

RAM AIRCRAFT

**The Engine Specialist**

FOR CESSNA, BEECHCRAFT, & CIRRUS AIRCRAFT



# AIRFRAME MAINTENANCE RECORDS

Registration No. N1557T  
Serial No. 414-0272



## AIRFRAME MAINTENANCE RECORDS

Log No. 5

Aircraft Registration No. N1551T

Model 414

Serial No. 414-0272

Waco Regional Airport  
7505 Karl May Drive • P.O. Box 5219 • Waco, Texas 76708  
Phone: (254) 752-8381 Fax: 254-752-3307  
[www.ramaircraft.com](http://www.ramaircraft.com)

DATE	TOTAL TIME IN SERVICE	TOTAL TIME SINCE OVERHAUL	TACH OR RECORDING METER TIME	DESCRIPTION OF WORK PERFORMED— SIGNATURE & CERTIFICATION NO. OF PERSON PERFORMING WORK
				TOTALS brought forward from previous page

Date	Total Time In Service	Recording Meter Time
12/18/19	7022.3	397.4

Cessna S/N 414-0272 N1557T



RAM Aircraft, Limited Partnership • Waco Regional Airport

Above referenced aircraft modified per installation of STC SE4327SW-D 335 HP engines. Installed intercooler scoops per STC SA8054SW-D. Installed RAM FAA PMA nose bowls. Increased maximum takeoff weight to 6765 lbs per STC SA8424SW-D. Flight Manual Supplement FM1030 Rev. B installed in aircraft. See 337 and attached form 8110-3 for approval of compatibility with vortex generators previously installed per STC SA00024SE. Installed RAM overhauled engines L-504184 and R-514737. Installed new Hartzell ScimitarPlus propellers, left s/n EB8401B, right s/n EB8403B. 78" propellers approved I/AW STC SA8424SW-D. Installed RAM FAA-PMA 1719-3 synchrophase system. Transducer installation per STC SE5726SW-D. Slick pressurized magnetos p/n 6320 installed per STC SE4651SW-D. See 337. Installed red silicone impregnated fiberglass baffle material on each engine. FAA-PMA replacement baffles. Installed new airspeed indicators and re-marked tachometer, manifold pressure gauge, 3-in-1 gauges per STC requirements. Static system tested per FAR 91.411, para A 2. C/W AD2000-01-16 by removal of the exhaust system from the slip joints aft. Installed the following exhaust system components:

Left Engine	P/N	S/N		Replacement due/ACTT
Wye	9910299-8AW	1-15768	RE-INSTALLED	9-1-2027/9488.7
Left Elbow	A9910299-3I	73146	NEW	1-1-2032/9522.3
Elbow Clamp	2274-20	N/A	NEW	1-1-2032/9522.3
Right Elbow	A9910299-4I	73148	NEW	1-1-2032/9522.3
Elbow Clamp	2274-20	N/A	NEW	1-1-2032/9522.3
Wastegate Elbow	K9910299-5	235534	RE-INSTALLED	9-1-2027/9488.7
Wastegate Clamp	2271-200	N/A	NEW	7522.3
Wastegate Tailpipe	K9910299-6	242697	RE-INSTALLED	9-1-2027/9488.7
Overboard Tailpipe	K9910299-1	244618	RE-INSTALLED	9-1-2027/9488.7
Tailpipe Clamp	NH1000897-50	N/A	RE-INSTALLED	9-1-2027/9488.7
Left Riser Assy	UNKNOWN	UNKNOWN	CLEANED AND INSPECTED*	N/A
Right Riser Assy	A9910295-14	78395	NEW	N/A
Wastegate	470908-9012	FLL00268	OVERHAULED	N/A
Turbocharger	407810-0003	H-WIL00025	NEW	N/A
Slip Joints	1001-3	N/A	NEW	1-1-2032/9522.3
Right Engine	P/N	S/N		Replacement due/ACTT
Wye	9910299-8AW	1-15769	RE-INSTALLED	9-1-2027/9488.7
Left Elbow	A9910299-3I	79127	NEW	1-1-2032/9522.3
Elbow Clamp	UNKNOWN	N/A	RE-INSTALLED	10-1-2028/9500.2
Right Elbow	A9910299-4I	73147	NEW	1-1-2032/9522.3
Elbow Clamp	UNKNOWN	N/A	RE-INSTALLED	10-1-2028/9500.2
Wastegate Elbow	K9910299-5	235535	RE-INSTALLED	9-1-2027/9488.7
Wastegate Clamp	UNKNOWN	N/A	RE-INSTALLED	7500.2
Wastegate Tailpipe	K9910299-6	240770	RE-INSTALLED	9-1-2027/9488.7
Overboard Tailpipe	K9910299-2	244644	RE-INSTALLED	9-1-2027/9488.7
Tailpipe Clamp	UNKNOWN	N/A	RE-INSTALLED	10-1-2028/9500.2
Left Riser Assy	UNKNOWN	UNKNOWN	CLEANED AND INSPECTED*	N/A
Right Riser Assy	A9910295-14	80823	NEW	N/A
Wastegate	470908-9013	DF008343	OVERHAULED	N/A
Turbocharger	407810-0003	H-WIL00024	NEW	N/A
Slip Joints	1001-3	N/A	NEW	1-1-2032/9522.3

\*Cleaned, inspected and joints re-swaged.

Hartzell ASB No. 057 N/A per turbocharger date of manufacture/rebuild. C/W para (b) by visual inspection and found to be serviceable. Next visual inspection per para (b) due in 50 hours TIS or 30 calendar days, whichever occurs later. C/W para (c) by removal and visual inspection of exhaust tailpipes and found to be serviceable at this time. Next removal and visual inspection per para (c) due each 12 calendar months. C/W para (d) by inspection of the outboard engine beams and canted bulkheads. Removed and replaced left front and aft bulkhead, replaced aft bulkhead inboard doubler. Removed and replaced left hand inboard beam. Left hand p/n TAM0851121-102, s/n 0135. Removed and replaced right hand aft bulkhead and aft inboard doubler. Removed and replaced right hand inboard beam. Right hand p/n TAM0851121-101, s/n 0141. Replaced left hand and right hand turbo mount bracket. Re-inspection per para (d) due each 500 hours TIS. C/W para (e) by visual inspection and pressure test of exhaust systems due each 12 calendar months. System checked satisfactory at this time. Para (f) installed new clamp on left hand, replacement due at AFTT 7522.3. Re-used right hand clamp, replacement due at AFTT 7500.2. C/W para (g) by installing new and/or re-installed existing exhaust system from the slip joints aft. Repetitive compliance due at 2,500 hours TIS or 12 years from date of installation, whichever occurs first. Installed new Aeroquip integral firesleeved fuel and oil hoses meeting TSO-C53A Type D and TSO-C75 Type III on each engine. C/W MEB00-9 by installation of p/n 2530-1 vent tube in crankcase breather hose. Installed new Hartzell ALV9610 alternator on right engine. See new empty weight and balance in POH. Installed new prop de-ice brush block p/n 40189 on right engine. AD96-12-22 N/A to oil filter adapter installed. Installed new cabin pressurization ducts p/n CM3211-10B9.5 and CM3211-10B38.0 in left and right wings. Removed previously installed "Bracket" air filters which are NOT compatible with RAM STC's. C/W AD84-26-02 per replacement of air filters. RAM Aircraft recommends air filters to be replaced every 300 hours or annual with mandatory log entry required. Installed new air/oil separators p/n AM107935AO on left and right engines. Installed EZ Heat Preheat Kit, m/n 540 on both engines. New empty weight and balance computed. Aircraft is approved for return to service for the work performed. Pertinent details on file under Project No. 9243.

Page No. \_\_\_\_\_



Reg. #: **N1557T** Date: \_\_\_\_\_  
 Make: **Cessna** Model: \_\_\_\_\_  
 HMT: **403.2**

Pilot's Altimeter		Part Number	5934A-A69
Scale Correction Card		Serial Number	90704
Standrd Alt. Ft	Altimeter Rdg	Standrd Alt. FT	Altimeter Rdg
-1000	-5	16000	-65
0	-10	18000	-65
500	0	20000	-80
1000	-15	22000	-90
1500	-5	25000	-120
2000	-15	30000	-110
3000	-10	35000	XX
4000	-5	40000	XX
6000	-10	45000	XX
8000	-30	47000	XX
10000	-40	50000	XX
12000	-60	51000	XX
14000	-70	A/C Reg. #	N1557T
		Date:	12/31/2019
		Tested by:	Wallace

**The following was performed by Duncan Aviation under work order:**

- Tested and inspected the pilot/copilot static pressure systems, system IAW Title 14 CFR Part 91.411 and ATC transponder to be found to comply with Title 14 CFR Part 43, Appendices E & F.
  - Pilot altimeter - United P/N 5934A-A69 S/N 90704.
  - Copilot altimeter - United P/N 5934PA-3 S/N 433833.
  - Encoder - Trans Cal Ind P/N SSD120-XXA S/N A70480.
  - Transponder - Garmin GTX-330 P/N 011-00455-00 S/N 84127080.
  - Units tested to 30,000 ft. on 31 Dec 2019.

I certify this aircraft has been inspected in accordance with **Title 14 CFR 91.411 and 91.413** and is approved for return to service. A detailed record is on file under work order **WU2NA**.

Signed: \_\_\_\_\_

Duncan QI 1443

**For Duncan Aviation Repair Station JGVR194F Phone: 800-228-4277**

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		<b>The Avionics Place, LLC</b>					
REG.	N1557T	<b>Beatrice Municipal Airport [KBIE]</b>				DATE	8/JAN/2020
MAKE	Cessna	MODEL	414	SERIAL NO.	414-272	HOUR	408.1

#### Maintenance Record Airframe

1. Removed Garmin GTX330 transponder P/N:011-00455-00 S/N: 84127080 and associated mounting rack from instrument panel radio stack F.S. 110.50
  2. Installed new Garmin GTX345 transponder P/N: 011-03302-00 S/N: 3EG031327 into instrument panel radio stack at F.S. 110.50 using supplied mount and hardware Referencing Garmin Part 23 AML STC Installation Manual No. 190-00734-10-10 Revision 13 Dated September 2019.
  3. Power for newly installed transponder is bussed from the existing avionics buss using existing transponder circuit breaker.
  4. Newly installed transponder is interfaced with the existing GNS 530W GPS/NAV/COM, PS Engineering PMA6000M audio panel, and blind altitude encoder for ADS-B compliance, display or traffic and weather, audio annunciations, traffic correlation, and pressure altitude referencing Garmin GTX3XX/33X Part 23 AML STC Installation Manual No. 190-00734-10 Rev. (13) dated September 2019.
  5. Installation accomplished in accordance with AC 43.13-2B Chapters 3,11,12 Sections 201,202,203,204,205,206,207,208,209,210 and reference to AC 43.13 chapter 4, 7, 11, 12, and Garmin Part 23 AML STC Installation Manual No. 190-00734-10 Revision 13 Dated September 2019.
  6. Performed electrical load analysis the newly installed equipment does not exceed 80% Buss Capacity.
  7. Performed functional tests referencing manufactures installation manual with satisfactory results, newly installed equipment does not interfere with existing equipment.
  8. Updated aircraft weight and balance and equipment list to reflect newly installed equipment.
  9. Inserted Garmin GTX33X and GTX 3X5 Transponders with ADS-B, FAA Approved Airplane Flight Manual Supplement No. 190-00734-15 Rev. 4 Dated September 9, 2019 into aircraft flight manual. See this or later revision.
  10. Provided a copy of Garmin GTX33X and GTX3X5 Instructions for Continued Airworthiness, Part 23 AML STC Document No. 190-00734-11 Rev. 7 Dated September 9, 2019 in the aircraft permanent records. See this or later revision.
- See FAA Form 337 Dated January 8, 2020 for details of this modification.

The work identified above was performed and inspected in accordance with current (CFR) Code of Federal Aviation Regulations Title 14 and was determined to be in condition for safe operation.

Signed:   
A&P 28625741A

SO#	20-0006	<b>Elevate Air Services LLC.</b>				DATE	4/FEB/2020
REG.	N1557T	<b>Crete Municipal Airport [CEK]</b>				HOUR	453.8
MAKE	CESSNA	MODEL	414	SERIAL NO.	414-0272	ACTT	7078.7

#### Maintenance Record Airframe

1. Removed Pilots Altimeter P/N 5934A-A69 S/N 90704 and installed Overhauled Altimeter P/N 5934PA-1 S/N 6C361. Reference Aircraft Quality Instruments form 8130-3 FTN 53963 dated 29/Jan/2020 for work accomplished.
2. Removed Co-pilots Altimeter P/N 5934PA-3 S/N 433833 and installed Overhauled Altimeter P/N 5934PA-1 S/N P517. Reference Aircraft Quality Instruments form 8130 FTN 53963 dated 29/Jan/2020 for work accomplished.
3. Customer Squawk was that flaps would not retract. Upon investigation, found that wires were broke off on flap switch under co-pilots panel. Repaired wiring, function test is normal.

Dated: 1/20/20 Shop Order: 20-0006

Signed:   
Shaun Krzycki  
A&P 3624942

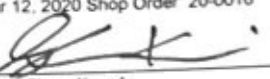
SO#	20-0016	<b>Elevate Air Services LLC.</b>				DATE	12/MAR/2020	WORK
REG.	N1557N	<b>Crete Municipal Airport [CEK]</b>				HOUR	492.8	
MAKE	Cessna	MODEL	414	SERIAL NO.	414-0272	TACH	7117.7	

**Maintenance Record Airframe**

1. Resealed the left-hand main landing gear strut referencing Cessna 414 Service Manual Section 4, Landing Gear and Brake System.
2. Replaced faulty heater control cable on co-pilots instrument panel and the heater control circuit breaker on the pilot's circuit breaker panel. Work done referencing Cessna 414 Service Manual Section 13, Utility and Optional Systems.
3. Replaced the taxi light on nose gear. Work done referencing Cessna 414 Service Manual Section 4, Landing Gear and Brake System.

Dated Mar 12, 2020 Shop Order 20-0016

Signed

  
 Shaun Krzycki  
 A&P 3624942

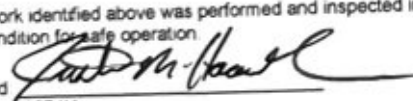
		<b>The Avionics Place, LLC</b>				DATE	19/Sept/2020
REG.	N1557T	<b>Beatrice Municipal Airport [KBIE]</b>				HOUR	408.1
MAKE	Cessna	MODEL	414	SERIAL NO.	414-272		

**Maintenance Record Airframe**

1. Removed PS Engineering PMA6000M audio selector panel P/N: PMA6000M S/N: L01554-J01556M-RL from center instrument panel avionics stack. Installed New PS Engineering PMA8000G audio selector panel P/N: 050-890-0913 S/N: NG01488-ST into existing location of removed audio panel picking up existing fastener locations. Power for newly installed audio selector panel is supplied via a 5 amp circuit breaker located in the existing circuit breaker panel on the existing Avionics buss. Installed new audio headphone jacks and microphone jacks in 6 existing locations in the aircraft. The newly installed audio panel is interfaced to the existing Garmin GNS530W and Apollo SL30 for Comm and Navigation audio signals. Installation was accomplished Referencing PS Engineering PMA8000G Installation Manual No. 200-890-0912 Rev (13) dated September 2020.
2. Installed autopilot Trim Sensor DT-520A P/N: 37580-1028 S/N: 457 as tested, Reference Cessna 414 Maintenance Manual Section 13. See FAA Form 8130-3 FTN 72716 dated August 27, 2020 from Bevan Aviation, INC. CRS KG2R951K.
3. Installed repaired autopilot pitch servo PA-500A P/N: 35070-0328 S/N: 4396, reference Cessna 414 Maintenance Manual Section 13. See FAA Form 8130-3 FTN 72716 dated August 27, 2020 from Bevan Aviation INC. CRS KG2R951K.
4. Installed repaired autopilot control unit C-530A P/N: 37960-1028 S/N: 713, reference Cessna 414 Maintenance Manual Section 13. See FAA Form 8130-3 FTN 72716 dated August 27, 2020 from Bevan Aviation INC. CRS KG2R951K.
5. Installed repaired autopilot computer amplifier CA-530A P/N: 37970-1028 S/N: 828, reference Cessna 414 Maintenance Manual Section 13. See FAA Form 8130-3 FTN 72716 dated August 27, 2020 from Bevan Aviation INC. CRS KG2R951K.
6. Performed ground operational check of autopilot with no discrepancies noted at this time.

The work identified above was performed and inspected in accordance with current (CFR) Code of Federal Aviation Regulations Title 14 and was determined to be in condition for safe operation.

Signed

  
 A&P 28625741A

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AVIATION

Contract/Invoice  
2  
Elevate Air Services LLC

**Elevate Air Services LLC.**  
**Crete Municipal Airport [CEK]**

DATE	6/NOV/2020
HOUR	556.4
TACH	

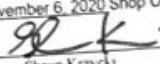
MODEL	414	SERIAL NO.	414-0272
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IG WORK

**Maintenance Record Airframe**

- Complied with Annual Inspection/100 Hour reference the Cessna Model 414 Service Manual Section 2A and the scope and detail of Title 14 CFR Part 43 Appendix D.
- Replaced o-ring on leaking fuel fitting on the rear of R/H fuel pump.
- Replaced the inoperative cabin heater and combustion blower assembly P/N EG722129-1 S/N 163 and replaced with overhauled unit P/N 8472C/E S/N 1180. See FAA form 8130-3 from Aircraft Heating and Electrical, Inc FTN 55685 dated 29/Oct/2020 for work accomplished. Function tested unit, working properly.
- Resealed both main landing gear struts.
- Re-rigged the flaps to specs.
- Secured the loose parking brake cable.
- Replaced the leaking fuel valve in the R/H wing P/N 2680234M1-13 S/N 264 with overhauled unit P/N 2680234M1-13 S/N 4635. For work accomplished, reference FAA form 8130-3 from the Aviation Group, Inc FTN 49562 dated 13/Nov/2019 for work accomplished.
- Replaced the bent cowl flap rod-ends that where broken or bent.
- Cleaned the outflow safety valves.
- Replaced cable seal on co-pilot firewall that was missing.
- Replaced the broken static wick on the L/H hand wing, P/N C592001-0201.
- Sealed a leaking nut plate in the L/H tip tank.
- Resecured the wire bundle that was chafing on the elevator bell crank behind the instrument panel.
- Resealed the shimmy damper.
- Replaced both brake disc's that were worn beyond limits
- Replaced the nose gear wheel bearings that were extremely water marked.
- Replaced the L/H gear well fuel pump sump line that was leaking.
- Increased the suction system.
- Replaced the middle hinges on both elevators that were missing.

I certify this (aircraft) (engine) (propeller) has been inspected in accordance with an Annual/100 Hour inspection as per Title 14 CFR part 91.409 (a)(1) and was determined to be in an airworthy condition  
Dated: November 6, 2020 Shop Order: 20-0056

Signed:   
Shaun Krzycki  
A&P 3624942


Signed:   
James Dux  
A&P 28158851A

Elevate Air Services LLC.				DATE	22/NOV/2021
Crete Municipal Airport [CEK]				HOUR	718.5
SO#	21-0077	MODEL	414	SERIAL NO.	414-0272
REG.	N1557T			ACTT	7279.0
MAKE	CESSNA				

**Maintenance Record Airframe**

- Complied with Annual Inspection/100 Hour reference the Cessna Model 414 Service Manual Section 2A and the scope and detail of Title 14 CFR Part 43 Appendix D.
- Complied with 12-month battery capacity check, battery failed. Replaced main ship battery with new P/N G-246 S/N G03126921.
- Complied with 12-month ELT inspection IAW FAR 91-207(d). ELT functions normal. Battery due replacement March 2021. Replaced battery with new P/N 2020. Next battery change due October 2023.
- Tightened set screw on autopilot head unit.
- Replaced the main battery relay that showed corrosion with new P/N S2443-2.
- Replaced the cracked O-rings on all fuel tank caps.
- Replaced the right-hand main tire with new tire P/N 076-356-0 and new tube P/N 092-344-0.
- Replaced missing brake pad on right-hand brake with new P/N 066-06600.

I certify this (aircraft) (engine) (propeller) has been inspected in accordance with an Annual/100 Hour inspection as per Title 14 CFR part 91.409 (a)(1) and was determined to be in an airworthy condition  
Dated: December 1, 2021 Shop Order: 21-0077

Signed:   
Shaun Krzycki  
A&P 3624942

Signed:   
James Dux  
A&P 28158851A

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Work Order: **L2SLA**

[illegible][illegible]

- Tested and inspected the pilot's and copilot's static pressure systems, altimeters and automatic pressure altitude reporting system IAW Title 14 CFR Part 91.411 and ATC transponder tests and inspections IAW Title 14 CFR Part 91.413 and was found to comply with Title 14 CFR Part 43, Appendices E & F.
  - o Pilot's Altimeter - United P/N 5934PA-1 S/N P517
  - o Copilot's Altimeter - United P/N 5934PA-1 S/N 6C361
  - o Encoder - Trans Cal Ind P/N SSD120-XXA S/N A70480
  - o Transponder - Garmin GTX-345 P/N 011-03302-00 S/N 3EG031327
  - o Units tested to 30,000 feet on 03 Feb 2022.

Signed:

Duncan QI 1443

For Duncan Aviation Repair Station JGVR194F Phone: 800-228-4277

SO#	22-0080	<b>Elevate Air Services LLC.</b>				DATE	13/JAN/2023
REG.	N1557T	<b>Crete Municipal Airport [CEK]</b>				HOURL	807.5
MAKE	CESSNA	MODEL	414	SERIAL NO.	414-0272	ACTT	7368.0

[illegible]

1. Complied with Annual Inspection/100 Hour reference the Cessna Model 414 Service Manual Section 2A and the scope and detail of Title 14 CFR Part 43 Appendix D.
2. Complied with 12-month battery capacity check, battery passed at 104%.
3. Complied with 12-month ELT inspection IAW FAR 91-207(d). ELT functions normal. Replaced battery with new P/N 2020. Next battery change due December 2024.
4. Replaced both gyro filters in wing roots with new P/N B3-5-1.
5. Troubleshoot the left-hand engine RPM gauge inoperative to faulty wiring at tach generator connector.
6. Replaced the amp gauge selector switch with new P/N 5018153-1. Post item change inspection found to be in working order.
7. Replaced the left-hand fuel boost pump that was leaking internally with new overhauled pump P/N 4140-00-153 S/N 28608. See 8130-3 FTN: M2107249 from Aeromotors, LLC dated 05/AUG/2021 for work accomplished.
8. Replaced both fuel selector valves with the following overhauled part numbers; left side P/N XV2096 S/N 091622, and the right side with P/N 2680234M1-13 S/N 3642A. See 8130-3's from The Aviation Group FTN's 53372, dated 21/SEP/2022 and 52796, dated 12/APR/2022 for work accomplished.
9. Replaced the leaking auxiliary fuel pump with a new overhauled unit P/N 8150-B S/N 05296. See Aeromotors 8130-3 FTN: M2210018, dated 06/OCT/2022 for work accomplished. Also replaced leaking fuel fitting at the auxiliary fuel pump pressure switch at this time.

I certify this (aircraft) (engine) (propeller) has been inspected in accordance with an Annual/100 Hour inspection as per Title 14 CFR part 91.409 (a)(1) and was determined to be in an airworthy condition.  
 Dated: January 13, 2023 Shop Order: 22-0080

Signed

Shawn Krzycki  
A&P 3624942IA

				SUB-TOTALS this page
				TOTALS—Carry forward to next page