 (1997); *Administrator v. Klock*, 6 NTSB 1530, 1531 (1989).

[272] Appeal Br. at 17, 19.

[273] *See* Oral Initial Decision at 2733-41, 2749-52.

the law judge's credibility determinations are rooted in the facts, they are not arbitrary or capricious.[274]

Second, the law judge's conclusion that the 13 engine logbook entries dated from June 7, 2011, through June 14, 2014, are false is consistent with the available evidence. While respondent certified in the June 7th engine logbook entry that he had performed the ground runs, he did not certify that he had performed the flight runs, which was necessary under the Service Bulletin to consider the engine overhauled and having zero TSOH.[275] Respondent did not offer an explanation at the hearing or on appeal why he recorded performing only half the test runs for the engine, but testified that he followed Mr. Distad's instructions for how to record the engine logbook entries.[276] Here, too, the law judge properly concluded that the engine logbook entries were not directed by Mr. Distad, but were made by respondent.[277] In drawing this conclusion, the law judge cited respondent's implausible testimony about respondent's helplessness in conducting and documenting the overhaul process and his absolute reliance on Mr. Distad's advice throughout the process, despite respondent's great experience as a mechanic and a pilot and his disagreement with Mr. Distad on maintenance issues.[278] The law judge also added that respondent's testimony that he followed Mr. Distad's incorrect advice just to avoid searching for a new IA undercut respondent's credibility because it suggested respondent was willing to falsify the maintenance records for the sake of expediency.[279] Equally implausible is respondent's

---

[274] *Porco*, NTSB Order No. EA-5591 at 13-20.

[275] *See* Exh. A-1 at 4.

[276] *See* Tr. at 2419, 2527.

[277] *See* Oral Initial Decision at 2748.

[278] *See id.* at 2747-51.

[279] *See id.* at 2752.

purported deferral to Mr. Distad's directions on how to record the engine logbook entries, even though Mr. Distad did not need to sign off as an IA on any of them.[280] Here, too, we find no reason to disturb the law judge's credibility findings because they were based on the facts and thus not arbitrary or capricious.[281]

Third, we find that the law judge did not commit a reversible error when the law judge did not assess the credibility of Inspector Tupper and Mr. Walker, who offered conflicting testimonies on the issue of calibration.[282] The law judge found the calibration issue immaterial because the preponderance of the evidence and the more credible testimony by Mr. Distad showed respondent did not perform the test runs. We agree with the law judge that whether the test runs were performed properly is not a consideration when the evidence shows they were not performed at all. As discussed above, respondent did not provide any documentary evidence of the test runs, and the law judge did not err in finding credible Mr. Distad's testimony that respondent did not test-run the engine. Since the law judge rightfully deemed the issue of calibration irrelevant to the case, the law judge's decision not to assess the credibility of Inspector Tupper and Mr. Walker was also not in error.[283] Therefore, we agree with the law

---

[280] *See* Tr. at 2524, 2527.

[281] *See Porco*, NTSB Order No. EA-5591 at 13-20.

[282] *See* Oral Initial Decision at 2741-42. *See also* Tr. at 2191-93, 2216-17, 2252-54, 2261-63, 2274-77, 2317-22, 2334-37, 2356.

[283] Even if the law judge found respondent credible, we note that the record demonstrates respondent did not complete the overhaul in accordance with the Service Bulletin because the instruments were not calibrated in compliance with the FARs. The FARs prohibit a certificated mechanic with an A&P rating from performing "major repairs and major alterations," which the regulations define as "calibration and repair of instruments." *See* 14 C.F.R. §§ 65.81, 65.85, 65.87; 14 C.F.R. Appendix A to Part 43, ¶ (b)(4)(i). The regulations place "calibration and repair of instruments" within the purview of certificated repair stations and state that the repair stations' equipment must itself be calibrated to a standard acceptable to the FAA. *See* 14 C.F.R. §§ 145.109(b), 145.201(c)(2), 145.211(c)(1)(viii). Consistent with these regulations, we previously found no merit in a contention that a mechanic may calibrate an instrument without sending it to

judge that respondent's June 7, 2011, entry stating the engine had been overhauled and had zero TSOH and the subsequent 12 entries based on that TSOH are false.

B. Knowledge of the Falsity

The third prong of the *Hart v. McLucas* test requires respondent to have known the representations were false when he made them. Direct evidence of actual knowledge is not required to prove a case of intentional falsification, and the element of knowledge may be inferred from circumstantial evidence.[284] Where circumstantial evidence is relied upon to demonstrate knowledge of falsity, it must be "so compelling that no other determination is reasonably possible."[285]

We find that there is compelling circumstantial evidence that respondent knew his logbook entries were false. Respondent argues that the only evidence the Administrator presented of respondent's knowledge of falsity is Mr. Distad's testimony, which respondent maintains does not meet the circumstantial evidence threshold, and that respondent provided a rational alternative to Mr. Distad's testimony.[286] As discussed above, we have no reason to overturn the law judge credibility evaluations of respondent's and Mr. Distad's testimonies as they are not arbitrary or capricious but based on the facts in the record.

---

a certificated repair station. *See Administrator v. Troxel*, NTSB Order No. EA-2739, 6 N.TS.B. 366, 369 (1988). Respondent concedes he did not send the Navion's instruments to a repair station; he did not provide any receipts of the new certified gauges he allegedly used; and the improvised water manometer consisting of a tube and cardboard does not meet the requirements of the regulations. *See* Tr. at 1771-72, 2404-05, 2409-13, 2484-85; Exh. R-W. Thus, we find respondent did not overhaul the engine pursuant to the Service Bulletin.

[284] *Olsen v. NTSB,* 13 F.3rd 471, 475 (9th Cir. 1994); *Erickson v. NTSB,* 758 F.2d 285, 288 (8th Cir. 1985).

[285] *Administrator v. Hart*, NTSB Order No. EA-950, 3 NTSB 24, 26 (1977).

[286] Appeal Br. at 21-22.

Respondent recorded completing only half the required test-runs and provided no evidence of Mr. Distad's influence over either the test runs or the engine logbook entries. There is also no evidence Mr. Distad had any reason to exert such influence: he did not serve as the Director of Maintenance for Kirst Aviation until a year after respondent made the overhaul entry and was not required as an IA to oversee the test runs or sign off on respondent's entries. Respondent essentially argues that he faces the loss of his mechanic certificates, something he spent years and much effort to earn, because of Mr. Distad's poor direction on how to test-run the engine and record the entries in the engine logbook. Had respondent truly relied on Mr. Distad's direction, the only reasonable argument for him to make at the hearing and on appeal would be that such reliance was mistaken. Instead, respondent asserts that, despite Mr. Distad's ill-advised direction, he nevertheless properly test-ran the engine for the overhaul and properly recorded the entries in the logbook. Coupled with our deference to the law judge's credibility findings, such contradicting arguments warrant the conclusion that respondent knowingly falsified the June 7, 2011, entry regarding overhaul of the engine and the subsequent 12 entries dated through June 14, 2014. Thus, we have no basis to overturn the law judge's conclusion that respondent knew his engine logbook entries dated from June 7, 2011, through June 14, 2014, were false.

ACCORDINGLY, IT IS ORDERED THAT:

1. Respondent's appeal is denied;

2. The law judge's oral initial decision is affirmed; and

3. The Administrator's revocation of respondent's airman mechanic certificate with airframe and powerplant ratings and inspection authorization is affirmed.

HOMENDY, Chair; LANDSBERG, Vice Chairman; GRAHAM

and CHAPMAN, Members of the Board, concurred in the above opinion and order.

UNITED STATES OF AMERICA
NATIONAL TRANSPORTATION SAFETY BOARD
OFFICE OF ADMINISTRATIVE LAW JUDGES

MICHAEL P. HUERTA, ADMINISTRATOR, FEDERAL AVIATION ADMINISTRATION Complainant, v. FOREST M. KIRST, Respondent.	Docket No. SE-30108

409 L'Enfant Plaza, S.W.
Washington, D.C.

Friday,
August 5, 2016

The above-entitled matter came on for hearing, pursuant to notice, at 1:00 p.m.

BEFORE:

THE HONORABLE ALFONSO J. MONTAÑO,
Chief Administrative Law Judge

APPEARANCES:

On Behalf of the Complainant:

GLENN H. BROWN, ESQ.
FAA Enforcement Division, Western Region
222 West 7th Avenue
Suite 14
Anchorage, Alaska 99513
907-271-5271 (phone)
907-271-2800 (fax)
glenn.brown@faa.gov

On Behalf of the Respondent:

BRENT R. COLE, ESQ.
of: The Law Office of Brent R. Cole, PC
821 N Street
Suite 208
Anchorage, Alaska 99501
907-277-8001 (phone)
907-277-8002 (fax)
info@akcolelaw.com

INITIAL ORAL DECISION AND ORDER

ADMIN. JUDGE MONTAÑO: This is a proceeding under the provisions of 49 USC Section 44709, formerly Section 609 of the Federal Aviation Act and the provisions of the Rules of Practice in Air Safety Proceedings of the National Transportation Safety Board. This matter has been heard before me as the Administrative Law Judge assigned to this case, and as provided by the Board's rules, I have elected to issue an oral initial decision in this matter. Pursuant to notice, the matter came on for trial on July the 11th through the 15th, 2016, in Anchorage, Alaska.

The Administrator was represented by two of his staff counsel, Mr. Glenn Brown, Esq. of the Western Team, Federal Aviation Administration, and Ms. Lauren Hoyson of the Great Lakes Office of the Federal Aviation Administration. The Respondent was represented by Mr. Brent Cole, Esq.

My decision for the Board is based upon the pleadings filed in this case and the evidence offered and received during the course of these proceedings. The Respondent appealed the Administrator's order of revocation, which was originally filed as a non-emergency case, on March 24th, 2015. The Administrator filed this complaint in the case and the Respondent subsequently filed

his answer to the complaint.

On December 11th, 2015, the Administrator filed an amended order of revocation and declaration of emergency in this matter. The Administrator asserted in its filings that at the time the Administrator filed a non-emergency order in March of 2015, the Respondent was not able to exercise the privileges of his mechanic's certificate due to injuries sustained in the aircraft accident. The Administrator further asserted that because the Respondent was not able to exercise the privileges of his mechanic's certificate, the Administrator determined that the public interest in air safety did not require that the Respondent's certificate be revoked on an emergency basis. However, the Administrator asserted that he subsequently learned that the Respondent was able to exercise the privileges of his mechanic's certificate, which prompted the Administrator to file the amended order of revocation and declaration of emergency.

The Respondent filed an unsuccessful challenge to the emergency nature of the revocation in this case, and the Respondent subsequently timely filed an answer to the emergency order of revocation which included affirmative defenses. The emergency nature of these proceedings was waived by the Respondent and a hearing in this matter was set for February 16 of 2016 before Judge Geraghty. Judge

Geraghty suddenly and unexpectedly passed away in February and the case was subsequently assigned to me.

During preliminary proceedings, the Administrator withdrew some of his initial allegations and filed a second amended order of revocation and declaration of emergency on April 13th, 2016. The second amended order of revocation and the declaration of emergency was filed as the Administrator's complaint. Mr. Kirst filed an answer to the second amended order of revocation and declaration of emergency.

The hearing was initially scheduled along with its companion case for the week of April 25th through April 29th of 2016. However, the hearing on the first matter consumed the entire week, and therefore this case had to be rescheduled.

The Administrator alleges that the Respondent violated the following Federal Aviation Regulations in this matter. The Administrator argues that the Respondent violated 14 CFR Section 43.12(a)(1) in that the Respondent was alleged to make a fraudulent or intentionally false entry in a record or a report that is required to be made, kept, or used to show compliance with the requirements of Part 43 of the Federal Aviation Regulations.

As to this violation, the Board has adhered to a three-prong standard to prove a falsification claim.

The Administrator must prove by a preponderance of reliable, probative, and credible evidence that a pilot, one, made a false representation, two, that false representation was in reference to a material fact, and three, that false representation was made with knowledge of the falsity of that fact.

The three-part test derives from the case of Hart v. McLucas which is at 535 F2d pages 516 and 519. That's a 9th Circuit case that was issued in 1976. The Board has held that a statement is false concerning material fact under the standard if the alleged false fact could influence the Administrator's decision concerning the certificate or compliance with the regulations. The Board has also held that the three-prong test can be proven by circumstantial evidence, and most often it is proven through circumstantial evidence.

The Administrator also alleges that the Respondent violated 14 CFR Section 43.15(a)(1) and that he is alleged to have performed an inspection required under Part 91, 125, or 135 of the Federal Aviation Regulations and failed to determine whether the aircraft or portions thereof under inspection met all applicable airworthiness requirements.

The parties were afforded a full opportunity to offer evidence, to call, examine, and cross-examine

witnesses and make arguments in support of their respective positions. I will not discuss all of the evidence in detail. I have, however, considered all the evidence, both oral and documentary, in this case. That which I do not specifically mention is viewed by me as being corroborative or is not materially affecting the outcome of this decision. I will talk about the agreements that the parties have made. In his answer to the Administrator's complaint, the Respondent admitted Paragraphs 1, 2, 6, 7, 8, 13, 14, and 15. As Respondent has admitted those allegations, they are deemed to be as established for the purposes of this decision. The Respondent has denied Paragraphs 3, 4, 5, 9, 10, 11, and Paragraph 12. He also denies Paragraphs 16 and 17.

As to the exhibits that were admitted into this case, the Administrator moved the admission of the following exhibits, A1, A8, A10, A11, A13, A14, Exhibit A16, A17, A18, A19, A20, A21, and A22. Those exhibits were admitted into evidence without objection from the Respondent.

The Respondent moved for the admission of the following exhibits which are listed in the order that they were presented at trial. Exhibit R-Y, Exhibit R-B, Exhibit R-C, Exhibit R-D, Exhibit R-F, Exhibit R-G, Exhibit R-H, Exhibit R-I, Exhibit R-L, Exhibit R-M, Exhibit R-N, Exhibit R-S, Exhibit R small letter mm, Exhibit R-Z,

Exhibit R small letter rr, Exhibit R small letter qq, Exhibit R small letter nn, Exhibit R-A, Exhibit R-R, Exhibit R-U, Exhibit R-T, Exhibit R small letter dd, Exhibit R-W, Exhibit R small letter pp, Exhibit R-E, Exhibit R small letter ss. These exhibits were entered into evidence without objection from the Administrator.

As part of this decision, I will now summarize the testimony in this case and then apply it to the issues that I must decide. The Administrator presented the following testimony.

The Administrator read into the record the deposition of Mr. Kirst. In that deposition, Mr. Kirst testified that except for the entries made by Mr. Destadd and by Mr. Daniels, he made all other log book entries in the engine log book in this case. He testified that SMOH stands for time since major overhaul. TSOH stands for time since overhaul.

He testified that he made the entries in the log book from January 6, 2011 to June 14, 2014 which documented the hours since overhaul as indicated in the complaint. He testified he does not dispute that he made those entries. Mr. Kirst testified he believed that when he made the entry of zero time since overhaul in the engine log book, he believed it was correct because all that had been done was what had been required by the overhaul manual, and that was

all completed on June 7th, 2011. When we're referencing the overhaul manual, that refers to Teledyne Continental Motors Overhaul Manual for models E-165, E-185, and E-225.

Mr. Kirst agreed that Paragraph 3 of the complaint is correct as long as any reference to the service bulletin be stricken from it. He was asked in that deposition whether new or rebuilt tappets had been installed and he answered that they had not been installed.

When asked if new or rebuilt magnetos had been installed on the engine, Mr. Kirst answered that they had not. He testified that he took the magnetos that were in his other engine that had to be replaced because of a prop strike. He testified that he did not install the new magnetos in the new engine.

Mr. Kirst agreed that Paragraph 4 of the complaint indicated that the magnetic testing of the crankshaft was required. As to a test club being necessary to test an engine, Mr. Kirst testified that he did not believe that a test club was necessary, but that test could be accomplished with a propeller.

Mr. Kirst agreed that a water manometer, a cylinder head temperature gauge and calibrated test instruments were required. He testified that he had a water manometer which had been calibrated by Mr. Destad. This is what he indicated during his deposition.

Mr. Kirst also testified in that deposition that thermocouple and head temperature gauge tests were conducted from the instrument panel of the aircraft. Mr. Kirst testified that he knew the crankshaft had been magnetically tested by a company in San Antonio called ECI because the company, ECI, had provided a yellow tag.

Mr. Kirst testified he received the yellow tag from Mr. Daniels when he bought the engine from him. Mr. Kirst testified that the yellow tag was not with the engine records in the fall of 2011. He testified that he did not know why the yellow tag was not with the records at that time.

During the deposition, Mr. Kirst was shown the yellow tag and he agreed that it did not specifically state that the crankshaft had been magnetically tested. When he was questioned about the log book entry signed by Mr. Daniels, Mr. Kirst testified that he had started to make an entry in the new engine log book, but Mr. Fred Destad had told him that Mr. Daniels had to make the engine log entry.

Mr. Kirst testified that he installed the engine he purchased from Mr. Daniels in his aircraft and tested it in accordance with the overhaul manual, and Mr. Destad helped him install the engine and perform the tests. He did not have his IA certificate at the time when he

installed the engine, and he was still signing documents as an airframe and power plant mechanic. When Mr. Kirst was asked if Mr. Destad had called Mark Smith of the FAA regarding the proper record entry for the overhauled engine, Mr. Kirst testified that that conversation never took place.

Mr. Kirst also testified during his deposition that he conducted an annual inspection of the aircraft in this case in June of 2014. He testified he checked engine screens, he took the oil filter out and he cut it open and he inspected the oil filter. He also inspected the hydraulic oil filter as well.

He testified that he had seen the engine tear down report prepared by Mr. Kurt Gibson from Continental Motors. Mr. Kirst testified that he believed the loss of the engine propeller had caused the damage and metal fragments that were found in the oil filter.

Mr. Kirst testified he trusted Mr. Daniels regarding the engine because he had asked others about him. He testified that the other individuals he had asked about Mr. Daniels' reputation all indicated that Mr. Daniels could be trusted.

When Mr. Kirst was asked about the service tag in Exhibit 5, he testified that the magnetic particle testing had indeed been done. Exhibit 5 is the deposition

exhibit. He testified that ECI was the most prestigious company in the country when it came to crankshaft inspection. He testified that Mr. Destad made entries to the log book for May 1st and June 7th, and Mr. Kirst also testified that Mr. Destad said that Mr. Daniels had represented that the engine had been overhauled.

On cross-examination, Mr. Kirst testified he became an IA on June 13th, 2011 and became an A&P mechanic in 2010. He worked as an apprentice in Canada and was credentialed as an automotive engine and diesel engine mechanic. He discussed his experience as an instructor teaching mechanics and his experience as a mechanic.

Mr. Kirst testified that he is required to follow overhaul manuals in automotive work and Continental requires him to follow the overhaul manual when an aircraft is overhauled. He testified that the metal particles in an oil filter means that the engine is coming apart. He testified if he saw that in an aircraft, he would instant-aneously ground the aircraft.

Mr. Kirst testified that he took apart the oil filter when he performed the annual inspection in his Navion before the accident. He also testified that he took apart the oil filter and did not find any metal particles in it. Mr. Kirst testified that the post-accident tear down report relative to particles in the oil filter is

false. He testified he had cut the oil filter open like an accordion and again, he did not find any metal or any other type of foreign particle.

Mr. Kirst testified that at that time he could not sign off on a return to service until he became an IA. He would ask Mr. Destad to sign off on any annual inspections or other work that he had done where an IA signature was required.

Mr. Kirst testified that Mr. Destad was his mentor, and that he had recommended Mr. Kirst to take the A&P examination. He also testified that Mr. Destad had recommended him for his inspection authority certification. He testified that prior to the accident he had worked with Mr. Destad every day.

Mr. Kirst testified that prior to June 7th, 2011, his aircraft records were kept in Mr. Destad's shop, or his hangar. In response to the question as to what role Mr. Destad played in the overhaul of the engine in Mr. Kirst's aircraft, Mr. Kirst testified that Mr. Destad told him what to do. He testified that he assisted Mr. Destadd because Mr. Destad was in charge. He testified he had to do what Mr. Destad asked him to do or he would be grounded.

When I refer to the overhaul of the engine, I'm referring to the completion of the overhaul of the engine which Mr. Kirst had purchased from Mr. Daniels and placed

into his aircraft, his Navion aircraft. Again, Mr. Kirst had testified that he started to make an entry in the engine log book, but before he could complete it, Mr. Destad told him to stop. After that, Mr. Kirst testified that Mr. Destad dictated what he, Mr. Kirst, should write into the engine look book at lines 4, 5, 6, 7, 9, and 10.

Mr. Kirst testified that ECI, the company in San Antonio, is the who's who in repair stations, that of course meaning that it was highly regarded. It was the highest quality shop according to Mr. Kirst.

Mr. Kirst also testified that Alaska Aircraft Engines, another repair station, is good and that he would refer people to them for repairs. He testified that he is familiar with a company by the name of BJ Cylinders in Alaska.

And he testified that he did not purchase new magnetos to put in the engine he bought from Mr. Daniels because the magnetos on the previous engine had only 30 hours on them, and Mr. Destad had told him to take those magnetos from the old engine and put them into the new engine that he had purchased from Mr. Daniels.

Mr. Kirst testified that Mr. Destad was part of everything done to his airplane. Mr. Destad was the leader, according to Mr. Kirst. Mr. Destad had researched service bulletins, Mr. Destad had checked screens and

filters to check for metal particles as well. Mr. Kirst testified at his deposition that Mr. Destad was around when he did oil changes, and that he would show Mr. Destad what he found when he inspected the oil filters.

Mr. Kirst testified he inspected Mr. Destad's work and that Mr. Destad inspected his work while they worked together in the same hangar. He testified that Mr. Destad conducted a 100-hour inspection on his aircraft, and he testified that Mr. Destad kept all his, Mr. Kirst's, records relative to his aircraft after the accident.

Mr. Kirst testified that he was pretty sure that Mr. Destad had seen him cut open the oil filter on June 14th, 2014 during his annual inspection of his aircraft. Mr. Kirst indicated that he had never done a complete overhaul on a Continental engine.

That completed the testimony of Mr. Kirst on his deposition.

The Respondent called as a witness, out of order, Mr. Richard Johns. Mr. Johns was a witness sub-poenaed by the Respondent. Mr. Richard Johns testified by telephone from San Antonio, Texas. His personal attorney sat in with him during the testimony that was recorded during the trial. Mr. Johns testified that he is a warranty analyst, or had been a warranty analyst with ECI. He testified that ECI stands for Engine Components

International. He testified that ECI was purchased by Continental Motors and that Mr. Johns has worked for Continental Motors for approximately five years.

Mr. Johns testified that the yellow tag, specifically in this case, indicated that the crankshaft in issue had been magnetically inspected. He indicated that if the crankshaft had not been magnetically inspected it would indicate n/a next to it on the yellow tag. He indicated that there was no indication of an n/a next to magnetic inspection.

Mr. Johns testified that it was the practice of ECI to inspect and magnetically inspect all crankshafts whenever one came in for work. The same stamp on the yellow tag that appears in this case was used for all other crankshaft yellow tags.

Mr. Johns testified that the process was that the customer would call in and ask to have work done. The crankshaft or other part came in, it was inspected, and it was magnetically inspected. If additional work other than what was requested by the customer had to be done, the customer would be notified for his consent to complete that work. Mr. Johns testified that the yellow tag is filled out by the repair station and attached to the crankshaft or part, and it would then be sent back to the customer.

On cross-examination, Mr. Johns testified that

if an individual did not want a magnetic inspection performed on a crankshaft, that could be done. However, the stamp on the yellow tag would indicate an n/a next to the line which indicates magnetic inspection if that were indeed the case where a magnetic inspection was specifically asked to be excluded or asked not to be done by a customer.

Mr. Johns testified that it is rare that a person would want only to have an ultrasound examination performed on a crankshaft and not a magnetic inspection at the same time. Mr. Johns testified that a magnetic inspection, again, was always performed on any crankshaft that came into ECI.

Mr. Johns testified that he had provided this information to an FAA inspector by the name of Mr. Charlestrom. And he had also provided this information to Mr. Cole and Mr. Kirst.

On cross-examination, Mr. Johns testified that he did not work for ECI in 2002, and did not work for ECI at the time the yellow tag was prepared. He testified he spoke to an engineer who had worked there at the time the yellow tag was prepared and confirmed that the process that he, Mr. Johns, understood and had conveyed to Mr. Kirst, Mr. Cole, and Mr. Charlestrom, was the correct procedure that was conducted at that time at ECI.

He testified that he spoke to an engineer. That engineer's name was Mr. David Shear. In response to my questions, Mr. Johns testified that he spoke to Mr. Charlestrom before he spoke to the engineer, David Shear, and discussed the subject with Mr. Cole and Mr. Kirst after he had spoken to the engineer.

On redirect he stated that the engineer essentially confirmed what Mr. Johns understood the process to be relative to yellow tags and magnetic examination of crankshafts.

Mr. Johns testified that Continental Motors still addresses questions about the past work at ECI and can be reached at the number on the yellow tag even though the company had subsequently been purchased by Continental Motors. He testified that the telephone number on the yellow tag was still active and could be called with questions relative to yellow tags that were issued by ECI. I found Mr. Johns to be credible both on his direct, cross-, and redirect examination. Mr. Johns was a very reluctant witness. Arrangements were only made at the last minute and for specific times for him to testify in this hearing.

The next person to testify for the Administrator was Mr. Francis X. Daniels. Mr. Daniels testified he's currently employed as a pilot at Everett's Air Cargo. The company flies cargo to remote villages in Alaska, and has

recently started flying cargo in the lower 48 states. He testified he's a pilot with certification in single engine land aircraft. He has an instrument rating. He is certified to fly multi engine land and has an ATP certificate.

Mr. Daniels testified that he started working for Everett's Air in 1988 as an A&P mechanic and not as a pilot. Now he is a pilot and he is employed as a first officer for Everett's Air.

He testified that he knows Forest Kirst and that he knew Mr. Kirst had an Avion Aircraft on the east ramp of the airport where he worked. He also did a recurrency class with Mr. Kirst. Mr. Kirst is a flight instructor.

Mr. Daniels testified he's always wanted to own an Avion aircraft and he purchased an Avion engine in the hopes that one day he would be able to buy an Avion airframe and put the engine he purchased into it. Mr. Daniels testified he purchased the engine on Trade-A-Plane and he overhauled it. When asked what he meant by overhaul he testified he overhauled the engine under the technical requirements of the Federal Aviation Regulations.

He testified he had not overhauled an engine before, and he testified that he sent various parts of the engine out to different companies so that he could determine if the parts were airworthy. He testified that he sent the engine case halves to DivCo for testing because

DivCo is considered expert in this area. He sent the crankshaft to ECI in San Antonio because they are experts in the area of crankshaft inspection.

He testified he bought and reviewed service bulletins and the overhaul manual for the engine that he had purchased. He identified Exhibit R-Y as the Continental Overhaul Manual he bought in order to work on the engine he had purchased.

He testified he disassembled and inspected the engine in accordance with the manual. He testified that Exhibit R-B is documentation from BJ Cylinders which indicates that he purchased new cylinders from BJ Cylinders because the original cylinders that came with the engine did not pass inspection.

Mr. Daniels identified Exhibit R-C as documentation from Alaska Aircraft to which he sent connecting rods, starter gear, and accessories for inspection. He also identified Exhibit R-D as the document from DivCo relative to the crank case inspection and overhaul. R-D Page Z3 is the yellow tag which indicates the part was airworthy after completion of the overhaul.

Mr. Daniels testified that Exhibit R-E was a six-page document from ECI which was the crankshaft overhaul company that overhauled the crankshaft. He testified that he sent the crankshaft to ECI to make sure

that it was airworthy. Mr. Daniels testified that ECI was the best in crankshaft overhaul in the country. He testified that magnetic inspection was a requirement under the overhaul manual, and he testified he could not recall specifically what he asked ECI to do relative to the crankshaft he sent to them, but he indicated in his testimony that he wanted a complete overhaul done of the crankshaft to make sure it was airworthy so that he could reinstall it in the engine. Mr. Daniels agreed that Page 2 of the exhibit was most important because it was the document that returned the crankshaft to service. Mr. Daniels identified Exhibit R-F as documentation which accurately depicted the parts he purchased from Aviall, a company that specialized in aviation parts.

He identified Exhibit R-G as the parts he sent to El Reno for inspection. Those parts were lifters, bush rods, tappets, tappet bodies. The document also indicates that he bought a brand new cam shaft from El Reno.

Mr. Daniels identified Exhibit R-H as documentation of the overhaul of the rear accessory case. R-L is documentation that he purchased new bearing set and gaskets for the aircraft. He testified that R-9 was the documentation which indicated that he had purchased applicable service bulletins for the overhaul of the engine in issue in this case.

And Mr. Daniels testified that R-S was a photo of a plastic container which he testified includedg all documentation, yellow tags, and receipts relative to the engine overhaul in this case.

He testified he had spoken to Inspector Major and the FAA attorney, but he never asked if he kept the overhaul documents together. He testified that he did tell them that he had the yellow tags for all of the parts. He testified that when he reassembled the engine he spoke to and obtained advice from Alaska Aircraft.

He testified he did most of the work himself and felt good about it. He testified he felt the engine was airworthy after he completed his work on it. Mr. Daniels testified that he had to sell the engine when he started to build a house in Anchorage.

He testified that when he sold the engine, it needed magnetos, an exhaust system, starter motors, gears, starter motor gears, and the attached rod. He testified that these were considered accessories to the engine.

Mr. Daniels testified that he brought the engine to Arctic Aviation to turn it over to Mr. Kirst. He wanted to be involved in the installation of the engine, but his work schedule would not allow it.

He testified that when he delivered the engine to Mr. Kirst, Mr. Destad and Mr. Kirst were present and that

he was asked to make an entry in the log book to show the engine was airworthy and was in compliance with the overhaul manual. He was asked if anyone had called an FAA inspector to ask for instruction on how to make the log book entry. He testified he did not recall that happening, nor could he recall the name of Mark Smith who was an FAA inspector.

Mr. Daniels testified that he was not involved in the follow-up testing of the engine. When asked if a test club was required for testing the engine, he indicated that testing could be done with a propeller instead of a wood test club.

Mr. Daniels testified that he took a test ride in the aircraft the summer of 2014 and he listened to the engine, and he, as an A&P mechanic, felt that it was running properly and that the engine was airworthy. Mr. Daniels testified that he later learned that the aircraft had been in an accident, and he was contacted by the FAA. He testified he was concerned what had caused the accident. Mr. Daniels testified he was contacted by Inspector Major and was asked to come to the FAA office for questioning.

He testified he did receive a letter of investigation from the FAA. He testified that the FAA attorney, whose name was Mr. Black, told him that the crankshaft had not been magnetically tested. Mr. Black had, according to

Mr. Daniels, told him that he was not in compliance with the regulations. Mr. Daniels responded that he had been in compliance.

Mr. Daniels testified that this was a heated discussion with Mr. Black and he was adamant that the crankshaft had indeed been overhauled and had been magnetically inspected. He testified at the time he had that conversation that the inspector had a copy of the yellow tag. Mr. Daniels testified that he had overhauled the engine correctly and that he was trying to defend his honor.

On cross-examination, he was asked if, during questioning by the FAA, he had been shown a copy of the yellow tag from ECI. He reviewed the yellow tag and he said he was not sure if he was shown that yellow tag. In fact, he was shown the receipts that were attached to the yellow tag.

Mr. Daniels testified that he became an A&P in 1984 and had worked for Everett's right after A&P school, and he has worked as an A&P from 1994 to 1998. Mr. Daniels agreed that Exhibit R-E Page 2 indicated that the work order was 8858501 but he testified he did not see any of that documentation from the work order.

He testified he lost money on the sale of his engine. He put more money into it than he was able to recover when he sold the engine to Mr. Kirst. Mr. Daniels

agreed that the entry he made in the engine log book in this case did not indicate that he had changed the cylinders in it as he indicated in his direct examination.

Mr. Daniels testified he could not recollect a specific conversation with ECI regarding the crankshaft in this case. And Mr. Daniels again testified that no one told him what to write in the log book entry regarding the overhaul of the engine. He wrote that information on his own.

Mr. Daniels testified after reviewing Exhibit R-Q, he might have talked to Fred Destad about the entry in the log book. Mr. Daniels maintained that he did overhaul the engine but agreed that he did not test the engine, which is required by the regulations.

Mr. Daniels testified that Mr. Kirst had wanted him to indicate that the engine had been overhauled when he made his entry in the log book. In response to my questions, Mr. Daniels testified that he believed he had overhauled the engine. He testified he communicated that belief to Mr. Kirst and that Mr. Kirst acknowledged that he understood the engine had been overhauled. When I asked him about the entry in the log book which indicated that the time since overhaul was zero, he indicated he did not agree with that entry. When that question was asked by Mr. Cole, and he was shown that total time for the airframe and

engine had to be included, then he agreed that the time since overhaul should indicate zero hours since the overhaul.

On recross, after my questions, Mr. Daniels agreed with the Administrator's counsel that A-1, the log book entry, did not specifically indicate that the engine had been overhauled. He testified that he did tell Mr. Kirst that he had not conducted a test run on the engine that was still required to be done.

In response to Mr. Cole's questions, Mr. Daniels testified that he did not ask ECI to only perform an ultrasound test of the aircraft, of the crankshaft. He testified he expected ECI to do everything that was required for a complete crankshaft overhaul.

I found Mr. Daniels to be generally credible. He seemed a bit confused relative to some of the questions, however he did not appear to be evasive or non-responsive. He answered questions once they were rephrased and he understood them.

Jason Major testified next in the sequence. Inspector Major is employed by the FAA as an Aviation Safety Inspector. Prior to working with the FAA, he was in the Air Force for 22 years working on various types of aircraft such as the F-16, F-10, and C-130. He testified he has the military equivalent of an IA rating.

After leaving the Air Force in January of 2011, he began working for the FAA in September of 2011. His work with the FAA entails working with certificate management teams, normal surveillance, manual changes and accident investigation. He has taken classes in investigation of aircraft accidents, rotorcraft accident investigations, experimental aircraft investigation, and human factors investigations.

He testified that he knows Mr. Kirst because he was the primary avionics inspector for Mr. Kirst's business for a period of about three years. Inspector Major testified that he was present during the tear down of Mr. Kirst's engine in this case. It was torn down as part of the investigation of the accident. The tear down took place on August 1st, 2014. Inspector Major was present, as was Mr. Destad, on behalf of Mr. Kirst, and Mr. Gibson from Continental Motors was also present during the engine tear down.

He testified that Mr. Destad and Mr. Gibson performed the tear down and he took notes. He testified that the tear down of the engine was documented through pictures. Inspector Major testified that the oil filter was examined to find out if it contained metal particles because that information would provide information to the investigator as to what was going on inside the engine at

the time of the accident. Inspector Major testified that Mr. Destad cut the oil filter in half, took out the element and opened it up like an accordion. He then examined the filter. He reviewed Exhibit 11 and testified that the photographs were of metal particles in the oil filter element. He testified that Mr. Destad cut up the filter elements into smaller pieces and put it in a solvent to remove the metal particles from the filter element. He then strained the solvent through a paint strainer.

Inspector Major testified that either he or Mr. Gibson took photographs. He testified that the pieces of metal on the filter in the photo was not to scale. He testified that he was confident that the material particles were indeed metal.

Inspector Major also testified that the other pieces of metal were found in the oil pump and crank case. He testified that the oil pump was scored. He testified when the oil pump was examined, it had a number of lines which indicated that metal had gone through it. He testified that when the metal pieces were removed from the oil pump, it amounted to a puddle of metal the size of a quarter. He testified that the team also found chunks of metal in the crank case.

He testified that number five thrust bearing was damaged and the back side of the bearing had been ground

down. He also testified that the crankshaft was moving forward in the crank case and the metal was breaking off. Inspector Major testified that he believed the metal particles came from the movement of the crankshaft. He testified it was grinding away metal fragments that appeared in the oil pump and oil filter. He testified the crankshaft was pulling itself forward eating itself up from the inside out.

Inspector Major testified that he was involved in the phone interview with Mr. Daniels. He testified that he had no discussions with Mr. Daniels during the break in the interview. Inspector Major was asked about the magnetic examination of the crankshaft in this case.

He testified that he obtained various receipts from Mr. Destad for parts and the examination of the crank case. He testified that he received the receipt which was part of Exhibit R-E Pages 5 and 6. He said his review indicated that R-E Pages R-E 5 indicated that the crankshaft in this case had undergone an ultrasonic inspection.

He indicated that he included these pages as items of proof in his report of investigation. Inspector Major subsequently reviewed the yellow tag that was obtained in this matter, but he testified that the yellow tag did not change his opinion as to whether the crankshaft had been magnetically examined.

Inspector Major did not believe that the crankshaft in this case had been magnetically tested or examined. Inspector Major testified that the yellow tag did not include a part number or serial number of the crankshaft but rather indicated "L-45." He testified the work orders for the yellow tag indicated an ultrasonic inspection was done and did not indicate that a magnetic investigation or magnetic testing had been done on the crankshaft.

Inspector Major also testified that the flange was inspected, the flange on the crankshaft had been inspected and he testified that the crankshaft in this case does not have a flange. Therefore he questioned the yellow tag since the crankshaft in this case does not have a flange and the yellow tag indicated that the flange had been inspected. Inspector Major testified that a magnetic investigation is required if an engine is overhauled and if the crankshaft is going to be placed in the same engine or placed in the aircraft.

On cross-examination, Inspector Major testified that he has not overhauled an aircraft engine. He has never sent out a crankshaft to be overhauled. He does not own an aircraft. He testified he has not worked as an aircraft mechanic. Inspector Major testified that he has been involved in about a dozen engine examinations. He testified that the engine tear down on October 1st was the

first time he had been involved in an engine tear down to that degree or to that depth. Inspector Major testified that he has never removed cylinders, oil pumps, or signed off as a mechanic. Inspector Major testified he is not an A&P mechanic nor does he have inspection authority.

Inspector Major testified he was involved in the interview with Mr. Francis Daniels and that he issued the warning letter to Mr. Daniels on October 7th, 2014. In response to questions, he agreed that he spoke to Mr. Daniels about the overhaul of the engine on November 10th or November 12th.

He testified on December 5th, 2015 he participated in preparing a sworn statement of Mr. Destad. On December 16th, 2014 he assisted in the preparation of the sworn statement of Mr. Daniels.

When Inspector Major was asked about any other notable events in his investigation, he testified he read manuals, talked to other inspectors, looked through service bulletins as part of his investigation in this case. Inspector Major testified he looked through the log books in this case, which are at Exhibit A-1, when they became available from Mr. Cole's office. Inspector Major also testified that he was also involved in a September 16, 2014 Hartzell propeller tear down, and that he was involved in the engine tear down of October of 2014.

Inspector Major was asked to review Exhibit R-Z, the engine field inspection, that was prepared by Mr. Kurt Gibson. Inspector Major testified that the FAA did not request that report. It was a joint effort between the FAA and Continental Motors.

He testified that he took off the accessories on the engine and had taken a number of pictures of the tear down. He testified that there were about 200 pictures, which were documented and provided to FAA attorneys.

Inspector Major testified that he had never cut an oil filter apart and has never seen one cut until he saw Mr. Destad do that during the engine tear down. Inspector Major testified he did not know how much metal should be in an oil filter, but he testified he did not believe metal particles in an oil filter always required overhaul.

Inspector Major testified that Lycoming has indicated that a teaspoon of metal particles in an oil filter is an acceptable level of metal particles. He testified that it was not so much the size of the metal particles that were in the oil filter in this case which was of concern, it was the fact that the metal fragments were present that made it significant.

He testified he did not know where the particles presently were located. He testified he did not weigh the particles. He testified he did not save any of the

particles, but testified that Mr. Destad did in fact save the particles. He also checked with Mr. Gibson who indicated that he had not saved any of the metal particles found in the oil filter or in the engine. Inspector Major testified that he could not describe the volume, composition, or where the particles came from, but he could only make a guess. He believed that the metal particles came from the thrust bearings. Inspector Major testified that the thrust bearing would be trashed if the propeller had come off the airplane. Only the front of the thrust bearing went out in this case, he indicated.

Inspector Major described how the oil filter was cut open again and the inside element was washed in solvent to separate the metal particles, and the solvent was drained through a paint strainer. When asked if a laboratory evaluation of the particles would have been able to tell where the particles came from, Inspector Major testified that was not necessary in this case because the tear down indicated where the particles came from. He testified that the particles appeared to come from the front bearing and the crank case and the oil pump. Inspector Major testified these findings indicated the engine had power at the time of the accident. It meant that the engine was coming apart internally at the time of the accident.

Inspector Major was asked to review Exhibit A-1. He testified that the first three lines of Page 3 did not carry any significance. It was just information and was not a violation of Federal Aviation Regulations.

As to the entry by Mr. Daniels, Inspector Major testified it appeared to be accurate. It did not indicate the engine was overhauled. He testified that the entry was not a violation, in his view, of any Federal Aviation Regulation.

Inspector Major then was asked about the difference between a yellow tag, a white tag, and a green tag on an aircraft part. He testified a green tag indicates the part is condemned, but he could not recall what a white tag represents, and he could not recall ever seeing a white tag in his experience. As to the yellow tag in this case, Inspector Major testified he could not say that the yellow tag belonged to the crankshaft in issue in this case. He indicated that the serial number is not included in the tag.

Inspector Major admitted that he did not follow up with ECI or call ECI to ask questions about the yellow tag and what examination was done of the crankshaft. Inspector Major testified that he spoke to the PMI (Principal Maintenance Inspector) that handled ECI in Texas, and that PMI had told him, Inspector Major, that ECI was sold to Teledyne Continental Motors and thereafter ECI

ceased to exist.

Again, Inspector Major testified that he did not see the yellow tag in evidence attached to the crankshaft in this case. He saw it only later when it was no longer attached to the crankshaft. When asked if he believed the yellow tag in evidence did not correspond to the crankshaft in this case, he responded that he could not say if it did or if it did not.

He testified that he did not contact ECI but spoke to the PMI for ECI in March or April of 2016. When he was asked if he kept notes of the conversation with PMI for ECI he, Inspector Major, testified that he did not.

He testified that he talked to Inspector Jim Tupper about the yellow tag, and he again testified that when he completed the investigation, he only had Page 3, 4, 5, and 6 of Exhibit R-E, which did not include the yellow tag in this case. Inspector Major testified that Mr. Daniels had told him in a telephone conversation that he had a yellow tag and he had given the yellow tag and all other tags to Mr. Kirst. Inspector Major testified he did not ask Mr. Daniels about the yellow tag for the crankshaft in this case.

He also testified he did not ask Mr. Destad about the yellow tag for the crankshaft in this case. Inspector Major testified that he spoke to Mr. Destad about

a conversation he had with Mark Smith, the FAA employee, about how to document the log book entry in this case. However, Inspector Major did not contact Mr. Smith about the conversation.

On redirect, he testified again that he did not have Pages 1 and 2, the yellow tag, when he prepared his enforcement investigative report and concluded that the crankshaft had not been magnetically inspected.

Inspector Major testified that he had sent a warning letter to Mr. Daniels which essentially said that he had done something wrong but no action was going to be taken against him. But he was informed by that letter just generally that he should not do whatever impropriety was performed again.

He testified that the warning letter is computer-generated in Oklahoma City and was not very specific. Inspector Major testified that after the tear down of the engine, the metal particles were left with Mr. Destad as he was the director of maintenance for Mr. Kirst.

Mr. James H. Tupper then testified for the Administrator. Mr. Tupper testified he is an Aviation Safety Inspector for airworthiness. He is presently assigned to the regional office but he works out of Fairbanks. He is with the tech standards branch. He reviewed the enforcement report in this case. He testified he is

an A&P mechanic and has an IA rating which he let lapse a few years ago. He testified he held the IA rating for the last 23 years.

He testified he received his A&P in 1979 and his IA in 1989. He testified he has worked in the industry in 135 operations half of the time turning wrenches and the other half of the time in a management position.

He had worked for Embry Air training pilots and maintenance crew. He testified he has experience in working in the area of automotive and farm tool repair and maintenance as well. He testified he worked for Alaska Air working on twin reciprocating engines. And he testified he was the director of maintenance for that company.

He testified he was in the Army from 1972 to 1975 and worked as a navigator operator as well as maintaining the aircraft. He testified he maintained seven Mohawk helicopters.

He testified he then worked for Arctic Circle Air as a director of maintenance. His job was to ensure airworthiness and ensure the aircraft were maintained properly. He spent many hours reviewing parts and determining if they were airworthy.

Inspector Tupper testified that he had experience in engine overhauls when he worked at Larry's Aviation as the director of maintenance. The company specializes

in servicing Lycoming 540 and Continental 520 engines. Inspector Tupper testified he oversaw the overhaul work conducted in approximately 100 to 150 engines. He testified that he has done hundreds of annual inspections, and 100-hour inspections as well. He testified that the scope and detail of the work in an annual inspection and the 100-hour inspection were essentially the same.

He testified that in 1995 he was hired by the FAA as a PMI for airworthiness. He worked in that job for three years and then was promoted to supervisory position. As a PMI he is responsible for oversight of maintenance procedures and the inspection of program records. Inspector Tupper indicated he had taken a number of classes, the latest of which involved carbon fiber in accident investigation. These investigation courses taught him how to examine accident scenes and examine accident engines to determine the cause of the crash.

He testified that the training he underwent on Mohawk helicopters was on-the-job training. He testified that he had also been a presenter in currency training for those individuals who were obtaining currency for their inspection authority certification.

The Administrator, after his testimony, asked to have Inspector Tupper qualified as an expert in aircraft overhaul and inspection, and an expert in the analysis of

wear of engine parts. Upon voir dire by Respondent's counsel, Mr. Tupper testified his work did not involve work on single engine aircraft. He testified that during his work with Alaska Airlines he did not work on single engine reciprocating aircraft engines.

He testified his work on Mohawk helicopters involved Lycoming turbo prop helicopter engines. Inspector Tupper testified he worked for Arctic Air, Arctic Circle Air, in the mid-1980s, and he worked for Warbelow for three years as a mechanic with inspection authority and as the director of maintenance, and oversaw in-house overhauls.

He testified that he worked for Larry's Flying Service for three years, and he testified Larry's had problems with the FAA and is no longer in existence. Inspector Tupper also testified on voir dire that he worked for Tannon Air for three years as an IA and that he oversaw in house overhauls. He testified the last time he participated in an overhaul was in 1980, 30 years ago.

He testified he has not worked for the FAA as a mechanic. He testified he was qualified as an expert witness 30 years ago on mechanical issues, in a case involving mechanical issues in which he was called to testify by the FAA. The case involved Minimum Equipment List and airworthiness directive issues on an aircraft fuel

pump. He testified he's not written or published any articles regarding oil filter examinations or how to determine when an engine begins to deteriorate.

Inspector Tupper testified on voir dire that he had read a number of articles on oil trend analysis over the last seven months, but he could not provide a list of those articles that he indicated that he had read. Inspector Tupper testified he has never provided testimony only based on his analysis of photographs as he is doing in this case. He testified he had reviewed a number of photos and spoke to a number of other FAA employees, but he did not speak to anyone in the industry about the subject. He testified that he spoke to Mr. Destad only briefly.

Inspector Tupper testified he did not speak to anyone at Continental Motors. He testified he did not testify as to the mass of the metal particles that were found in this case. He testified he was not sure if more than one type of metal was in the particles found in the oil filter. He testified he did not know what type of metal was in the particles. He testified he has never worked with Continental Motors or worked on a Continental motor.

Based on that voir dire, the Respondent objected to qualifying Mr. Tupper as an expert in the analysis on the wear of engine parts. Respondent did not object to

his expertise in engine overhaul and inspection. Based on the information before me I qualified Inspector Tupper as an expert in engine overhaul and inspection. I did not feel after voir dire of this witness that the Administrator had demonstrated that Mr. Tupper had an expertise in the area of analysis on the wear on engine parts, specifically single engine aircraft engines that is applicable to this case.

On direct testimony Mr. Tupper testified that the purpose of an overhaul is to keep an engine within operating limitations for air safety. When asked if entries in the record could influence the decision of the Administrator, Mr. Tupper testified that they could, relative to air worthiness, safety, and they are records required to be kept by the Administrator to determine airworthiness of an aircraft. His response to the question when asked if entries in the records could influence the decision of the Administration, Mr. Tupper testified that they could.

Mr. Tupper testified that if an engine is taken apart, cleaned and reassembled, in essence it has been overhauled and must be tested. He testified that a crankshaft in such a situation must be magnetically tested.

He testified that Exhibit R-Y lists the crankshaft as one of the parts that must be magnetically tested.

He testified that the engine must be tested with certain instruments. He testified that Exhibit 14-8 states that inaccurate gauges are worthless in engine testing after an overhaul. He testified that the service bulletin at A-16 identified a method of using the aircraft in lieu of a test cell. He testified that it is specific at Page 2, the calibration of the aircraft and engine instruments must be performed. Exhibit A-16 is a service bulletin, M89-7R1, from Teledyne Continental Motors.

Inspector Tupper testified that the calibration of instrument means that the readings must be traceable back to a national standard used to calibrate the aircraft gauges. He testified that the calibration of an instrument must be done before the engine is test run and the engine test run must be done before an engine can be correctly termed as being overhauled.

Inspector Tupper testified that the aircraft instruments must be removed from the aircraft, sent to a certified repair station for calibration, and returned with documentation indicating the instruments were certified as properly calibrated. Inspector Tupper testified that the maintenance records must reflect that this was done. Inspector Tupper testified that a test run of the aircraft on the ground is required to ensure that there are no leaks and to check the magnetos and fuel quantities.

Once the aircraft is ground tested, it must then undergo a flight test. Both the ground and flight test are specific to the service bulletin he made reference to.

Inspector Tupper testified that it is critical to have an accurate RPM instrument. He testified that this test could be done in a test cell or in an aircraft or on the wing, as he called it.

He testified that Exhibit A-16 explains what type of tests are required during the actual flight test. He testified that flight tests cannot be performed on the ground. Inspector Tupper testified that the ground and test flight takes approximately two to 2-1/2 hours. He again testified that the test flight cannot be conducted without calibrated instruments.

He then testified relative to the yellow tag in this case. Inspector Tupper testified that he had seen the yellow tag at Exhibit R-E. He testified that in his opinion the yellow tag did not prove that the crankshaft had been magnetically tested. He testified everything else listed in the yellow tag is backed up by other documents except the crankshaft magnetic testing. He does not dispute that the yellow tag relates to the testing done on the crankshaft in this case. However, he testified he does not see that magnetic testing of the crankshaft was billed on Pages R-E5 and 6. He would think he would also

see in the yellow tag and documentation dimensions relative to the crankshaft that was magnetically tested.

Inspector Tupper testified he did not actually inspect the crankshaft and he testified that in his experience, contrary to other testimony, that ECI was not a premier repair station. In his opinion it was the cheapest game in town. He said he had had problems with ECI in the past.

Inspector Tupper testified that the terms "serviceable" and "airworthy" are terms that are interchangeable in his opinion. He explained that there was a huge difference between ultrasonic testing and magnetic testing. Ultrasound uses sound waves to detect flaws inside the crankshaft while magnetic testing is used to detect flaws on the surface of the crankshaft.

Inspector Tupper testified that a water manometer was used to measure crankshaft pressure to ensure that the piston rings were properly seated. He testified that a water manometer had to be calibrated before being used for that testing.

On cross-examination Inspector Tupper testified that the yellow tag alone did not indicate that the crankshaft had been magnetically tested. According to Mr. Tupper, generally there is more than one document relative to the magnetic testing that is needed to reach the

assumption or the conclusion that magnetic testing was done. Inspector Tupper agreed that the yellow tag could return the part to service, but an invoice of the charges for testing of the crankshaft in and of itself could not return the part to service.

When asked if a mechanic would always have to compare the invoice and the yellow tag to determine if magnetic testing had been done, Inspector Tupper testified by saying "sometimes yes and sometimes no." Inspector Tupper testified that the part number was wrong on the yellow tag so an inquiry should be made to determine if the magnetic testing on the crankshaft had actually been done.

Inspector Tupper was asked what inquiries he had made to determine if the crankshaft had been magnetically tested. Inspector Tupper replied that he had reviewed documents, he contacted Continental Motors, but he could not recall who he spoke to at Continental Motors. He testified he had asked about the plating noted on the yellow tag and he testified that it was explained to him and it appeared that Inspector Tupper does not have a dispute that plating was done on the crankshaft as described on the yellow tag.

Inspector Tupper testified he did not ask about whether the crankshaft had been magnetically tested. He testified that he knew that records would not be kept for

more than three years. Inspector Tupper testified that FAA inspectors in Texas had visited ECI to see if there were additional records. He testified that he couldn't remember who those FAA inspectors were.

When asked if there were any records, any reports, of that visit, Inspector Tupper indicated that he did not know. He testified that Inspector Major had coordinated any reports relative to that matter.

Inspector Tupper testified that contacts were conducted after they had received the yellow tag. Again, he opined that the yellow tag was insufficient to prove or establish that the crankshaft had been magnetically tested. Again he testified that he only called Continental Motors about the plating of the crankshaft flange and did not ask about magnetic testing of the crankshaft in this case. He testified he did not speak to Mr. Daniels as to what test he expected ECI to perform on the crankshaft that he had sent to them.

Inspector Tupper was asked if a person only wanted to have an ultrasound test performed on a crankshaft would he receive a yellow tag when it was returned and I believe Inspector Tupper testified that no, a yellow tag would not be returned if only an ultrasound testing was performed on a crankshaft. As to the engine log book in this case, Inspector Tupper testified that the entry at A1,

Page 4 of 9, at the top of the page are not adequate entries.

Inspector Tupper again testified that to be calibrated, when an engine is tested in an aircraft and outside of a test cell, instruments in the aircraft have to be removed, sent out to a repair station for calibration, and then they are to be sent back with the certification of calibration before testing could begin. An entry in the log book is required to show that that indeed was accomplished. Inspector Tupper, when asked if he was aware of different opinions by other mechanics as to that procedure, he testified he was not aware of any other differing opinions.

When asked where the practice he just described removing instruments is required, Inspector Tupper could only point to Section 43.13 which relates to the calibration of the altimeter. Inspector Tupper agreed with the statement that unless an engine's instruments are taken out, calibrated and certified, an engine could not be termed as being overhauled.

On redirect he testified that he factually disagreed with the entry in the engine log book at A-1, Page 4, regarding the test run. On recross he testified ECI had had an FAA PMI assigned to it and that PMI would review the procedures for the yellow tag and approve the yellow tag procedures that were used by ECI. Inspector Tupper testi-

fied that the ECI PMI had been contacted but that he had not made the contact. Inspector Tupper testified he disagreed with the entry that testing of the new engine was done because the time since overhaul was zero. He indicated it was a deceptive entry. If tests were actually done the time would indicate two hours, which would include the ground and flight tests required after overhaul. The logbook should read "time since overhaul, two hours." It should not read "time since overhaul, zero." As to how to document the aircraft logbook, Inspector Tupper cited 43-9, which he admitted was not clear, and he did not have a sample logbook entry for entering an overhaul engine and the testing of the engine which could be used as a guide in making entries in an engine logbook.

I asked Inspector Tupper if a hypothetical employee of ECI stated that an electronic examination is performed on all crankshafts that came in, essentially to avoid liability and because it was cheap and easy, would he find that hypothetical testimony to be credible. Inspector Tupper basically stated that he would still want additional information. He did not testify that the hypothetical testimony would, in his view, be credible or not credible.

Inspector Tupper agreed that some repair station yellow tags have more information and some have less

information. Inspector Tupper agreed that there is no uniform information requirement on the yellow tag.

He testified that Section 65.81 states that a mechanic cannot repair instruments. In response to my questions he testified that he disagreed with the entry in the logbooks.

After his testimony Mr. Fred Destad was called. Mr. Destad testified that he is a self-employed mechanic. He started as a teenager and attended high school and studied to be an A&P, Airframe and Power Plant Mechanic, at the same time. He indicated he also had a part-time job with an A&P Mechanic.

He obtained his A&P and went to work for Arctic Circle Air. He then advanced from mechanic to inspector and then was promoted to Chief of Maintenance until the company shut down in 1988. After that he started his own business, which he called Arctic Aviation.

He testified he knows Mr. Kirst. They first met when Mr. Kirst was doing flight instruction for a company that was offering flight instruction out of Mr. Destad's hangar. He testified Mr. Kirst bought a Cessna 152 and had him, Mr. Destad, make repairs on the aircraft, and then Mr. Kirst had him make repairs on other aircraft that he had purchased. He testified that he and Mr. Kirst had developed a trade relationship where he let Mr. Kirst

use the hangar and Mr. Kirst helped him out with his work. Mr. Destad testified Mr. Kirst subsequently opened a 135 operation and Mr. Kirst asked him to be the Director of Maintenance of that 135 operation. As I understand, it was opened in Mr. Destad's hangar.

Mr. Destad testified that he signed off on Mr. Kirst to become an A&P mechanic. After that, Mr. Kirst obtained his Inspection Authority and Mr. Destad testified that the relationship after that changed. Mr. Kirst, according to Mr. Destad, no longer asked Mr. Destad for advice, and Mr. Kirst acted as though he was superior.

When asked about the June 13, 2013, annual inspection of Mr. Kirst's aircraft Mr. Destad testified he was not involved in the inspection and did not review the inspection. He did not know if Mr. Kirst cut open the oil filter when this inspection was done. Mr. Destad testified that he was involved in Mr. Kirst's engine teardown after the crash. He said that took place in October of 2014.

He was involved in the teardown because Mr. Cole, Mr. Kirst's attorney, and Mr. Kirst had suggested he be appointed as a third party to the investigation. He signed the necessary paperwork and became the third party and that's why he was present during the engine teardown. He testified he helped Mr. Gibson of Continental Motors

with the engine teardown. He testified that Inspector Jason Major was there at the teardown as well.

He testified how he would open the oil filter, take the elements out, place the element in a clean bucket with solvent. He ran the solvent through a paint filter. The filter picked up pieces of aluminum, bronze, and steel. He used a magnet to test the particles. Mr. Destad testified that after the inspection he took the oil filter and metal particles and put them in what he called an action pack and locked them in the hangar.

After the aircraft was released he removed the aircraft and the action pack with the particles of metal into a connex, which had been paid for by Mr. Kirst's insurance company. He testified that other parts of the aircraft were placed in the connex as well. He testified that he remembered putting the metal particles in the connex and locking the connex.

Mr. Destad testified that Mr. Daniels was an A&P and a pilot. He had purchased an aircraft engine, took it apart and then put it back together.

He testified that Mr. Kirst was looking for an engine because his old engine had to be replaced because of a prop strike. Mr. Destad testified that Mr. Kirst and Mr. Daniels came to his hangar and they asked him if he could use the kitchen. He overheard the conversation between

them. Mr. Kirst, he testified, wanted Mr. Daniels to make a log entry which indicated that the engine had been overhauled.

Mr. Destad testified that he informed Mr. Kirst that he could not do that until the engine had a test run and had been broken in. He testified that he told Mr. Kirst that Mr. Kirst could only make a Part 43 entry in the logbook.

He testified that Mr. Kirst then wanted to argue about it -- what was appropriate or what the appropriate entry should be -- so Mr. Destad called Mark Smith of the FAA, explained the situation and asked that he instruct Mr. Kirst as to the proper logbook entry. Mr. Destad handed the phone, he testified, to Mr. Daniels and Mr. Kirst, and he left the room. Later, Mr. Kirst, according to Mr. Destad, told him that Mark Smith had agreed with what Mr. Destad had said.

Mr. Destad testified that after the entry was made he had no involvement in the completion of the overhaul of Mr. Kirst's aircraft. According to Mr. Destad, Mr. Kirst installed the engine and he, Mr. Destad, had nothing to do with it.

He testified he did not see the test run performed by Mr. Kirst. He testified he may have not been in the hangar when it was done.

He testified that Mr. Kirst had told him that a test run had been performed on the aircraft. Mr. Destad testified that Mr. Kirst had his own toolbox with compression testing tools, a timing light, and Mr. Kirst also had access to all of his, Mr. Destad's, tools as well.

Mr. Destad testified he did not have a test club, a wood test club, or a water manometer. He testified he had a used thermocouple and temperature gauge, but nothing that could be used with an engine.

He testified that he does not have calibrated test instruments or tools to calibrate instruments. Mr. Destad testified that a repair station would perform that type of the work. He testified he was not qualified to do calibration on engine -- on aircraft instruments. He testified that if calibration had to be done, the instruments would have to be removed from the aircraft and sent to a repair station for re-calibration and then a log entry would have to be made in the engine logbook. Mr. Destad testified he never calibrated instruments because he is not qualified to do so. On cross-examination Mr. Destad testified that during his 40 years in aviation he has never sent out a crankshaft for overhaul. He testified he has not done so because he does not do overhauls on aircraft engines.

He testified he has removed cylinders and

agreed that he has to follow procedures. He testified that Federal Aviation Regulation Part 65 provides for what a mechanic can and cannot do and describes what repair stations can and cannot do. He testified that Part 43 states that calibration and certification are major repairs which require 337 documentation. Mr. Destad testified on cross-examination that if an instrument is calibrated it is also certified as being calibrated. He testified that they were one in the same thing.

As to his relationship with Mr. Kirst, Mr. Destad testified it was a trade type of situation between the two of them. Mr. Kirst helped him and he helped Mr. Kirst in his work. He testified there was some financial payment but it was mostly a trade situation between he and Mr. Kirst.

Mr. Destad testified he became the Director of Maintenance for Mr. Kirst's 135 operation. He said that designation was obtained after Mr. Kirst bought the engine from Mr. Daniels. Mr. Destad testified he agreed that Exhibit A-1 indicated that he certified that an annual inspection was completed on January 1, 2012, and that the aircraft was airworthy with a total time since overhaul of 73 hours.

Mr. Destad testified he became the Director of Operations for Mr. Kirst's Part 91 operation but not for

the aircraft in this case. He testified that the Part 91 certificate involved the Cessna 152. Mr. Destad testified he removed himself as the Part 135 Director of Maintenance a couple months before Mr. Kirst's airplane crash. He testified he was the Director of Maintenance on October 1, 2014, when the teardown report was prepared by Mr. Gibson, and that report is at Exhibit R-Z.

Mr. Destad agreed that Mr. Kirst had been a mechanic in the past and had a mechanical background. He agreed that Mr. Kirst was mechanically inclined and he testified that he signed Mr. Kirst's application to become an A&P.

He testified that he and Mr. Kirst would help each other out by checking each other's work. Mr. Destad testified that he did go over the proper procedures to change the oil in 2014 and told Mr. Kirst about the importance of checking for metal in the oil filter. He testified he had seen Mr. Kirst change oil filters in the past, but he had not always been there when the oil filters were changed by Mr. Kirst. Mr. Destad testified he believed Mr. Kirst if Mr. Kirst stated that he inspected the oil filters.

Mr. Destad testified that he was aware that Mr. Kirst had purchased a propeller for the engine he bought from Mr. Daniels. Again, he testified that Mr. Daniels showed up at the hangar and that he and Mr. Kirst asked him

to use the kitchen to make the engine log entries. Mr. Destad again testified he did not see all of the receipts and yellow tags when they met, but they may have been under the table and he may have not been able to see them.

He testified that the plastic box depicted at R-S looked familiar but he could not testify that Mr. Daniels had that box with him when the logbook entries were made. Mr. Destad reiterated the sequence of events regarding the logbook entry and that Mr. Kirst wanted Mr. Daniels to indicate the engine had been overhauled. Mr. Destad informed him that that could not be done until the engine is tested, broken in. Mr. Kirst disagreed and then Mr. Destad called Inspector Smith of the FAA to speak to Mr. Kirst. Mr. Destad testified he did not tell Mr. Daniels what to write in the logbook, that Mr. Daniels made those entries himself.

When asked about signing off on the annual inspection without determining if the engine had indeed been overhauled as represented in the engine logbook, Mr. Destad testified that the aircraft was not on the 135 certificate and, therefore, that was not required. He testified that he examined the aircraft for the annual but that he had to rely on Mr. Kirst's certification that he had performed the work necessary for an A&P to complete an annual inspection.

Mr. Destad testified he had not seen the yellow tag for the crankshaft overhaul until Mr. Cole made the engine logbooks available. He agreed that he was able to locate other records identified as R-B, R-C, R-D, and possibly R-E, but he was unable to find the yellow tag for the crankshaft testing when he searched for the documents that he provided.

Mr. Destad was shown the yellow tag at Exhibit R-E(1) and (2) and asked if he would install that crankshaft in an aircraft and he testified that he had problems with the yellow tag. He testified he was concerned that the part number on the yellow tag is described as L-45. He testified that L-45 is not a part number. A Continental part number has a six-digit-long identifier.

He testified he did not believe L-45 to be an appropriate part. I took that to mean a crankshaft. Mr. Destad agreed that he would have to call ECI to have his concerns addressed and would have to find out if the crankshaft had indeed been magnetically inspected before he would install it in an aircraft.

Mr. Destad was asked what he had reviewed when he signed off on the annual inspection on Page 5 of Exhibit A-1. He provided a lengthy answer but stated that he reviewed the logbook and did not question what Mr. Kirst had performed on the annual as required. He testified the

annual requires that Mr. Kirst certify what he had done.

Mr. Destad testified he did not look at the oil filter or take apart anything else. He testified he looked at the logbook to look at the aircraft and he believed Mr. Kirst's representation that Mr. Kirst had conducted the inspection in accordance with the regulations.

He testified that he did not assist Mr. Kirst by removing accessories from the old engine that was involved in the prop strike and installing them in the engine that Mr. Kirst purchased from Mr. Daniels, and Mr. Destad again testified he was not certified to calibrate and certify instruments.

Again he testified on cross he did not have a wood test club. He does not have a water manometer and he has never owned one. He testified it is used to test whether or not the cylinders are properly broken in.

Mr. Destad testified that he did see Mr. Kirst work on the aircraft there after he signed off on the annual on June 12, 2012. He testified he had been concerned with oil leaks in the aircraft and Mr. Destad testified that subsequent engine teardown indicated a push rod problem that would account for the oil leaks he had been concerned about. He testified that Mr. Kirst had been concerned with the oil leaks as well and was trying to find them in his aircraft. He testified about opening up the oil filter

during the engine teardown with Mr. Gibson and Mr. Major. He testified that he could not quantify the weight of the metal particles in this case. He testified the metal particles were aluminum, metal, and copper.

When asked if there were oil analysis tests available to test the metal particles, Mr. Destad testified there were, but they were usually used to determine a trend over time and not usually used just once to obtain a result about a metal particle. When asked where the metal particles came from, he testified from the crankshaft, crankcase, and bearings. When asked when the engine began to deteriorate, he testified he believed it started when Mr. Kirst had a diaphragm engine problem in his aircraft and he ran the aircraft when it was low on oil. The diaphragm he is referring to is the propeller diaphragm.

Mr. Destad testified that he put the metal particles in a bag, locked them in the hangar, then moved them to the connex while he still had the keys to the connex. He testified he saw the bag there when he had the keys to the connex. He testified that the locks were subsequently changed by Mr. Kirst and his keys would no longer work on the connex.

On redirect he testified he had access to where the bag was with the particles during the time he had a key to the lock on the container. He again testified that in

order to calibrate instruments they must be removed and returned to a repair station.

Again he testified he signed off on the annual inspection on Page 5 of A-1 because he assumed entries were made and he believed that the work claimed to have been completed by Mr. Kirst had been completed and the aircraft was legal. He trusted Mr. Kirst to have performed the task he indicated he said he did.

He testified he removed himself as the Director of Maintenance from Mr. Kirst's business after the accident because Mr. Kirst was in recovery and Mr. Kirst had also cut Mr. Destad out of the process before, and that any time there was any dealings with the FAA Mr. Kirst dealt with the FAA directly and did not involve Mr. Destad as the Director of Maintenance.

He testified that if he found metal particles in an oil filter it was not something he could ignore. He testified the larger the particle or the flakes was the greater the indication that something was really coming apart.

He testified that he did not work on Mr. Kirst's aircraft instruments in 2011. On recross again he testified he did not help at all in installing the engine purchased by Mr. Daniels.

He saw no tests performed on the airplane by Mr.

Kirst. He saw no run up conducted on the airplane by Mr. Kirst. He testified he never had a manometer, never owned one, and never saw Mr. Kirst with a manometer. He testified he did have a thermocouple, but not one that could be used to test the engine in this case. He testified that he could not have performed the test because he did not have the thermocouple instrument. He also testified on recross that he never saw Mr. Kirst take the instruments out of the aircraft and send them out to be re-calibrated.

Mr. Destad again testified that he trusted the entry in the logbook that Mr. Kirst had made. He had no reason to doubt it. He testified that while he was away Mr. Kirst could very well have had the instruments calibrated. Mr. Kirst could have purchased the tools, such as a manometer and a thermocouple, while Mr. Destad was away from the hangar. Mr. Destad was asked if he had a duty to look back into the records when he became the Director of Maintenance and after a significant explanation he answered yes.

When asked if he had fulfilled that duty he testified that he had completely fulfilled that duty. He testified that he had nothing to do with the testing in the aircraft after the engine was installed. He did not speak to Mr. Kirst about what needed to be done to complete the overhaul on the engine he purchased from Mr. Daniels. Mr.

Destad reviewed the service bulletin at A-16 which indicates you can use an aircraft to complete tests in lieu of a test cell.

He was asked if he remembered going out to buy a thermometer to calibrate the instruments on Mr. Kirst's aircraft. He testified no, he did not remember going out to purchase a thermometer. He was asked if he recalled heating oil in a saucepan and testing the instrument to see if the reading was correct. Again, he testified no, he did not, that he had not done that.

He testified that this type of testing that was described and he was asked about could be done to find out if there was a problem with an instrument, but he testified that was not calibrating and certifying the instrument. He testified that could only be done if it's sent to a service station that is capable of calibrating and certifying the instrument. When asked if he remembered calibrating the instruments in Mr. Kirst's aircraft with Mr. Kirst to ensure that the measurements of the instruments were correct, Mr. Kirst replied no, he did not.

As to the Respondent's case, the Respondent called to testify Mr. Richard Walker. Mr. Walker is the owner of Custom Aircraft, Inc. which specializes in overhauling aircraft engines. He purchased it from B.J. Custom Aircraft and retained most of the employees. He said

he has owned the business for 4-1/2 years. The company only does overhauls on Continental and Lycoming engines. His company conducts about 40 overhauls a year.

He is a private pilot with an instrument rating. He started working in aviation when he was about 15 years old in his father's business. He testified he has A&P certificates and has an IA certificate as well. He performed several hundred instruments -- engine overhauls, he testified.

The Respondent moved to have him qualified as an expert in engine overhauls and annual inspections. The Administrator objected, citing the fact that he did not file a report and it was not clear what he would be testifying about since no report had been filed. The Respondent only indicated that he would rebut the testimony of Inspector Tupper in the pre-hearing submissions submitted by the Respondent. The Administrator was correct that the report, an expert opinion report, had not been filed as required by the Federal Rules of Civil Procedure and the Pre-Hearing Order, and the Respondent's description of what testimony would be involved in Mr. Walker's testimony was less than informative.

Based on the information and the objection I did not qualify him as an expert in overhaul and annual inspections because he did not file a report as to what he was

about to testify relative to this case. However, I did allow him to testify as an A&P mechanic with an IA rating. He had specialized knowledge in those areas.

He testified he reviewed the yellow tag in this case. He testified he has received ECI yellow tags in the past for parts that have been serviced. He testified that ECI had performed crankshaft overhauls for him and he testified that the yellow tag at Exhibit R-E(1) and (2) provided for a return to service of the crankshaft.

He testified that that is not the only way to return a part to service. He said to return a part to service can be accomplished through a Form 81-30 and also through an invoice which must indicate that the part is being returned to service. When asked if he as a mechanic received R-E(1) and Exhibit R-E, Pages 1 and 2, he testified he would conclude that the part would be ready to be installed in an aircraft and used.

Mr. Walker testified that, reviewing the yellow tag in this case, he would assume that the magnetic inspection had been done because once a crankshaft is removed from an engine it has to be magnetically tested before it can be put back into an engine. He testified that the yellow tag describes other work that was performed on the crankshaft in this case, such as plating and baking of the flange, or spline in this case.

He testified that he would have been concerned that the magnetic testing had been done if he only had seen Pages 5 and 6 of Exhibit R-E. However, viewing the pages in conjunction with Exhibit R-E, Pages 1 and 2, he would have no doubt that the magnetic testing had been done on the crankshaft in this case.

He testified if he had been concerned about anything on the yellow tag or invoice he would have called ECI for clarification. He testified that there are two test cells in the State.

He testified if you purchase a factory re-manufactured engine you do not have to worry about testing because that's already done. However, non-factory overhaul engines require a test run and test flight. Mr. Walker testified that because there are so few testing cells in the State, many mechanics perform testing using using the aircraft as a platform to perform the test.

He testified, as to calibration of instruments, that there was disagreement in the field. He and others believe the instruments do not have to be removed and sent out for calibration. He testified that it can be done with instruments still attached to the instrument panel. He testified that he has performed 40 to 50 overhauls using the aircraft instruments in the aircraft to perform the test.

He testified he knows that some believe the instruments must be taken out and sent to a repair station for calibration. He described how the various calibrations could be accomplished by an A&P mechanic or assisted under the supervision of an A&P mechanic. He testified that, for example, manifold pressure testing, you compare the manifold pressure in the aircraft at rest with the current barometric temperature. For oil temperature you use water or oil, heated, and a thermometer to compare the thermometer reading to the oil temperature reading.

On cross-examination Mr. Walker testified that any other part that required magnetic testing would be identified in the appropriate overhaul and assembly manual. He agreed that using water to test an aircraft instrument would vary because water boils at different degrees at different elevations. As to the yellow tag, he testified he had to assume the customer asked for the magnetic testing. As to why it does not appear in the invoice, when he was asked, Mr. Walker stated it could very well just be a clerical error. Mr. Walker testified that some companies provide more information on yellow tags than other companies. Some companies include the crankshaft measurements, some do not.

He testified that he believed the crankshaft in this case was magnetically examined. When posed with the

question as to what his reaction would be if someone from ECI had testified that they, ECI, magnetically examined every crankshaft that was sent to them, whether it was requested or not, he responded that he would find that to be credible. He testified that it would be crazy for a company like ECI not to perform a magnetic testing on all crankshaft engines, for no other reason than to cover their liability. He testified that magnetic testing is cheap and it takes very little time.

He testified that if a customer only wanted an ultrasonic test performed on the gear, the company would not provide a yellow tag. A green tag, stating that the part -- that there was partial release, would be sent to the customer when that type of a test was done. He testified that situation may occur in a case where an airworthiness directive required one certain type of test.

I'll now discuss the testimony of Mr. Forest Kirst. Mr. Kirst testified that he has a mechanical background. He stated that he started in the early '70s, when he repaired bicycles.

In 1971 he became an interprovincial automotive mechanic. He worked as an automotive mechanic, and as a teacher teaching auto mechanics. He testified he subsequently obtained a bachelor of arts degree, and a credential in teaching. He has taught automotive mechanics at

the high school level and at the community college level. He testified he has performed over 300 overhauls and 1,000 transmission rebuilds. Mr. Kirst's resume is admitted into evidence at R-nn.

As to his aviation experience, he testified the principles as to automotive and aviation engines is not that different. Shop manuals and service bulletins are different, but that's about it.

He testified his father purchased a fleet of aircraft, and he was designated as the family mechanic. He said he had a falling out with his father, and therefore he went into automobile mechanics.

In 2005 or 2006 he began working for Fred Destad in his spare time, and then he subsequently became full time. Fred Destad subsequently signed him off to take his A&P examination. He testified that he passed the exam in 2010. He testified that Mr. Destad subsequently signed him off to take the IA exam, which he passed as well, and received his Inspection Authority Certificate in 2015. His IA certificates were admitted into evidence as R-A.

Mr. Kirst testified he was once accused by the FAA of being unable to perform his duties, and the certificate was in jeopardy. But he explained that he had cleared that up, and the certificate was returned to him.

Mr. Kirst testified that he worked with Fred

Destad as an A&P for a period of time, and then worked alone. He said the relationship with Fred Destad was fine. He inspected Mr. Destad's work, and Mr. Destad inspected his. He testified he taught Mr. Destad how to fly. He said it was a good relationship. Again, Mr. Destad signed off on his application to become an A&P mechanic, and also relative to his Inspection Authority certificate.

He testified Mr. Destad was the Director of Maintenance for Mr. Kirst's 135 operation, and the Director of Operations apparently for his Part 91 operation. But Mr. Kirst later testified that he did not pay Mr. Destad for his work. He said he paid him in trade by working with Mr. Destad. Mr. Kirst testified he did pay him for Mr. Destad's annual inspection he performed on his aircraft. And he paid him also for aircraft parking at Mr. Destad's hangar.

Mr. Kirst testified that after the accident Mr. Destad was helpful. He helped bring his crashed airplane back to the hangar. He testified, however, at some point during the investigation Mr. Destad stopped talking to him. Mr. Destad removed himself as the Director of Maintenance. Later, Mr. Destad told him to get out of his building, his hangar. Mr. Kirst speculated Mr. Destad was concerned with liability. Mr. Kirst testified that they had agreed -- they had argued in the past, but then corrected himself

to say that they had disagreements in the past, but they did not take it personally. He testified that he had problems with Mr. Destad doing his job as an A&P. He testified that Mr. Destad had agreed to sign off on modifications and do all the paperwork, including Form 337, for $5,000 dollars, on one of Mr. Kirst's aircraft. However, Mr. Kirst testified that, a year later, the aircraft that Mr. Destad had done the work on was grounded.

Mr. Kirst testified he found real problems with Mr. Destad's mechanical work. For example, there was no oil in the engine in one case. When he asked Mr. Destad to bring a case of oil to put oil in the engine, that Mr. Destad had neglected to include, Mr. Destad only brought one can. Subsequently he had to bring a number of cans, as Mr. Kirst had recently requested, in order to fill the aircraft with the appropriate level of oil.

He found out that Mr. Destad, in another case, had left out a hydraulic lifter in an aircraft on which he was working. When Mr. Kirst found it in the hangar, Mr. Kirst ran out and stopped the aircraft, told the owner that the aircraft was grounded based on these observations, problems with Mr. Destad's work. He himself decided to become -- to obtain his Inspection Authority certificate. Mr. Kirst did not state whether he discussed Mr. Destad's dangerously poor performance, and Mr. Kirst grounding an

airplane with Mr. Destad, before Mr. Destad signed him off to obtain his IA certificate.

As to the purchase of the engine in this case, Mr. Kirst testified he had not purchased an engine before 2011. He testified he believed Mr. Destad told him about the availability of the engine in this case for his Avion, and he testified that he was told the engine had been overhauled.

He testified that he had talked to employees where Mr. Daniels worked, and Mr. Daniels was given a good recommendation, and therefore, Mr. Kirst purchased the engine from Mr. Daniels. Mr. Kirst testified he and Mr. Daniels brought the engine to Mr. Destad's hangar.

Mr. Daniels provided a container that had all the records, and the work that had been done on the engine. That is at Exhibit R-s. Despite being an A&P mechanic, Mr. Kirst testified he did not know what to look for in terms of documentation for the work performed on the engine that Mr. Daniels was going to sell him. He said there was a yellow tag for the testing of the crankshaft. He testified that Mr. Daniels did not have any concerns about the yellow tag. And Mr. Kirst did not testify that he had any concerns about the yellow tag either.

Mr. Kirst testified that Mr. Destad told Mr. Daniels how to fill out the log book for the engine. He

testified that the parts that were purchased for the engine are all listed on Exhibits R-b through R-9. And Mr. Kirst testified that, with the exception of Exhibit R-t, Mr. Daniels had provided all of the documentation.

He testified that a list of service bulletins that were used is at Exhibit R-9, and was provided by Mr. Daniels. He testified that at the time he reviewed the yellow tag for the crankshaft he understood that it was ready to be installed in the aircraft.

He testified he paid $12,000 dollars for the engine, I believe. He indicated he started a new log book for the engine because Mr. Destad thought it would be better to have a new log book.

Mr. Kirst then testified that Mr. Destad's testimony that he had called an FAA inspector who got on the phone with Mr. Kirst and Mr. Daniels to tell them how to fill out the log book entries had never happened. Mr. Kirst denied that that occurred. Mr. Kirst testified that Mr. Destad told Mr. Daniels what to write in the log book. And Mr. Destad told him, Mr. Kirst, what to write in the log book.

He testified Mr. Daniels left, and he and Mr. Destad moved the accessories from the old engine to the new engine he had just purchased from Mr. Daniels. Mr. Kirst testified that Mr. Destad wanted the old magnetos put into

the new Daniels engine, because they were yellow tagged, and had only a few hours on them. He said that they set the timing for the engine by using a time rite degree wheel. It belonged to Mr. Destad, and Mr. Kirst testified that Mr. Destad taught him how to use it.

He testified that installing the engine could be done by one person, but it was easier for two people to do it. Mr. Kirst testified, and I quote, "Before we installed the engine we calibrated the instruments." He testified that Mr. Destad took his hot plate and two quart saucepan, put oil in it, and put a thermometer, and tested and calibrated the cylinder head temperature. And they calibrated the exhaust gas temperature gauge as well.

Mr. Kirst testified that he recorded the readings, and kept them in the file folder with the records that Mr. Destad had provided. According to Mr. Kirst he and Mr. Destad then calibrated the rpm. Mr. Kirst described the instrument panel gauges used to perform the test run. A photograph of the gauges, or the instruments, is at Exhibit R-mm.

Mr. Kirst testified that they, meaning he and Mr. Destad, installed a water manometer and an auxiliary pressure gauge. He testified that Mr. Destad had pulled a service bulletin about it, and had studied the service bulletin. Mr. Kirst provided a photo of the water

manometer, which has been admitted into evidence as R-w.

He testified that they, he and Mr. Destad, calibrated the oil temperature gauge. He described the process, with him in the aircraft, and Mr. Destad at the engine. He testified that Mr. Destad calibrated the water manometer by simply marking the level of water in the tube.

Mr. Kirst then discussed Exhibit R-y, Page 83, which is a Continental Overhaul Manual that lists test equipment. Mr. Kirst testified that he and Mr. Destad had reviewed that document and all of the test equipment that was required for the testing.

He testified that Mr. Destad had told him, Mr. Kirst, that Mr. Destad had all the tools. So, according to Mr. Kirst they went off and did the ground test. He testified that they used a propeller for the test, instead of a wood test club.

Mr. Kirst testified that he made up charts regarding the readings from the gauges. He testified that he had made readings, and noted readings during the test flight. He testified that Mr. Destad did not indicate that there were any problems with the process of calibrating the instrument.

Mr. Kirst testified, in his view, the way to calibrate the instruments that Mr. Destad had suggested, or had been involved in, made perfect sense to him. They

were not certifying certifying the instruments, they were simply calibrating them.

Mr. Kirst testified that when the test run was made Mr. Destad was there, and also another individual he named, but did not produce as a witness to corroborate his testimony. Again, Mr. Kirst testified he took notes on the process, made up charts when the test run was completed, and he put them in a file folder. Mr. Kirst then testified, and I quote, "We did the test run. We did the test flight." He testified that Mr. Destad told him what to write in the log book on June 7th, 2011. He testified he believed what he had put in the log book was accurate.

Mr. Kirst then testified about the first annual inspection of the aircraft. He testified he did not agree with Mr. Destad's testimony as to what he did to sign off the inspection as an IA. Mr. Kirst said he did not simply want a rubber stamp by Mr. Destad, but he wanted Mr. Destad to actually inspect the work he accomplished. However, he testified that Mr. Destad expressed no concern about the annual inspection that Mr. Kirst had performed.

He was asked about Mr. Destad's testimony, that he believed the problems with the metal particles in the oil filter was due to Mr. Kirst running the engine low on oil, after a propeller oil diaphragm leak. Mr. Kirst explained the problem and described the hole in the diaphragm

as a slit he could fit a penny through. He testified that Mr. Destad was not concerned about it as the Director of Maintenance.

Mr. Kirst testified that when he received the Notice of Revocation he received, he testified that his documents were in large part moved to Mr. Cole's office. Mr. Cole is of course his attorney. Part of the documents were also in Mr. Destad's hangar.

He said he found the yellow tag in this case in the container that Mr. Daniels had provided. The container, he testified, was in Mr. Destad's hangar. He testified about how simple it would have been to find the yellow tag, and how simple it would have been to contact ECI to find out if the crankshaft had been magnetically examined.

He also testified how simple it was for him to obtain information, and finally be transferred to Mr. Johns to obtain information regarding the magnetic testing of the crankshaft. He also discussed how easy it was to communicate with Mr. Johns via email.

Mr. Kirst testified that, contrary to what Mr. Tupper said, Mr. Kirst believed that the yellow tag indicated the crankshaft was measured, as indicated by the notation standard, as far as the measurements of the part of the crankshaft was concerned. The measurements indicated a range, but he testified it did not mean that it was

not measured. Mr. Kirst testified that ECI had an FAA PMI, and that the FAA PMI essentially told ECI what to put on the yellow tags, and the FAA had in fact approved the use of the yellow tags.

Mr. Kirst testified that the magnetic particle testing had to be done, and was done. He then testified about the crankshaft flange in this case. The FAA does not dispute that it was plated and polished.

Mr. Kirst was asked questions about Mr. Tupper's declaration that was attached to the Administrator's motion. And he went on to criticize the fact that Mr. Tupper indicated that the service bulletins he cited were no longer current.

He discounted Exhibit R-dd, referencing an airworthiness directive that does not apply to his airplane. He also testified about his knowledge as to how the various ways that a part can be returned to service, which is a return to service.

Mr. Kirst also testified that there was no question in his mind that anything he had done relative to his entries in the log books was false or misleading. He testified he believed everything he had done, he had done correctly and in compliance with the federal regulations.

On cross-examination he agreed that the document that he had used to criticize Mr. Tupper's assertion

in his affidavit did not even apply to his airplane. He testified he could not state when he found the yellow tag, but then indicated that it was not until February that he called the number on the ECI tag.

Mr. Kirst testified, when he was asked as to the dates he performed the calibration, he was not sure when the calibration had occurred. He testified it may have been a day or two, or three days before the engine was installed.

He testified he could not remember when he started the installation of the engine in this case. He testified he could not remember what day he calibrated the instruments. He testified he had made notes, but again, they were not in his file anymore.

When he was asked more specifically as to the dates he checked the instruments, he began to question the relevance of the questions that were being asked by the attorneys for the Administrator. He started to become argumentative.

He testified the testing was done in one day, during his testimony. In his deposition he said that that occurred over six to eight days. He testified that testing took five to eight hours, which included the test flight. However, Mr. Kirst also testified that the ground check lasted 40 minutes to an hour.

Mr. Kirst was asked about a previous prop strike. He testified he had struck a snow berm. He became quite agitated when he discussed the matter. He stated that Mark Smith, FAA Inspector, had told him that if anyone tried to fly the aircraft he would have their certificates. He testified that he, Mr. Destad, and an instructor from the University of Alaska agreed that a simple test was all that was needed, rather than a complete tear down of the aircraft. He testified that Mr. Smith knew better than making the statement that he did to him. It cost Mr. Kirst $1,200 dollars to break down his engine.

When a letter was produced by the Administrator that did not indicate that the threat to pull anyone's certificate was made by Inspector Smith, Mr. Kirst became angry and argumentative. He argued that there was; they were talking about another letter, not the letter that had been shown to him.

Mr. Kirst testified on cross that he reviewed the documents provided by Mr. Daniels with Mr. Destad when Mr. Daniels was still at the hangar. He testified he could not recall when he reviewed the records again after that. Mr. Kirst testified he obtained some data from Mr. Daniels' log book to put in the new log book at A-1 in the first three lines. He testified that Mark Smith was not called when Mr. Daniels was still with him -- when Mr. Daniels and he

were with Mr. Destad.

Mr. Kirst again testified that Fred Destad wanted the magnetos from the old engine installed on the new engine. And they transferred other accessories from the old engine, the fuel pump, the alternator, oil and air separator, and prop accessories, as well as a breather tube.

When asked if he had read anything about how to calibrate the EGT cylinder head temperature gauge, he testified he probably read something about it. He testified that the instruments he used during the test were not Alcor instruments specifically used to calibrate the gauges. He testified he used whatever he had. But he did not testify as to what, specifically, instruments he had.

He again testified that Mr. Destad told him what to write in the log book. He was asked about the oil leak in the propeller diaphragm, and he testified he only lost about a quart of oil.

He testified that he performed the test run following the instructions on A-16, Page 2, Section iii. He also followed the instructions on R-y, Page 65, Table 18, and performed all of those tasks.

I asked Mr. Kirst a couple of questions. I asked him why, if Mr. Destad told him what do to regarding the installation and testing of the engine, and directed

log book entries, why Mr. Destad did not sign it? And he replied that he wanted to sign the log book -- as making the -- for what he had done.

Mr. Kirst testified that sometimes he disagreed with Mr. Destad when Mr. Destad wanted him to make entries in log books, and the entries were not correct. He testified that, even though the entries he was asked to put in the log book were not correct, that he basically did what he was told. He said if he did not do what Mr. Destad told him to do, he would have to go out and get a new mechanic with an Inspection Authority, and someone else to work on his aircraft engines. In order to avoid having to go through that trouble, he decided to make the incorrect entries that Mr. Destad wanted him to make in the engine log books.

Mr. Kirst agreed his A&P training trained him regarding engine installation and overhauls. He also had been trained to make log entries. He testified he had to sign his name, and include his A&P number because the regulations required it for the purpose of responsibility. So every time that he made a log book entry he had to include his name, as well as his A&P number. He said this was to determine who was responsible for the work that was performed, and to ensure safety. He testified that he had not performed a mechanical service in the past. He had to be

supervised, according to the regulation. He testified he had not installed an engine, or tested it, before, so he had to be supervised by Mr. Destad in installing the aircraft engine he purchased from Mr. Daniels, and in performing the tests that were required -- the ground tests, the testing of the instruments, and the flight test.

When I asked why half of the records were in Mr. Cole's office and the other half in Mr. Destad's hangar, he delivered a detailed explanation as to the records, until he was interrupted by Counsel for the Administrator, who informed the Court that Mr. Cole was actually in the hospital at the time he was describing what had occurred. Mr. Kirst did not dispute that assertion on the witness stand.

That completed the respondent's case. The Administrator, at the end of the respondent's case, presented a rebuttal case. They recalled Mr. Fred Destad to testify. And Mr. Destad was asked to explain how he became the Director of Maintenance. He testified that Mr. Kirst had asked him to become the Director of Maintenance for his business. He thought about it for a minute, and signed all the necessary documents to become the Director of Maintenance.

He was asked about Exhibit A-20, which is a letter from Mark Smith. And he testified that Mark Smith

had hand-delivered the letter to Mr. Kirst, and that he was with Mr. Kirst at the time that Inspector Smith delivered the letter initiating this case -- or that has been discussed in this case. Mr. Destad testified that, after the prop strike that was the subject of the letter, Mr. Kirst did not feel he had to tear down the engine to inspect it. Mr. Destad testified that he agreed with Inspector Smith's position that the service bulletin required inspection, but the letter also gave other examples of approved means of doing so.

Mr. Destad testified he had not seen any other hand-delivered letters that came to Mr. Kirst when he was present with Mr. Kirst. Mr. Destad testified he did not hear Inspector Smith say anything about action if anyone attempted to fly Mr. Kirst's aircraft.

He testified he did not have any conversations with Inspector Smith regarding the letter for prop strike, prior to the conversation he and Mr. Kirst had with Inspector Smith. He testified Mr. Kirst told him he did not think that an inspection was necessary for that prop strike. Mr. Destad testified he felt an inspection was indeed needed. He said inspections are needed when you have a prop strike, because the propeller is stopped, and there may be unseen damage inside the airplane engine. He testified he did not hear Inspector Smith say anything

about what action he would take against a person who flew the aircraft. Mr. Destad testified he did not discuss anything relative to this issue with Mr. Smith before Mr. Smith delivered the letter.

He also testified that he was present when Mr. Kirst was flying with an FAA inspector, and had a problem with a propeller bladder. He testified that Mr. Kirst returned to the hangar with the aircraft covered with oil. He had fire trucks following him. He testified he believed the test flight was for the installation of a heater.

When asked how big the hole in the diaphragm was, Mr. Destad testified that the diaphragm was multi-layered. He testified he saw the hole in the propeller diaphragm, and he thought it was about three inches long.

Mr. Destad said he saw Mr. Kirst go out after the fire engine trucks had left and he checked the oil in the aircraft. He testified that he then saw Mr. Kirst put five quarts of oil in his aircraft. When asked how he knew it was five quarts, Mr. Destad testified he saw Mr. Kirst take five quarts of oil to the airplane, put five quarts in the aircraft. And then he saw him throw away the five empty quart cans.

Mr. Destad testified that when Mr. Kirst brought the engine to the hangar, oil was on the cowling, oil was burning on the exhaust, and oil was on the tail and

the windshield of the aircraft. When asked if there was oil, where the oil had come from in the aircraft, Mr. Destad testified it came from the propeller diaphragm.

Mr. Destad again testified he did not assist Mr. Kirst in installing the engine that Mr. Kirst bought from Mr. Daniels. He testified he saw Mr. Kirst working on it in the hangar, but he was not with him to supervise him, or to watch what Mr. Kirst was doing.

He testified he did not supervise Mr. Kirst in installing the engine in this case. He testified that Mr. Kirst had removed an engine in the past in a Cessna 152 he had owned, and Mr. Destad had supervised that activity. Supervision did not mean that every time an A&P removed an engine from a 172 or a 182, supervision was necessary. He testified that after removing an engine from an aircraft once, the A&P mechanic did not have to be supervised.

He testified that one man could install the engine in the aircraft in this case. All that was needed was a hoist, torque wrenches, manuals, and hand tools. Mr. Kirst had all the necessary tools, and Mr. Destad testified he also had all the necessary tools and manuals to which Mr. Kirst had access.

He was then asked if he knew of any records made and kept by Mr. Kirst during the installation, engine testing, and flight test. Mr. Destad testified he was not

aware of any records made by Mr. Kirst. When asked if he knew of any records made by Mr. Kirst relative again to the test run, he testified the only records he was aware of were the engine log books, and the entries that were made by Mr. Kirst. Mr. Destad was asked about Mr. Kirst's records, and where they were maintained, and he testified the records were kept in the hangar at Arctic Aviation.

After the accident Mr. Kirst asked him to send the records to his attorney, Mr. Cole. The records he was asked to send were the current log books and the 337 forms. He testified the records were at his hangar because Mr. Kirst ran his business out of Mr. Destad's hangar.

Again, he testified that he believed the propeller diaphragm problem occurred before the annual inspection he signed as an IA in June of 2012.

Mr. Destad testified that it was his understanding that all of the accessories from the engine came with the engine that Mr. Daniels had sold to Mr. Kirst. He later found out that was not the case.

He testified that when he was present for the tear down of the accident engine after the accident, he said at that time he learned that the magnetos and the carburetor had been removed from the old prop strike engine, and had been placed in the new engine that Mr. Kirst had purchased from Mr. Daniels.

Mr. Destad testified that he did not review the records that were provided by Mr. Daniels with the engine when the engine was sold. He also testified he did not see Mr. Kirst review the records provided by Mr. Daniels.

When asked if he kicked Mr. Kirst out of his hangar, he testified that he had. He testified he had lunch with Mr. Kirst, and he told him they needed to separate Kirst Aviation from Arctic Aviation. He testified he took this action because he was finding things that needed to have been documented, which had not been documented by Mr. Kirst. He said he thought that Mr. Kirst was picking and choosing what documentation to make, and what regulations to follow.

Mr. Destad testified he never found any records that documented the removal of the old magnetos from the old engine, and the transfer to the new engine. He testified there was no documentation as to the use of the old magnetos.

On cross-examination he agreed that he was in error when he thought the test flight, which involved the propeller diaphragm oil leak, was involving testing of a heater. He agreed that the test flight was for the testing of a pod.

Mr. Destad was shown a letter he wrote to Mr. Kirst outlining the reasons for the separation of his

business, and that letter was admitted as R-ss, and was dated April 22nd, 2015. There was a date also on the letter, which indicated August 2015, which was written over Mr. Kirst's name. Mr. Destad testified that he gave Mr. Kirst the letter on April 22nd, and the August date was not there at the time. It could have been written in later. He agreed that the letter did not indicate that Mr. Kirst had been conducting improper maintenance.

He testified he did not take pictures of the holes in the oil diaphragm that he testified about. He testified that an airworthiness directive had been issued for a diaphragm very soon after the incident that involved the propeller diaphragm problem in Mr. Kirst's aircraft.

He testified he wrote a letter for Mr. Kirst, recommending him for an A&P examination. However, he testified he did not endorse him for an IA exam, or his certificate. He testified he did not believe Mr. Kirst had the necessary experience to obtain Inspection Authority. He testified Mr. Kirst presented the experience to the FAA, and the FAA bought it.

He testified he did not review anything before his testimony. He had not read Mr. Kirst's deposition, or any other deposition before his testimony. Mr. Destad denied that Mr. Kirst asked him for assistance in locating an engine after the prop strike. He thought other people

had told Mr. Kirst about the engine.

He testified he did not tell Mr. Kirst or Mr. Daniels how to make an entry in the engine log book. Mr. Destad again testified he did not assist Mr. Kirst do any engine testing, testing of the engine, or instrument calibration, and did not participate in any way in the testing of the engine.

Mr. Destad testified that Mr. Kirst said at the time that he had performed the tests he should have. Mr. Destad stated that he would have no reason to doubt that indeed Mr. Kirst had performed the tests.

Again, he testified he did not know how long it took for Mr. Kirst to install the engine. He testified that Mr. Kirst had ordered a propeller, but he did not know when Mr. Kirst put on the propeller, or installed the propeller.

Mr. Destad testified he was not asked for advice by Mr. Kirst. He testified he did not see Mr. Kirst run up the engine once the installation was done. He testified Mr. Kirst was qualified to run up the engine, as he had done that before a number of times.

Again, Mr. Destad testified they did not have any authority to calibrate instruments, according to the regulations. He testified that if calibrating instruments was called for in his work, he sent them out to a

repair shop who would calibrate and certify them as being calibrated.

Mr. Destad was shown some documents to refresh his recollection that Mr. Kirst had removed cylinders on his 152, but did not replace them, as Mr. Destad had testified to earlier. He agreed that the record indicated that he replaced the same cylinders after taking them out.

He was asked about the prop strike, which Mr. Kirst described as the propeller hitting a snow bank. He replied, you mean when the nose gear collapsed? He testified that he went out to look at the aircraft when it happened. He testified that the prop hit the ground. The follow-up question to that statement was, do you have pictures of that? Mr. Destad testified he did not.

Mr. Destad testified he knew the name of the instructor at the University of Alaska's A&P school. But he testified he did not have any conversations with that person and Mr. Kirst regarding the need for an inspection after the prop strike.

He reviewed the letter from Inspector Smith, and testified the letter indicated that the FAA identified three methods for dealing with the prop strike, including other methods of inspection that the FAA could consider. They were willing to do that. Mr. Destad testified again that Inspector Smith had hand-delivered the letter in this

case.

He testified that engine log, prop log, governor log, heating log, diaphragm and other items were all logs that are required to be kept for an aircraft.

As to the magnetos, he testified he saw them during the engine tear down. After that he had dug through Mr. Kirst's records, and found out that they had been removed by Mr. Kirst from the prop strike engine, and were installed in the engine that was sold by Mr. Daniels.

He was shown information in a small manila envelope that was taped to the engine log book, which included information about the magnetos. Mr. Destad testified he did not remember seeing that small envelope at the time that he had completed his review of the annual inspection of the aircraft.

Mr. Destad testified he did not tell Inspector Major about the oil diaphragm leak during the engine tear down. After the crash he remember bringing the information to the FAA's attention during the investigation of the case, but does not remember exactly when that was.

On redirect he testified that he did not have any concern about Mr. Kirst being able to do a test run on an aircraft after an overhaul. He testified that there should be records and notations about the run up and the test flight to complete the overhaul.

He testified he was not involved in the maintenance of Mr. Kirst's aircraft. Mr. Kirst did all of the maintenance himself on his aircraft. Mr. Kirst handled all of the discussions or communications with the FAA regarding the aircraft in his businesses. Mr. Destad testified, again, that he had been cut out of the process, even though he was the Director of Maintenance.

He testified as to his duties as the Director of Maintenance, on recross. He testified that the ops specs also identified the Director of Maintenance duties. He testified his duties as far as an Inspection Authority are identified in the Federal Aviation Regulations. He testified he cannot ignore his duties as an IA or a Director of Maintenance, and that he cannot allow an A&P working for him or with him to ignore the regulations. He testified that is not what happened in this situation.

In response to my questions he testified that he did not have to sign the log books if he supervised Mr. Kirst performing a task that he was doing for the first time. I asked him if he had the instruments and tools identified in the complaint to perform the testing. He testified he did not. Again, he testified that Mr. Kirst may very well have gone out and borrowed the tools or bought the tools for the testing, and had performed the testing when he was not there. He testified he did not instruct

Mr. Kirst to put the magnetos from the old engine into the new engine that he purchased from Mr. Daniels.

I asked him the same question I had asked Mr. Kirst during his testimony. I had asked Mr. Kirst if he felt that Mr. Destad had been lying under oath during his testimony. Mr. Destad seemed taken aback when I informed him that Mr. Kirst had indicated that he thought that Mr. Destad was lying under oath. He seemed to be taken aback, and he was very reluctant to make the same charge against Mr. Kirst. However, he did indicate that if that was the case, it was Mr. Kirst who was not being truthful in his testimony.

I asked him about whether Mr. Kirst had found a vertical lifter in the hangar. Mr. Kirst stated he ran out from the shop and grounded the airplane the part had come from. Mr. Destad indicated he didn't remember anything of that nature. He testified he did not remember any time Mr. Kirst grounded an airplane he had been working on, and he could not remember an instance where he was not putting oil in an aircraft that he had worked on.

I told him Mr. Kirst, during his testimony, had said that he had written notes, and took down readings, and made charts of the run up and the test flights. But Mr. Kirst testified that Mr. Destad had taken them. When I asked Mr. Destad if he had taken these documents, charts,

records, he again seemed taken aback, and answered without hesitation that he had not.

On cross-examination to my questions he was asked if he knew a Mr. Rue, who owned the airplane on which he had worked and had left out a hydraulic lifter. He testified that in that situation he had left out a part, and Mr. Kirst had caught the problem. He testified the part was put in the airplane, but that occurred before the aircraft was released for service. Mr. Kirst did not go out and ground the plane. As to the claim that he left oil out of an engine in an aircraft owned by a Mr. Dick McLain, Mr. Destad indicated he never forgot to put oil in an aircraft. Again, he testified that Mr. Kirst would have to purchase or borrow the tools necessary to complete the overhaul test, and test flight.

That completed, essentially, the testimony in this case. What I will do at this point is to discuss the evidence in this case as it relates to the decisions I have to make.

However, first of all, at the conclusion of the Administrator's case the respondent moved for a directed verdict relative to the cited violations of both 14 C.F.R. § 43.12(a)(1), and 14 C.F.R. § 43.15(a)(1).

The Administrator conceded during discussion that he did not sustain his burden of proving the violation

of 14 C.F.R. §43.15(a)(1), based on the fact that their expert witness was not qualified as an expert in the analysis and the wear of engine parts. Therefore, that issue could not be addressed, and that violation could not be sustained by the Administrator. However, the Administrator argued that, in his case in chief, he sustained his burden of proving his *prima facie* case relative to the falsification citation.

I granted the respondent's motion for a direct verdict as to the violation of 14 C.F.R. § 43.15(a)(1). I found that the Administrator has not sustained his burden of proving Mr. Kirst performed an inspection required by Part 91, 125, or 135 of the Federal Aviation Regulations, and failed to determine whether the aircraft, or portions thereof under inspection, met all applicable airworthiness requirements.

Thus, the only issue that remained before me in this case is whether the respondent violated 14 C.F.R. §43.12(a)(1), in that the respondent was alleged to have made a fraudulent or intentionally false entry in a record or report that is required to be made, kept, or used to show compliance with the requirements of Part 43 of the Federal Aviation Regulations. As I previously mentioned, the Board has adhered to a three-prong standard to prove a falsification claim. The Administrator must prove by a

preponderance of reliable, probative, and credible evidence that a pilot or mechanic made a false representation. That false representation has to be in reference to a material fact. And that false representation had to have been made with knowledge of the falsity of that fact. Therefore, in order to find a falsification in this case, and that Mr. Kirst is indeed in violation of 14 C.F.R. §43.12(a)(1), I will use the Hart v. McLucas test to analyze the evidence before me.

The first issue I must address is whether the Administrator has proven the respondent has made a false representation in this case. The Administrator alleges that the respondent purchased the engine in issue in this case in May of 2011 from Mr. Daniels.

It is alleged that the engine could not be described in any required maintenance record or form as being overhauled unless it had been disassembled, cleaned, inspected, repaired as necessary, reassembled, and tested in accordance with the Teledyne Continental Overhaul Manual for E-165, E-185, and E-225 series aircraft engines. The overhaul manual required that the crankshaft be magnetically tested, and it required specific tests for which certain items, including the wood test club, propeller, a water manometer, a cylinder head temperature gauge, and thermocouple and calibrated test instruments was required.

The Administrator alleges that on May 1st, 2011 Mr. Daniels made a log entry in the maintenance records which indicated the engine had 1,165.9 hours of time in service since the major overhaul, that he had sent out various parts for inspection, and that the engine was assembled in accordance with the Teledyne Continental Service Bulletin, SB97-6A, and Continental Overhaul Manual for E-225. The Administrator alleges that his entry does not include any statement to the effect that the engine had been overhauled. Mr. Kirst is alleged to have made the next entry in the maintenance record for the engine, in which he stated that he installed the engine in aircraft N4827K, and that the engine had zero time since overhaul.

The Administrator alleges that on 13 different dates Mr. Kirst made log entries in the engine log book, indicating that the engine had increasing hours of use on the engine that started at zero. According to the Administrator, at no time during the period from when Mr. Daniels purchased the engine, until on or about June 7th, 2011, when respondent made the entry that the engine had zero time since overhaul, had the crankshaft been magnetically inspected. Further, the Administrator alleged that at no time after Mr. Daniels reassembled the engine as referenced in his maintenance entry dated May 1st, 2011 were post-assembly tests performed, because the facility where the

engine was located during that period of time did not have available for use a wood test club propeller, a water manometer, a cylinder head temperature gauge and thermo-couple, or calibrated test instruments.

It is alleged that each of the 13 entries in the maintenance records was intentionally false, because when Mr. Kirst made them he knew at the time that he made the entries that the engine had not undergone an overhaul that met the requirements of the overhaul manual and service bulletin. Each of the entries understated the engine time in service by 1,165.9 hours. Further, the Administrator alleges that the 13 entries were intentionally false, because Mr. Kirst knew that the engine had not been over-hauled since it had been purchased by Mr. Daniels, and that each of the entries understate the engine time since overhaul.

So, the first question I have to address is whether there is a false representation in this case, as alleged by the Administrator. The first question I will address is whether or not the crankshaft in this case was magnetically tested, as alleged in Paragraph 9 of the Administrator's complaint.

The deposition of Mr. Kirst was read into the record. He testified in his deposition he believed the crankshaft in the engine he purchased from Mr. Daniels had

been magnetically tested, because he was provided a yellow tag from Mr. Daniels. The yellow tag was provided by ECI, which Mr. Kirst stated was the most prestigious company in the country when it came to crankshaft inspection. Mr. Kirst did testify in his deposition that the yellow tag did not specifically indicate that the magnetic testing was done on the crankshaft. In his testimony at hearing Mr. Kirst testified that when he received the yellow tag he had no concern about whether the crankshaft had been magnetically tested. He also testified that Mr. Destad did not have any problem that the yellow tag indicated that the crankshaft had been inspected. Mr. Kirst also testified he believed the crankshaft was tested because he believed it was measured, and the yellow tag indicated that it was of standard size. He also testified that ECI had an FAA PMI, who he believed instructed and approved what ECI included on the yellow tag.

Francis Daniels testified that he had sent the crankshaft to ECI in San Antonio for an overhaul, because they are experts in that field. He testified he did not know specifically what he asked ECI to do, but he wanted a complete overhaul so he could determine if the crankshaft was airworthy. On cross-examination he testified he did not ask ECI to only perform an ultrasonic test on the crankshaft. He testified he expected ECI to do everything that

was required for a crankshaft overhaul.

Mr. Richard Johns testified that he worked as a warranty analyst for ECI. He testified that the yellow tag in this case indicated that the crankshaft had been magnetically tested or inspected. He testified that all crankshafts that came to ECI at the time this crankshaft was evaluated were all magnetically tested. He testified that the same stamp that appears on the yellow tag in this case was used for all yellow tags for crankshaft inspection. He testified that if the crankshaft had not been magnetically inspected, it would indicate on the yellow tag an NA next to the printed information about magnetic testing. If a customer only wanted certain tests done other than the tests that were generally done by ECI, then an NA would be indicated next to that item in the yellow tag.

Mr. Johns testified he did not work for ECI in 2002 when the crankshaft was inspected, but he verified his understanding of the process; all crankshafts were magnetically inspected with Mr. David Sheer. Mr. Sheer is an engineer who worked with ECI in 2002.

Mr. Johns testified that he provided this information to an FAA inspector by the name of Mr. Charlstom. The Administrator presented no evidence to attack Mr. John's testimony as being false and questionable. They

only argued that Mr. Johns did not work for ECI in 2001, but that does not mean that the information he provided under oath is not credible.

Mr. Richard Walker, an A&P mechanic with Inspection Authority, testified for Mr. Kirst and indicated he believed the yellow tag indicated that the crankshaft in this case had been magnetically inspected. He also testified that if the yellow tag had not been associated with the invoices and other documents related to the crankshaft, he would have questioned as to whether or not the crankshaft had been magnetically inspected. He testified he would have contacted ECI for clarification.

Aviation Inspector Major testified that during his investigation he was not provided the yellow tag for the crankshaft. Based on the information available to him at the time he prepared his investigative report, he included the invoice, which made no mention of the magnetic testing. Therefore, he did not believe that magnetic testing had been done on the crankshaft in issue in this case. He also testified that when he was provided with the yellow tag, it did not change his opinion. He testified that the yellow tag does not have the serial number of the crankshaft, but rather indicates L-45. He testified he could not say if the yellow tag could be associated with the crankshaft in this case.

On cross-examination he testified he did not follow up with ECI once he obtained the yellow tag. He contacted the FAA PMI for ECI, who informed him ECI was purchased by Continental Motors, and no longer in existence. Inspector Major testified that he did not pursue the issue any further.

Aviation Inspector Tupper testified that he had seen the yellow tag at Exhibit R-e. He testified that in his opinion the yellow tag did not prove the crankshaft had been magnetically tested. He testified everything else listed on the yellow tag is backed up by other documentation, except the crankshaft magnetic testing. He testified he does not dispute that the yellow tag relates to the testing done on the crankshaft in this case. He does not see the testing billed on Exhibit R-e, pages 5 and 6. He testified that he would think that he would also see some dimensions noted on the yellow tag if the crankshaft had been measured.

He testified that in his experience, contrary to other testimony, that ECI was not the premier repair station. Inspector Tupper also testified that the yellow tag alone did not indicate that the crankshaft had been magnetically tested. According to Mr. Tupper, generally more than one document is needed to reach the assumption of the conclusion that a magnetic testing had been done on

a crankshaft. He agreed that the yellow tag could return a part to service, but a simple invoice of charges for services rendered could not return a crankshaft to service. When asked if a mechanic would always have to compare the invoice and the yellow tag to determine if magnetic testing had been done, he responded by saying, sometimes yes, and sometimes no.

He testified that the part number was wrong on the yellow tag, so inquiries should have been made to determine if magnetic testing had been done. Inspector Tupper was asked what inquiries he made to determine if the crankshaft had been magnetically tested. He replied he reviewed documents; he contacted Continental Motors, but he did not recall who he spoke to. He testified he asked about the plating noted on the yellow tag. He testified that the plating was explained to him, and it appeared he did not have a dispute with the plating that was done and described on the yellow tag. He testified he did not ask about whether the crankshaft was magnetically tested, however. He indicated that he knew records would not be kept for more than three years.

When asked if he called ECI, he testified that FAA inspectors in Texas had visited ECI to see if there were any additional records. He could not remember who those inspectors were. When asked if there were any reports,

Inspector Tupper indicated he did not know, that Inspector Major coordinated any reports on this matter.

Again, he opined that the yellow tag was insufficient to prove or establish that the crankshaft was magnetically tested. When I asked Mr. Tupper if an employee from ECI had testified that all crankshafts were magnetically tested, whether it was requested or not, would that change his opinion. Inspector Tupper responded that he would still need additional information.

I agree with Inspector Tupper that additional information is indeed necessary. However, I feel that more information is indeed necessary for the Administrator to prove that the crankshaft in this case was not magnetically tested.

I found the testimony of Mr. Johns to be convincing and credible. He was a very reluctant witness, who only agreed to testify by phone. He had his attorney with him. Neither the respondent nor the Administrator, it appeared, was certain as to how and what specifically Mr. Johns was going to testify to under oath.

Mr. Daniels understood that he requested an overhaul of the crankshaft to ensure that it was airworthy, and Mr. Walker believed that the crankshaft had been magnetically tested, based on the information that he was provided during the course of the hearing. He believed

that the fact that it (magnetic testing) did not appear on the billing that was provided from ECI, that that could simply indicate a "clerical error." Whether it was a clerical error is undetermined, because the Administrator did not inquire as to that possibility.

Inspector Tupper testified that he contacted Continental Motors, but he cannot recall who he spoke to. He asked about the plating noted on the yellow tag, but he didn't ask about whether or not the crankshaft had been magnetically tested. It's difficult to understand why he would ask about the plating of a crankshaft, and be satisfied with the answers he was provided, because that is essentially not an issue in this case. However, whether a crankshaft was magnetically tested is a critical issue of this case, and he did not ask about that. He only testified he knew that the records were not kept for greater than three years. It is uncertain why he would ask about the metal plating if he understood that records were not kept for greater than three years.

The Administrator's witnesses testified that the crankshaft serial number does not appear on the yellow tag; instead, the letters L-45. Thus, they question whether the crankshaft was magnetically tested. At the same time the Administrator does not question the authenticity of the yellow tag. Rather, they concede that the

yellow tag is associated with the crankshaft in this case. I find that the Administrator has not proven by a preponderance of the evidence that the crankshaft in this case was not magnetically tested. I give the greater weight to the witnesses I have found credible in this case. I find that the Administrator has not carried his burden. Therefore, I cannot find the Administrator has proven the allegations in Paragraph 9 of the complaint.

As to Paragraph 10 of the complaint, I now turn to those allegations. The paragraph again indicates that at no time after Mr. Daniels assembled, reassembled the engine, as referenced in the maintenance entry dated May 1st, 2011, were post-assembly tests performed, because the facility where the engine was located during that period of time did not have available for use a wood test club propeller, a water manometer, a cylinder head temperature gauge, and a thermocouple, or calibrated test instruments. There is no dispute that the engine purchased from Mr. Daniels was installed in Mr. Kirst's aircraft, at Mr. Destad's hangar. This is where any form of agreement ceases to exist.

Mr. Kirst, in his deposition and his testimony, describes how the engine he purchased from Mr. Daniels was installed in his aircraft, how it was tested, how the instruments were calibrated, and how it underwent a test

flight to comply with the requirements of the overhaul manual. Mr. Destad, on the other hand, testified in complete contradiction to the testimony of Mr. Kirst. Mr. Kirst testified that he had never installed an engine and completed an overhaul on the type of aircraft that he owned. Therefore, he relied upon Mr. Destad to instruct and guide him in every step in that process. In his deposition he agreed that Paragraph 4 of the complaint indicated that magnetic testing of the crankshaft was required. As to whether or not a wood test club was necessary to test the engine, Mr. Kirst testified he did not believe a test club was necessary, and that the test could be done using a real propeller.

He agreed that a water manometer, a cylinder head temperature gauge and thermocouple, and calibrated instruments were required, as indicated in Paragraph 4 of the allegations of the complaint. He testified he had a water manometer which had been calibrated by Mr. Destad. He testified that the thermocouple and head temperature gauge tests were conducted from the instrument panel in the aircraft in this case.

Mr. Kirst testified he knew the crankshaft had been magnetically tested. Mr. Kirst does not dispute that in order for the engine to be considered documented as overhauled it must meet the requirements of the overhaul

manual at A18, Page 97 to 105, and the service bulletin from Teledyne at A17. To the contrary, Mr. Kirst asserts he complied with all of the requirements, which allowed him to document his engine log book that he completed the overhaul, and indicated zero hours since major overhaul.

Mr. Kirst testified that Mr. Destad was his mentor, who signed off for him to take his A&P exam, and who signed off so that he could receive his Inspection Authority Certificate. He testified Mr. Destad was a leader, and he did whatever Mr. Destad instructed. He testified he worked with Mr. Destad every day prior to his accident. Mr. Kirst testified that Mr. Destad guided him, instructed him, and assisted him in all aspects of installing the engine in his aircraft, and completing testing and flight testing, in order to document that the engine had been overhauled.

He testified that he started a new log book for the engine, because Mr. Fred Destad thought it would be better to have a new log. Mr. Kirst testified Mr. Destad told Mr. Daniels what to write in the log book. Mr. Destad told him, Mr. Kirst, what to write in the log book. Mr. Kirst testified he did what Mr. Destad told him.

He testified that after Mr. Daniels left, that he and Mr. Destad moved the accessories from the old engine, the one with the prop strike, to the new engine that he had

just purchased from Mr. Daniels. Mr. Kirst testified that Mr. Destad wanted the old magnetos put on the new engine, because they were yellow tagged and only had a few hours on them. He testified that during the course of installing the engine Mr. Destad taught him how to use specific instruments, such as a time rite degree wheel. He agreed that one person could perform the engine installation, but it was easier with two persons. In this case, he and Mr. Destad installed the engine.

Mr. Kirst testified, and I quote, "Before we installed the engine we calibrated the instruments." He testified that Mr. Destad took his hot plate and a two quart saucepan of oil with a thermometer, and they calibrated the cylinder head temperature gauge, and exhaust temperature gauges. He says he recorded the readings and kept them in a file folder with the records that Mr. Daniels provided. According to Mr. Kirst they then calibrated the rpm. Mr. Kirst described the instrument panel gauges used to perform the test run. A photo of those gauges is at Exhibit R-mm.

Mr. Kirst testified that they, meaning he and Mr. Destad, installed the water manometer and auxiliary pressure gauge. Mr. Destad had pulled the service bulletin about it, and studied it. A photo of the water manometer is included as an exhibit as R-w. He testified that he and Mr. Destad calibrated the oil temperature gauge. He

described the process, with him in the aircraft, and Mr. Destad outside, and monitoring the engine when this was done. He testified that Mr. Destad calibrated the water manometer by simply marking the level of water in the tube. Mr. Kirst then discussed Exhibit R-y, Page 83, which is the Continental Overhaul Manual that lists test equipment. Mr. Kirst testified that he and Mr. Destad, before starting any of this process, reviewed it.

He testified that Mr. Destad told him, Mr. Kirst, that Mr. Destad had all the tools, so, according to Mr. Kirst, they went off and did the ground test. They used a propeller instead of a test club. Mr. Kirst testified that he made up charts regarding the readings from the gauges. Mr. Kirst testified that Mr. Destad helped him prepare the charts and notes of the testing.

He testified that Mr. Destad had no problem with the process of calibrating the instruments. He testified it made perfect sense to him. They weren't certifying the instruments, they were just simply calibrating them.

Mr. Kirst testified that when the test run was made Mr. Destad was there. He took notes on the process. Again, Mr. Kirst testified he had charts, notes, which he included in a file folder, and which were kept in Mr. Destad's hangar. Mr. Kirst then testified, and I quote, "We did the test flight," this indicating that both he and

Mr. Destad performed the test flight in this case. Thus, according to Mr. Kirst, Mr. Destad was involved in every aspect of the installation of the engine in this aircraft, from instructing what entries were to be made in the engine log when it arrived at the hangar, to the very end of the overhaul process, and performing the test flight.

Mr. Destad, on the other hand, testified that he had nothing to do with the installation of the engine or the testing. Had nothing to do with the ground run or the test flight. He testified that the day Mr. Daniels arrived with the engine in the hangar that he was asked by Mr. Kirst if he and Mr. Daniels could use the kitchen.

Again, he testified that Mr. Kirst had wanted Mr. Daniels to indicate the engine was overhauled. He indicated to Mr. Kirst that that could not be done. When Mr. Kirst wanted to argue about it, he put Mr. Kirst in touch with Inspector Smith of the FAA, who explained the situation to him. Mr. Destad testified he handed the phone to Mr. Kirst, and he left the room. He testified that Mr. Kirst later told him that Inspector Smith had agreed with what Mr. Destad had indicated were the appropriate -- what types of log book entries could be made.

Mr. Destad testified that after the entry was made he had no involvement in the completion of the overhaul of Mr. Kirst's aircraft. According to Mr. Destad, Mr.

Kirst installed the engine on his own, and he, Mr. Destad, had nothing to do with it. He testified he did not see the test run performed by Mr. Kirst. He testified he could perhaps not have been at the hangar when this was done. He testified that Mr. Kirst told him that he had performed the test run.

Mr. Destad testified that Mr. Kirst had his own toolbox with compression testing tools and timing lights, and Mr. Kirst had access to all of Mr. Destad's tools, as well. Mr. Destad testified he did not have a test club -- wood test club, or water manometer. He testified he had used a thermocouple and temperature gauge, but nothing that could be used to test an engine.

He testified he does not have tools to calibrate instruments. Mr. Destad testified that a repair station would perform that type of work. He was not qualified to do calibration of instruments, and was prohibited from doing so by the regulations. He testified that if calibration had been done, the instruments would have to be removed, sent to a repair station for recalibration, then a log book entry would have to be made. He has never calibrated instruments, because he's not qualified to do so. He does not perform overhauls.

He testified he saw Mr. Kirst working in the hangar, but he was not with him to supervise him, or watch

what Mr. Kirst was doing when Mr. Kirst installed the engine. He testified that one man could install the aircraft engine. All that was needed was a hoist, torque wrench, manuals, and hand tools, and Mr. Kirst had all of those tools.

When he was asked if he knew of any records that were made and kept by Mr. Kirst during the engine installation, Mr. Destad testified he was not aware of any records made by Mr. Kirst. When asked if he knew of any records made relative to the test runs, Mr. Destad testified the only records he was aware of were the engine log book entries made by Mr. Kirst.

On recross-examination, he testified, for a third time, he did not help Mr. Kirst install the engine. He saw no tests performed on the airplane by Mr. Kirst. He did not see Mr. Kirst do a run up, or see a run up conducted on the airplane.

He testified he never had a manometer, never owned one, and never saw Mr. Kirst with a manometer. He testified he does not have a thermocoupler that could be used to test an engine. He testified he could not perform the test because he did not have the instruments, even if he had helped Mr. Kirst perform the test.

He testified he never saw Mr. Kirst take instruments out of the aircraft and send them out for

calibration. He testified that while he was away Mr. Kirst could very well have done it. He could have purchased tools, such as a manometer and thermocoupler to perform the testing.

He testified he had nothing, again, to do with the aircraft after the engine was installed, and did not speak to Mr. Kirst about what indeed had been done to complete the overhaul. Mr. Destad reviewed the service bulletin at A16, which indicated you can use an aircraft to complete the test, in lieu of a test cell.

He was asked if he remembered going to buy a thermometer to calibrate the instrument on Mr. Kirst's aircraft, as Mr. Kirst testified. He replied, he did not do that. He testified this type of testing can be done as trouble shooting, but cannot be used to calibrate and certify an instrument as being calibrated. When asked if he remembered calibrating the instrument with Mr. Kirst, he testified again that he did not.

Other issues were argued during the course of the hearing, such as whether calibrating instruments meant the instrument also had to be certified. Did they mean the same thing? Could they be calibrated without being certified? Did they have to be certified and calibrated? Those were things that were discussed at length during the course of the hearing.

There were arguments as to whether an A&P could perform calibration, as Mr. Kirst and Mr. Walker contend, or if it is prohibited by regulation, as testified by Mr. Destad and Inspector Tupper, and the instruments had to be sent out to a repair station for calibration and certification. These issues and arguments would indeed be relevant to this case if any type of documentary evidence provided to establish that any of the testing required by the overhaul manual and Teledyne service bulletin was actually performed.

Respondent has provided no documentary proof that any of the required testing required by the overhaul manual and the service bulletin was done. The only proof he provides is his testimony that he and Mr. Destad performed all of the required tests and calibrations. While he has testified he made notes and charts to document the readings of the calibration of instruments, and the results of testing required, respondent has not offered those notes and charts into evidence.

Respondent provided no evidence that he had a wood test club propeller, a water manometer, a cylinder head temperature gauge, or a thermocouple. He testified that Mr. Destad had all of the instruments and tools necessary, but then he inconsistently testified that he brought a water manometer from his home. He provided a

photo of what he represented to be the water manometer which appeared to be a hose tossed on the cement floor in a collection of other tubes.

Despite the fact that the Administrator did not object to the authenticity of the photo, or object to its admission, I find that the photograph proves nothing. There's no evidence as to where or when the photo was taken, what the tubes in the photographs are, or to whom the purported instrument belongs. The photo could very well have been taken at someone else's hangar or repair shop.

Mr. Kirst also testified that a wood test club was not necessary, and testing could be performed with a propeller. However, he provides no evidence to demonstrate that he in fact used a propeller instead of a wood club. While there is testimony that he purchased a new propeller, that, in and of itself, does not established that he used that propeller he purchased to perform the required tests. There's no proof of that.

Most troubling is Mr. Kirst's testimony as to why he did not offer the notes and charts he asserts he made while testing the engine and performing the test flight. He testified that he no longer has those because Mr. Destad took them; he essentially stole them. Mr. Kirst offers no proof of that claim, other than to assert that Mr. Destad feared some type of liability. Thus, with no documentary

proof that required testing was performed on the engine in issue in this matter, the case truly must be decided on credibility.

Is Mr. Kirst to be believed in his claim that all the required tests, calibrations, and test flights were performed under the guidance of his mentor and leader, Mr. Destad? Or is Mr. Destad to be believed that he had no part in the installation of the engine and testing of the engine, and calibration of the instruments and test flight?

Mr. Destad is not the subject of any FAA action, nor is there any indication or offer of proof from Mr. Kirst that Mr. Destad faces any liability stemming from this case or any other case. Clearly there was a parting of the ways between Mr. Kirst and Mr. Destad, but that could be the product of the fact that Mr. Kirst appears to want to blame Mr. Destad for directing Mr. Kirst in making false entries in the log book that is at issue in this case, or perhaps Mr. Destad is to be blamed because he was the Director of Maintenance for Mr. Kirst's business.

Mr. Destad testified he did not like the things that he was seeing while assisting Mr. Kirst as his representative, after Mr. Kirst's aircraft accident. Mr. Destad testified he believed Mr. Kirst wanted only to follow certain regulations and he chose what to document and what not to document. He testified he tried to

amicably ask Mr. Kirst to leave his hangar. I found Mr. Destad's testimony to be credible both on direct and cross-examination. He was never evasive. He appeared to be forthright in his answers. His testimony has been consistent on direct, cross, redirect, recross, and in response to the questions I have asked him.

Mr. Destad was reluctant to provide testimony to damage Mr. Kirst. He testified that while he himself did not have the tools necessary to perform the required testing and flight test, he made it clear that Mr. Kirst may very well have gone out and purchased the tools, or borrowed the tools to perform the tests that were required. He offered Mr. Kirst every benefit of the doubt as to his testimony. I did not detect that Mr. Destad displayed any animosity toward Mr. Kirst during the course of his testimony. When I asked Mr. Destad if he had taken Mr. Kirst's charts and notes relative to the testing of the aircraft, he appeared genuinely surprised by the accusation, and answered that he did not.

Even when I informed him that Mr. Kirst had testified that Mr. Destad lied under oath, he again appeared to be taken aback by the accusation. It was apparent that he found it difficult to testify that Mr. Kirst was the one being untruthful in his testimony in this case.

Mr. Kirst, on the other hand, has his A&P and IA certificates to lose in this action, despite the fact that he testified that he will face certain liability in any event. His testimony is inconsistent. He testified Mr. Destad provided all the tools required for the testing, then changed his testimony to state he brought a water manometer from home.

His testimony was vague. He testified that he could not remember when he performed the calibrations. It may have been a day, or two, or three days before the engine was installed. He testified he could not remember what day he started the installation of the engine.

He testified he made notes and charts, but did not indicate where they were until I had to ask him what happened to them. At that point he testified that they had been stolen by Mr. Destad.

He was evasive and argumentative when asked for more specifics on cross-examination regarding the dates he calibrated the instruments. He did not answer the questions, but instead engaged in a discussion as to how the questions asked by the FAA counsel were relevant.

In his deposition, he testified the testing occurred over six to eight days. At trial he testified it took one day to complete the testing. He testified it took five to eight hours to complete the testing, including the

test flight. However, he also testified the ground check only lasted 40 minutes to an hour.

When asked about a prop strike in his aircraft he became very angry, stating the aviation inspector involved in the case knew better than to require him to take certain action to inspect the aircraft before flight. He testified that sometimes he disagreed with Mr. Destad when he was an A&P working with Mr. Destad. He disagreed with what Mr. Destad wanted him to put in the log books when the entries were not correct. He testified he did what he was told because he did not want to have to go out and find a new IA and someone else to do the work on his aircraft. If indeed this is true, this indicates he, Mr. Kirst is willing to compromise his integrity in the interest of not having to go find someone with Inspection Authority -- or a new mechanic to work on his aircraft.

I asked Mr. Kirst if he believed Mr. Destad was lying under oath when he testified in this hearing. Mr. Kirst was quick to respond that Mr. Destad was a liar. He also testified that Mr. Destad was incompetent relative to his duties as an A&P, and as his duties with Inspection Authority. He testified he had to correct his work, and he had to ground a plane Mr. Destad had worked on and did not perform the work correctly. He testified that Mr. Destad had taken his notes and charts that he made during

the testing of the engine. When Mr. Destad was brought back to testify, and contradict or clarify Mr. Kirst's accusation, the response from Mr. Kirst was one of anger. Unlike Mr. Destad, who was reluctant to say anything bad about Mr. Kirst, Mr. Kirst had no qualms about calling his mentor and leader, the person who recommended him for his A&P exam, an incompetent, lying thief.

I do not find Mr. Kirst's testimony to be credible. I find Mr. Destad's testimony to be more credible in this case. Therefore, I find that the preponderance of credible evidence in this case establishes that the testing claimed to have been performed in accordance with the overhaul manual and the service bulletin in this case was not performed.

I find that the entries in the engine log were not directed by Mr. Destad, but were made by Mr. Kirst. I find that the 13 entries identified in Paragraphs 7 and 8 of the complaint have been established by a preponderance of the evidence to be false entries, and thus false representations. Having found that the entries are false representations, I turn to the next issue, whether or not those false representations are material.

The Administrator presented the testimony of Aviation Inspector James H. Tupper, who is qualified as an expert. When asked if the entries and maintenance records

in this case could influence the decision of the Administrator, Inspector Tupper testified that indeed, these entries could influence decisions that were made by the Administrator.

Mr. Kirst himself testified that he had to sign his name and include his A&P number in the maintenance records because the regulations require it for the purpose of responsibility. He further testified that documenting the maintenance record with his name and A&P number was necessary to determine who is responsible for the work, and for safety. Based upon the evidence I find that the Administrator has proven by a preponderance of the evidence that the respondent's false representations in this case are material.

I now turn to the last prong of the Hart v. McLukas test, and for that I must address whether the false representations were made with knowledge of the falsity of that fact. Mr. Kirst testified that he has a mechanical background that started in the early '70s when he began repairing bicycles. In 1971 he became an interprovincial automotive mechanic. He worked as an automotive mechanic and as a teacher, teaching auto mechanics.

He testified he subsequently obtained a BA and a credential in teaching. He taught automotive mechanics at a high school level, and at the community college level.

He testified he performed over 300 overhauls and 1,000 transmission rebuilds. Mr. Kirst is clearly proud of his accomplishments, as he included in the exhibits in this case his resume, which is at Exhibit R-nn.

As to his aviation experience, he testified the principles of engines between aircraft engines and auto engines is not that different. Shop manuals and service bulletins are different, but that's about it, he testified.

He testified his father purchased a fleet of aircraft, and that he was designated as a mechanic. He had a falling out with his father, and went into auto mechanics instead.

He testified that in 2005 or 2006 he began working for Mr. Destad in his spare time. And then he began to work full time. Mr. Destad subsequently signed him off to take his A&P exam. He passed the exam in 2010. He testified Mr. Destad subsequently signed off for him to take his IA exam, which he passed as well, and received his IA in 2015. Mr. Destad disputes this fact, he testified. His IA certificates were admitted into evidence at R-a.

He testified that he was once accused of being unable to perform his duties, and his certificate was in jeopardy. But he explained that and got that all cleared up, and his certificate was subsequently returned to him.

He admits that his A&P and IA training have

taught him how to make appropriate log book entries. It also taught him the importance of making accurate log book entries. As previously noted, he is required to sign his name and include his A&P and IA certificate number in the records for purposes of responsibility and safety. It is important to know who is responsible for the repairs.

Mr. Kirst is clearly experienced in automotive and aviation maintenance. He has been an educator; he is a pilot; he has owned and run Part 135 and Part 95 businesses. However, in his testimony in this case, relative to the overhaul of the engine that is the subject of this matter, he represents himself as essentially inexperienced, and nearly helpless when it came to documenting the engine log book entries, and performing testing required by an overhaul manual in this case.

He testified he followed the instructions of Mr. Destad, his mentor and his leader. He was only doing what he was told when he made the log book entries in this case. He was only doing what Mr. Destad told him to do in performing the claimed tests. Mr. Destad told him and Mr. Daniels what entries to make in the new engine log books. The implication is, if the log book entries that followed are false, it is the fault of Mr. Destad, as he directed what should be written in the log books. However, Mr. Daniels denies anyone told him what to write in the log

books, and Mr. Destad denies he directed any entries in the log book in this case.

Mr. Kirst has testified that he has made incorrect and, thereby, false entries in maintenance records, despite the fact that he knew they were incorrect. He did so to avoid seeking a new IA and mechanic to work on his airplanes. Certainly this, if his testimony is true, indicates that Mr. Kirst does not have a reluctance to make incorrect and false statements in the records.

I do not find Mr. Kirst's testimony in this case to be credible. He is an educated man with substantial aviation maintenance experience. He would be the first to tell you that he knows what he's doing. I'm convinced that he does know what he's doing. Based on all of the evidence I have discussed in this decision, I must find that Mr. Kirst made the 13 false entries identified in Paragraphs 7 and 8 of the complaint in this case, with knowledge of the falsity of that fact.

Based on all of the evidence in this case I find the Administrator has proven each of the elements of the Hart v. McLucas test by a preponderance of the evidence. I find that the Administrator has proven by the preponderance of the evidence that respondent violated 14 C.F.R. §43.12(a)(1) of the Federal Aviation Regulations.

Based on those findings I now have to make spe-

cific findings of facts and conclusions of law. In doing so I will use the Administrator's complaint in this case. The respondent has admitted the allegations in Paragraphs 1 and 2. He has denied the allegations in Paragraph 3. I find that the Administrator has proven by a preponderance of the evidence all of the allegations that are listed in Paragraph 3 of the complaint in this case, that at all times referenced herein, in accordance with 14 C.F.R. § 43.12(a), the engine could not be described in a required maintenance entry or form as being overhauled, unless it had been disassembled, cleaned, inspected, repaired as necessary, reassembled and tested in accordance with the Teledyne Continental Overhaul Manual for E-165, E-185 and E-225 series aircraft.

I find that the Administrator has proven the allegations in Paragraph 4 by a preponderance of the evidence. That allegation is, at all times referenced herein, the requirements set forth in the overhaul manual required that a crankshaft be magnetically tested, and it required specific tests for which certain items, including a wood test club propeller, a water manometer, a cylinder head temperature gauge, and a thermocouple, and calibrated test instruments were required. I find that the Administrator did not prove that the crankshaft was not magnetically tested in this case. I find that it was magnetically

tested. However, I find that the Administrator has proven the allegations that follow the sentence relative to the crankshaft being magnetically tested.

The respondent admits to Paragraph 5, Paragraph 6, Paragraph 7, and Paragraph 8. As to Paragraph 9, I find that the Administrator has not proven by a preponderance of the evidence that the crankshaft in this case was not magnetically inspected. I find that it was magnetically inspected based on a preponderance of the evidence in this case.

As to Paragraph 10, I find the Administrator has proven the allegation in Paragraph 10, that at no time after Daniels reassembled the engine as referenced in his entry dated May 1st 2011, were all of the post-assembly tests referenced in Paragraph 4 performed on the engine. Because the facility where the engine was located during the time period did not have available for use a wood test club propeller, a water manometer, a cylinder head temperature gauge, and a thermocouple or calibrated test instruments.

I find the Administrator has proven the allegations by a preponderance of the evidence on Paragraph 11, that each of the 13 entries referenced in Paragraph 7 and 11 were false, because at no time after the engine was purchased by Mr. Daniels had it undergone an overhaul that met the requirements of the overhaul manual and the service

bulletin. And each of those entries understate the engine's time in service since overhaul by 1,165.9 hours.

I also find that the Administrator has proven the allegation in Paragraph 12, that each of the 13 entries referenced in Paragraphs 7 and 8 were intentionally false, because you knew at the time you made each of them that the engine had not been overhauled since it had been purchased by Mr. Daniels, and that each of those entries understates the engine time since overhaul.

As to Paragraphs 13, 14, 15, 16, and 17, those paragraphs were the subject of the directed verdict in this case, which I granted at the conclusion of the Administrator's case.

I find that the Administrator has thus proven by a preponderance of the evidence the allegations that Mr. Kirst violated 14 C.F.R. § 43.12(a)(1). Having found the Administrator has proven the allegations as I have just described, by a preponderance of reliable, probative and credible evidence, I now turn to the sanction imposed by the Administrator in this case.

On August 3rd, 2011, Public Law 112-135, known as the Pilot's Bill of Rights, was signed into law by the President of the United States. The Pilot's Bill of Rights specifically strikes from 49 U.S.C. § 44703 language that provides that in cases involving Airman Certificate de-

nials the Board is bound by all validly adopted interpretations of law and regulations the Administrator carries out, unless the Board finds an interpretation is arbitrary, capricious, or otherwise not in accordance with the law.

The Pilot's Bill of Rights also strikes from 49 U.S.C. §§ 44709 and 44710, language that in cases involving amendments, modifications, suspensions, and revocations of Airman Certificates, the Board is bound by validly adopted interpretations of law and regulations the Administrator carries out, and of written agency policy guidance available for the public related to sanctions to be imposed under this section, unless the Board finds an interpretation is arbitrary, capricious, and otherwise not in accordance with the law.

Thus, because of the Pilot's Bill of Rights, I'm no longer bound to give deference to the Federal Aviation Administration, by statute. The agency, however, is entitled to judicial deference due all other federal administrative agencies under the Supreme Court decision of Martin v. Occupational Safety and Health Review Commission. And that is at 499 U.S.C. § 144, also at 111 S.Ct. 1171. In applying the principles of judicial deference to the interpretation of law, regulations, and policies in this case, I must analyze and weigh the facts and circumstances in each case to determine if the sanction selected by the Adminis-

trator is appropriate. What that means is that I can weigh mitigating or aggravating circumstances to determine whether or not the sanction is appropriate. The Administrator has argued that the Administrator is due deference in this case, just as any other executive branch is due deference. He has made his sanction guidelines a part of the record in this case, which indicates that revocation is the appropriate remedy for falsification. Respondent argues that no sanction is appropriate in this case, and argues that the remaining cited violations should be dismissed. Respondent's counsel has argued that the Administrator has taken this action against Mr. Kirst because they do not like him. I cannot find that the respondent's arguments are compelling, or in any way present mitigating factors which would warrant the imposition of a lesser sanction. I find that the Administrator's arguments relative to the appropriate sanction in this case to be compelling, and supported by the facts of the case.

Board precedent firmly establishes that even one intentional falsification compels the conclusion that the falsifier lacks the necessary care, judgment, and responsibility required to hold any Airman Certificate. And that is the case of Administrator v. Berry. That's NTSB Order EA-2689, and that is a 1988 decision.

I therefore find that the sanction sought by the

Administrator is appropriate and warranted in the public interest in air commerce and air safety. Therefore, I find that the emergency order, the complaint herein, must be and shall be affirmed as discussed in this decision.

ORDER

ADMIN. JUDGE MONTAÑO: The emergency order of revocation, the complaint herein, is hereby affirmed as to the allegations I have described in this decision. The respondent's Airman Mechanic Certificates, including Airman Mechanic Certificate number 2933061, with airframe and power plant ratings, and Inspection Authority, be, and is hereby revoked.

This order is issued on the 5th day of August, 2016, at Washington, DC.

EDITED ON

September 21, 2016 Alfonso Montaño

Chief Administrative Law Judge