Your Company Name

HVAC Inspection Report

Contractor Information	
Company	Your Company Name
License	TACLA00000C
Phone	(512) 555-0100
Email	you@example.com

Job Information	
Customer	Margaret Chen
Address	100 Sample Lane, Austin, TX 78701
Date	2026-11-09
Job Type	AC Tune-Up
Technician	Mike Reynolds

Weather Conditions	
Outdoor Temp	94°F
Humidity	52%
Note	Warm ambient — normal summer operating conditions
Source	Weather — weatherkit.apple.com/legal-attribution.html

At a Glance

SYSTEM CONDITION

Good

INSPECTION RESULTS



● 10 Passed ● 0 Failed ● 0 N/A

Executive Summary

AC Tune-Up performed on 2026-11-09. 10 of 10 checked items passed. 3 findings recorded, including 1 critical issue requiring immediate attention. Overall system condition: Good.

Key Findings		
● CRITICAL	Contactor pitting — replace immediately	$285.00
● RECOMMENDED	Capacitor nearing end of life	$175.00
● ADVISORY	Upgrade air filter to MERV-13	$45.00

Equipment Summary	
Central AC	Carrier 24ACC636A003 · SN 3218G04572 · Year Installed 2019 · R-410A / TXV · 3.0 ton · SEER 16.0 · Filter Size 20x25x1

Air Side

3/3 PASS

Item	Value	Unit	Target	Result
Air filter — condition	Pass			●
Air filter — replaced	Pass			●
Supply air temp	55.0	°F		
Return air temp	75.0	°F		
Delta T (supply – return) (calc)	20.0	°F	16–22°F 	●

Outdoor Unit

3/3 PASS

Item	Value	Unit	Target	Result
Condenser coil — cleaned	Pass			●
Compressor amps	9.8	A		
Capacitor — run (µF reading)	44.5	µF		
Capacitor — rated (µF)	45.0	µF		
Capacitor within tolerance? (calc)	Pass		±6% of rated value	●
Evidence of refrigerant leak	Pass			●

Refrigerant Readings

4/4 PASS

Item	Value	Unit	Target	Result
Refrigerant type	R-410A			
Suction line pressure (low-side)	118.0	PSI		
Suction line saturation temp (calc)	39.5	°F		●
Suction line temperature (actual)	49.5	°F		
Superheat (calculated)	10.0	°F	TXV: 8–12°F, Piston: 10–20°F 	●
Discharge (head) pressure	320.0	PSI		
Liquid line saturation temp (calc)	100.7	°F		●
Liquid line temperature (actual)	87.0	°F		
Subcooling (calculated)	13.7	°F	TXV: 10–18°F, Piston: 5–10°F 	●

Closeout

Item	Value	Unit	Target	Result
Overall system condition	Good			
Technician notes	System running well. Capacitor aging — schedule replacement at next visit.			

Findings & Recommendations

F-1 CRITICAL **Contactor pitting — replace immediately** AWAITING DECISION

Contactor points show significant pitting and carbon buildup. Arcing observed during operation. Risk of compressor failure or no-start condition if not replaced.

Estimated Repair Cost: $285.00

F-2 RECOMMENDED **Capacitor nearing end of life** AWAITING DECISION

Run capacitor reading 44.5 µF on a 45 µF rated capacitor. Within tolerance now but approaching lower limit. Replace proactively to avoid hard-start failures.

Estimated Repair Cost: $175.00

F-3 ADVISORY **Upgrade air filter to MERV-13** AWAITING DECISION

Current MERV-8 filter provides basic filtration. Upgrading to MERV-13 would improve indoor air quality, especially for allergy season. No impact on static pressure for this system.

Estimated Repair Cost: $45.00

Repair Summary	
Critical	$285.00
Recommended	$175.00
Advisory	$45.00
Total Recommended Work	**$505.00**

Completion & Signatures

I certify that the above inspection was performed in accordance with applicable standards and the information provided in this report is accurate to the best of my knowledge.

Mike Reynolds

Technician Signature | Date

Customer Signature | Date

Report generated: November 9, 2026 at 4:57 PM

Recommended Next Service: November 2027

Annual AC maintenance — Schedule early to ensure optimal system performance.

How the Numbers Were Calculated

Every calculated value in this report was computed on-device by the FieldLoom calculation engine from the readings the technician recorded, using published refrigerant pressure/temperature tables. No AI and no estimates are involved.

Delta T (supply – return) — 20 °F

Delta T = return air temp – supply air temp

Return air temp: 75 °F · Supply air temp: 55 °F

75°F – 55°F = 20°F

Rule: 16–22°F

✓ Computed by FieldLoom engine — not AI-generated

Capacitor within tolerance? — Pass

Deviation = |measured – rated| ÷ rated × 100

Measured: 44.5 µF · Rated: 45 µF · Deviation: 1.1 %

|44.5 – 45| ÷ 45 = 1.1%

Rule: ±6% of rated value

✓ Computed by FieldLoom engine — not AI-generated

Suction line saturation temp — 39.5 °F

Saturation temp looked up from the R-410A pressure/temperature table

Suction line pressure (low-side): 118 PSI · Refrigerant type: R-410A

Interpolated between 110 PSIG (36°F) and 120 PSIG (40.4°F) → 39.5°F

✓ Looked up from published P/T tables — not AI-generated

Superheat (calculated) — 10 °F

Superheat = suction line temp – saturation temp at suction pressure

Suction line temperature (actual): 49.5 °F · Suction line saturation temp: 39.5 °F

49.5°F – 39.5°F = 10°F

Rule: TXV: 8–12°F, Piston: 10–20°F

✓ Computed by FieldLoom engine — not AI-generated

Liquid line saturation temp — 100.7 °F

Saturation temp looked up from the R-410A pressure/temperature table

Discharge (head) pressure: 320 PSI · Refrigerant type: R-410A

Exact table row at 320 PSIG → 100.7°F

✓ Looked up from published P/T tables — not AI-generated

How the Numbers Were Calculated (continued)

Subcooling (calculated) **13.7 °F**

Subcooling = saturation temp at head pressure – liquid line temp

Liquid line saturation temp: 100.7 °F · Liquid line temperature (actual): 87 °F

100.7°F – 87°F = 13.7°F

Rule: TXV: 10–18°F, Piston: 5–10°F

✓ Computed by FieldLoom engine — not AI-generated