HVAC Compressor Replacement Checklist

HVAC School
For Techs by Techs

Customer Name _____ **Address** _____ **Date** _____

Outdoor Unit

Brand_____ System Model #: _____ System Serial #: _____

☐ Straight Cool ☐ Heat Pump ☐ Package Unit ☐ Split ☐ Single Stage ☐ 2 Stage System Size _____ Tons

Compressor

Compressor Model #: _____

Compressor Serial #: _____

Refrigerant & Oil Service

Refrigerant Type _____

Refrigerant Recovered: _____ lbs

Data Tag Shipped With: _____ lbs

Final Refrigerant Charge: _____ lbs _____ oz

Source: ☐ New Refrigerant
☐ Reused Recovered Refrigerant (via filter drier)

Acid Testing

Acid Test Type: ☐ Quick Check ☐ Mixture Kit
☐ Sent for Oil Analysis

Acid Test Result: _____

Compressor Oil

Old Compressor Oil Level: ☐ High ☐ Low ☐ Okay

Method: ☐ Weighed ☐ Drained & Measured

Line Inspection

Liquid Line Size: _____ Suction Line Size: _____

Approx. Length: _____ ft

Strainer Condition: _____

☐ Magnet Was Used To Clear Suction Line
☐ Used Foam Pig Through Lines
☐ Nitrogen Flown To Check Restrictions
☐ Nitrogen Flowed During Brazing

Filter Driers

Liquid Line Filter Drier: Type: _____ Size: _____ Qty: 1

Suction Line Filter Drier: Type: _____ Size: _____ Qty: 1

Suction Line Filter Drier Removal Date: _____

Accumulator:

☐ None ☐ Replaced
☐ Re-used, drained oil & inspected

Valve Cores: ☐ Replaced with new

Valve Caps: ☐ Brass ☐ Plastic
(If plastic, replace)

Condensing Coil Cond. _____

Fan Condition _____

Pressure Test

Start: _____ psig at _____ °F (Line Temp)

End: _____ psig at _____ °F (Line Temp)

Held For: _____ minutes

Vacuum Test:

Initial Pull-down: _____ microns

Held For: _____ minutes

Ending Level: _____ microns

Electrical Components

Disconnect Condition: _____ Amperage: ____ Distance to Panel: ____

Wire Size (Disconnect): _____ AWG, Wire Size (Unit): ____ AWG

Compressor Plug: ☐ Replaced with new ☐ Reused existing

Terminal Condition: _____

Run Capacitor:

☐ Replaced with New

Rating: _____ MFD ☐ 380V ☐ 440V

Old Cap Condition: _____

Crank Case Heater: ☐ New Installed ☐ Reused Existing (_____ Ohms) ☐ None

Contactor: ☐ Single Pole ☐ Double Pole **Status:** ☐ Replaced with new ☐ Used existing

RLA Rating: ____, Inrush Rating: ____, Coil Volts: _____, Points Condition: _____, Coil Ohms (if reusing): _____

Hard Start Kit (Never reuse):

Existing Model: _____ Action ☐ Removed ☐ Replaced with Soft Start ☐ Replaced with Factory Model

Protection Devices (Circle if added today): • HP Switch ☐ LP Switch ☐ Discharge Line Stat ☐ Time Delay
• Sure Switch ☐ Surge Protector ☐ Voltage Monitor

Airflow & Performance Data

Static Pressure: Supply: _____ "WC, Return: _____"WC, ESP: _____ "WC

Airflow: _____ CFM (Measured across evaporator coil)

Condition of: Evaporator Coil: _____ Blower: _____ Duct: _____ Filter: _____

Voltage: Min. at Startup: _____ V, While Operating: _____ V
Amperage: Common: _____ A, Start: _____ A, Run: _____ A

Compression Ration: Head _____ psig + _____ (14.7) = _____ PSIA

Suction _____ psig + _____ (14.7) =_____ PSIA

Head PSIA / Suction PSIA = _____ :1 comp ratio

Temperature Calculations:

Indoor Metering Device Type: ☐ EXV ☐ TXV ☐ Fixed Orifice

Suction Line Temp._____ - Suction Saturated Temp._____ = Super Heated Vapor_____

Target Superheat: _____ °F ☐ High ☐ OK ☐ Low

Liquid Saturated Temp._____ - Liquid Line Temp._____= Sub Cooled Liquid_____

Target Sub Cool: _____ °F ☐ High ☐ OK ☐ Low

Return air WB_____ - supply air wet bulb _____= Delta ___WB

Target Delta T: _____ °F ☐ HVAC School App ☐ Performance Chart

Return Air Temp._____ - Supply Air Temp._____= Delta T_____

Target Evaporator TD: _____ °F (35 +/- Single Stage)

Return Air_____ - Suction Sat. Temp._____= Evap. TD_____

Target CTOA _____°F Unit SEER Rating: _____

Condensing Temp _____ - Ambient Temp _____= CTOA _____°F

Discharge line temp _____ - Liquid saturated temp = discharge superheat_____ºF

Notes and Root Cause of Failure

_____

_____

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