Furnace Test Data Sheet

Equipment Information:		
Furnace Model #:		Serial #:
Installation Date:	Todays Date:	Thermostat:
Filter Type, Size:		Control Board Part Number:

Customer Complaint:

Dealer Information:		
Dealer Name:		Tech Name:
Address:		Phone:

Distributor Name:		
Distributor Name:	Service Tech Name:	
Address:		Phone:

Home Owner Information:			
Homeowner Name:			Address:
City:	State:	Zip:	Phone:

Gas Type / Orifice Size:		
Type Of Gas	Natural	LP
Orifice Size		

Gas Pressure:		
Standing Inlet Pressure W.C.		
Furnace Operating	Low Fire	High Fire
Inlet W.C."		
Manifold W.C."		

Temperature Rise:		
	Low Fire	High Fire
Supply Air Temp		
Return Air Temp		
Temp Rise	0	0

Venting:		
	Metal	PVC
Size		
Vert.		
Horz		
Ells		
PVC Ells Radius	Short	Long

Inducer:		
Part Number		
Voltage		
Pressure Switch	Not Firing	Firing
Low Fire W.C.		
Hi Fire W.C.		

Electrical Reading:	
Line Voltage To Ground	
Line Voltage To Neutral	
Neutral To Ground Voltage	
Low Voltage	
Polarity OK	Yes / No
Dedicated Circuit	Yes / No
Micro AMPS (Flame Sensor)	
Breaker or Fuse Size	
Blower Voltage	
Blower AMPS	

Codes History:	
1-	4-
2-	5-

Note:

Blower Performance Static Pressure:				
Return Air Static Measured Between Furnace and Air Filter				
Supply Air Static Measured Between Furnace and Evap. Coil				
Return Air Static	With Filter		W/O Filter	
Supply Air Static	With Filter		W/O Filter	
Total Static **(RAS+SAS)**	With Filter		W/O Filter	

Single Stage, H Model, X-13 40" Furnace:			
Blower Speed Selection (Wire Color)			
Lo Heat	Hi Heat		Cooling
Switch Bank	SW 1 Off delay	SW 2 Stage	SW 3 2nd Stage Delay
	150 or 100 sec	1 or 2	5 Min or Auto

X-13 Motor 34.5" Furnace:				
Switch Group S2 Heat Speed			Switch Group S1 Thermostat Setup	
S2 Switch 1	On	Off	S1 Switch 1	On Off
S2 Switch 2	On	Off	S1 Switch 2	On Off
S2 Switch 3	On	Off	Switch Group S3Cooling Speed	
			S3 Switch 1	On Off
			S3 Switch 2	On Off

Modulating Furnace:			
S1	S1	On	Off
	S2	On	Off
	S3	On	Off
	S4	On	Off
	S5	On	Off
	S6	On	Off
S2	S7	On	Off
	S8	On	Off
	S9	On	Off
	S10	On	Off
	S11	On	Off
	S12	On	Off
S3	S13	On	Off
	S14	On	Off
	S15	On	Off
	S16	On	Off
	S17	On	Off
	S18	On	Off

ECM Two Stage Furnace:			
S1	S1	On	Off
	S2	On	Off
	S3	On	Off
	S4	On	Off
S3	S1	On	Off
	S2	On	Off
	S3	On	Off
	S4	On	Off
S4	S1	On	Off
	S2	On	Off
	S3	On	Off
	S4	On	Off
S5	S1	On	Off
	S2	On	Off
	S3	On	Off
	S4	On	Off

3-	6-	

Split System Test Data Sheet

Equipment Information:				
Condenser Model #:			Serial #:	
Air Handler Model #:			Serial #:	
Coil Model #:			Serial #:	
Installation Date:	Todays Date:		Thermostat:	
Filter Type, Size:		Heat Strip	Model #	Serial #

Customer Complaint:

Dealer Information:			
Dealer Name:		Tech Name:	
Address:			Phone:

Distributor Name:		
Distributor Name:	Service Tech Name:	
Address:		Phone:

Home Owner Information:			
Homeowner Name:		Address:	
City:	State:	Zip:	Phone:

Outdoor Performance:	
Outdoor (DB)	
Indoor Wet Bulb	
Superheat	
See Superheat Calculator	

Sub Cooling (TXV):	
Liq Line Pressure	
Liq Line Temp.	
Sat. Temp	
Sub Cooling	0

Superheat (Orifice):	
Suction Pressure	
Suc Line Temp.	
Sat. Temp	
Superheat	0

Indoor Performance:	
Entering (DB) (Return Air)	
Exiting (DB) (supply Air)	
T D = (RA - SA)	0
Entering (WB) E (Return Air)	
Leaving (WB) E (Supply)	
Enthalpy Diff. TC (RA - SA)	

Line Set Size: (Circle):		
Suct Line	3/4 7/8	1 1/8
Liq Line	1/4 3/8	1/2
Length (ft.)		
# Elbows (Liq Line)		
# Elbows (Suc Line)		
Short	Long	45°
Equivalent Length (feet)		

90° Short Radius	90° Long Radius	45°
3/4 1.7	1.5	0.7
7/8 2	1.7	0.8
1-1/8 2.3	1.6	1
Long Line Set Application		

Condenser Coil:		Drier:	
Dirty	Clean	Inlet Temp	
		Outlet temp	
		Difference	
		S/B less then 4° Difference	

Metering Device:	
Type	Number
TXV	
Orifice	
R-410A units will not work on Capillary Tubes	

Electrical:	
Breaker Size	
Standing Voltage L1 to L2	
Starting Voltage L1 to L2	
Compressor AMPS	
Condenser AMPS	

Compressor:	
Model Number	
Serial Number	

Ohms Reading:			
R - C		C - Ground	
S - C		S - Ground	
R - S		R - Ground	

Air Handler Static Pressure:				
Return Air Static Measured in Return Duct				
Supply Air Static Measured in Supply Duct				
Return Air Static	With Filter		W/O Filter	
Supply Air Static	With Filter		W/O Filter	
Total Static (RAS+SAS)	With Filter		W/O Filter	

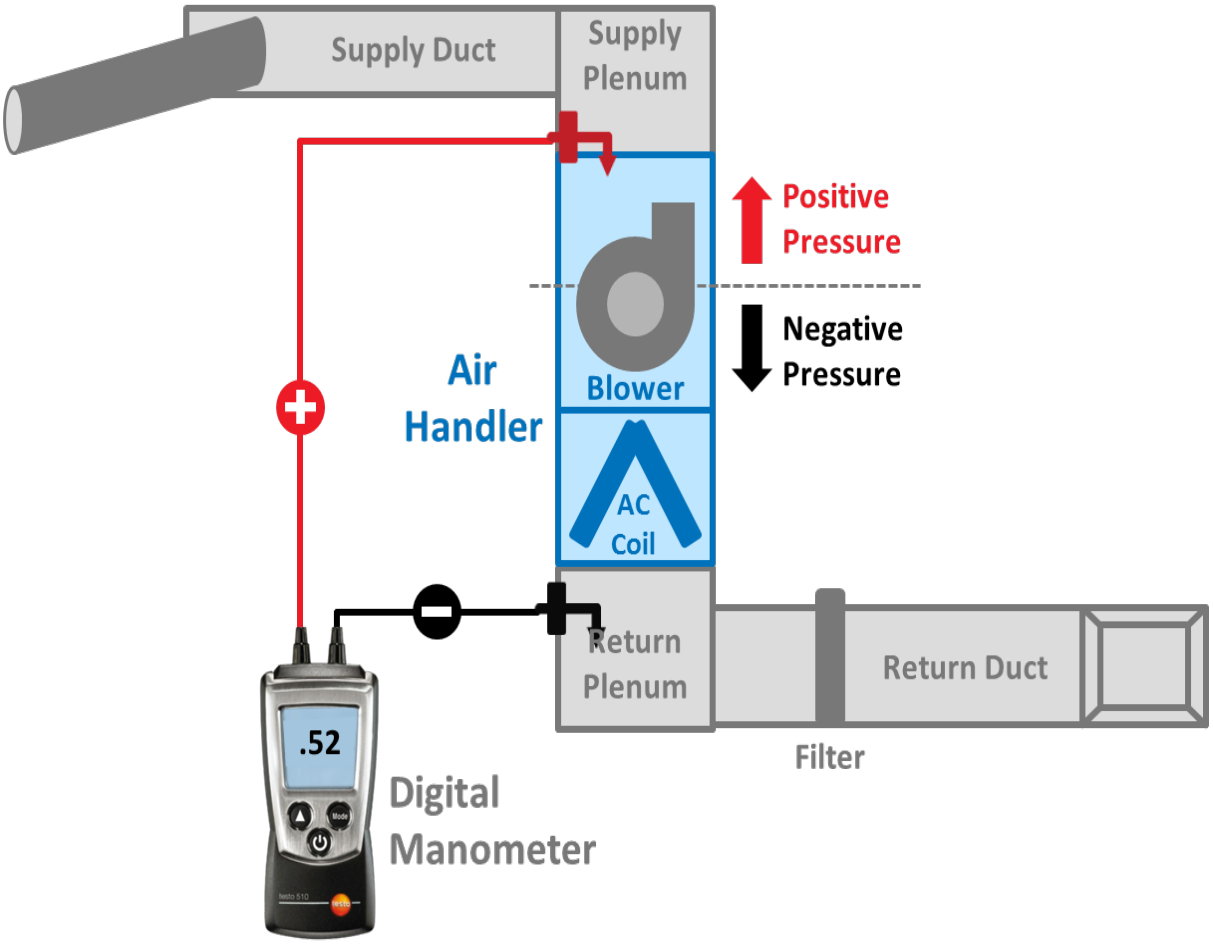
Air Handler:					
X-13 ECM	Communicating ECM Switch ON or OFF			PSC	
T1	S1	S8		Hi	
T2	S2	S9		Med Hi	
T3	S3	S10		Med	
T4	S4	S11		Low	
T5	S5	S12	Codes History:		
	S6	S13	1-	4-	5-
	S7		2-	3-	6-

Formulas:	
E = Enthalpy of WB	TH (electric heat)= (V X A) X 3.413
TC = E dif. X 4.5 X CFM	V = Volts AC A = Amps AC at heater
TH = T R heating X 1.08 XCFM	CFM = TH (electric heat) ÷ TR X 1.08
TC = Total cooling BTU output	
TH = Total Heating BTU output	

Note:

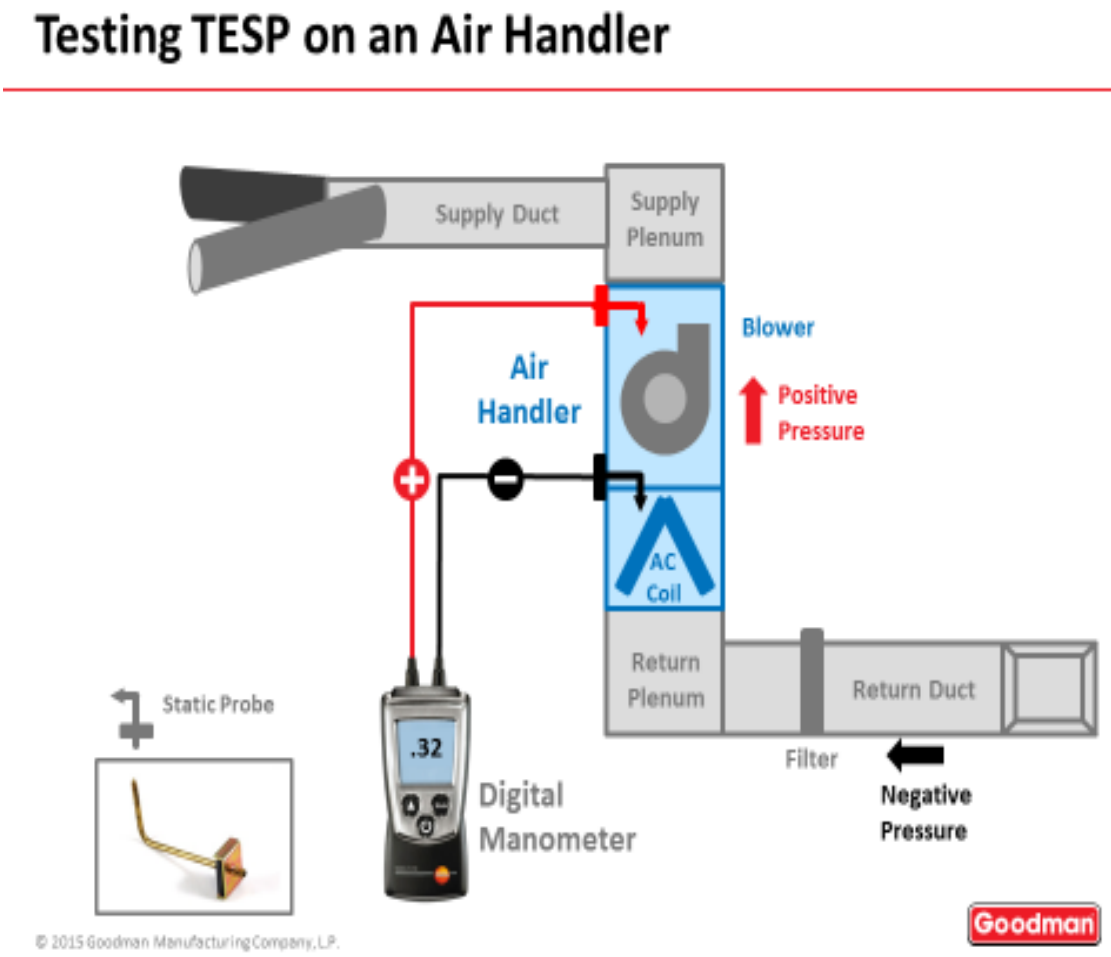
TP-106* R-22	TP-107* R410A	

Checking Static Pressure Single Piece Air Handler



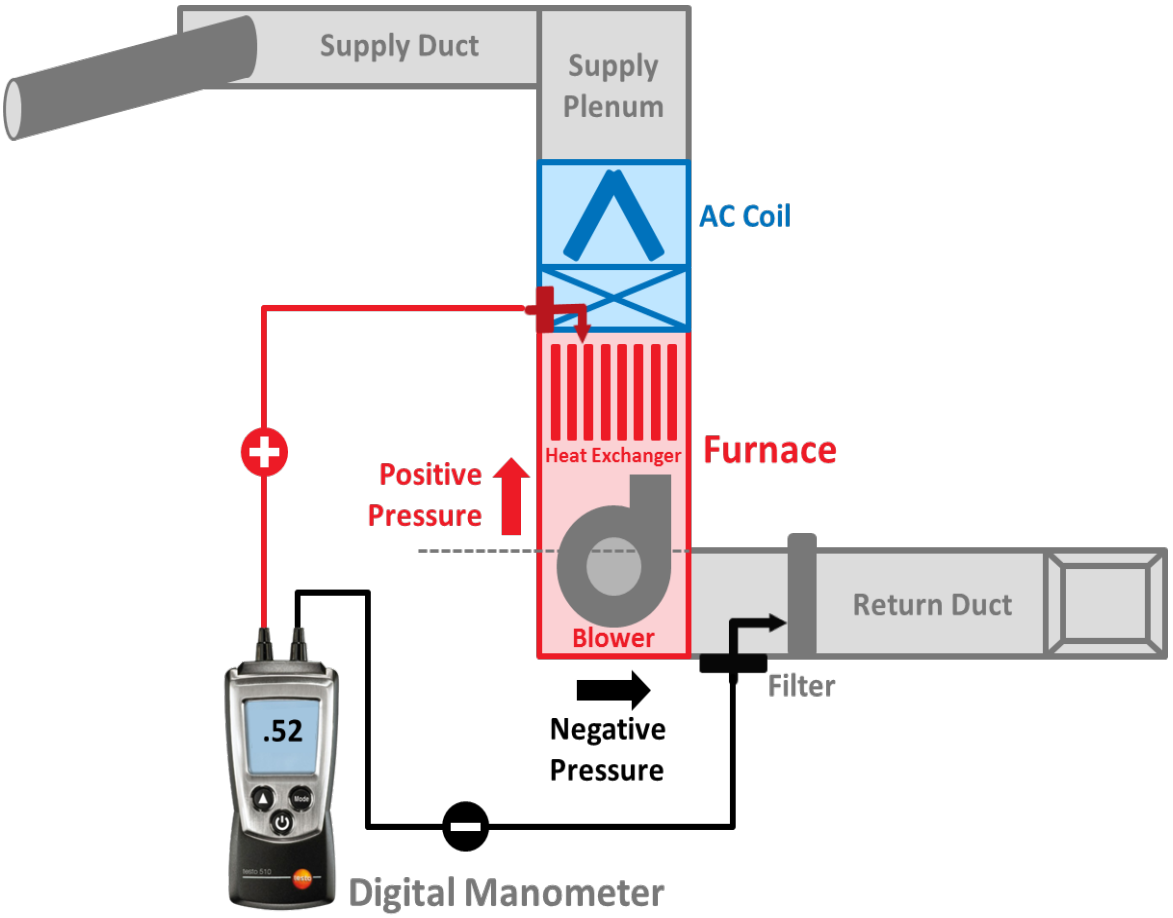
- Measure static pressure of the supply duct at the outlet of the air handler.
- Measure the static pressure of the return duct at the inlet of the air handler
- Single piece air handler evaporator coil is already considered in airflow calculation
- **NOTE:** Both readings may be taken simultaneously and read if so desired.

Checking Static Pressure on Two Piece Air handler



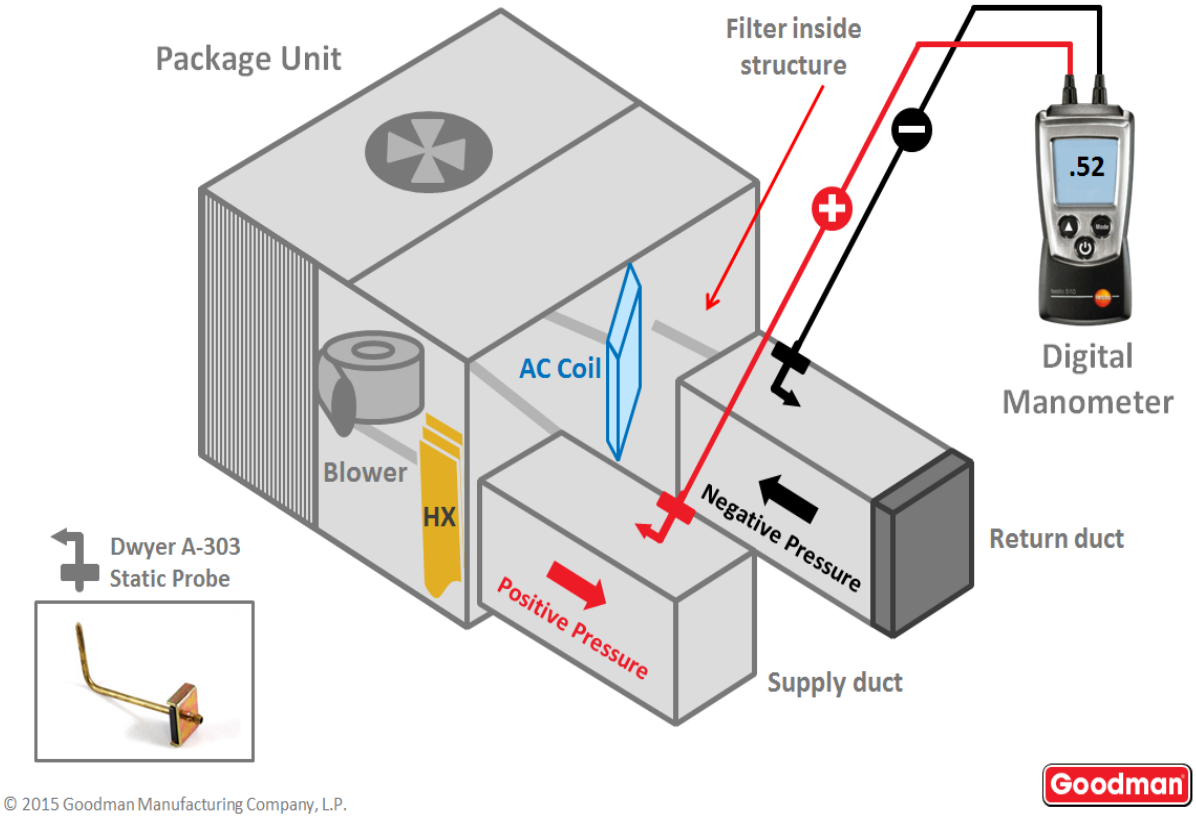
- Measure the static pressure of the supply duct at the outlet of the unit.
- Measure the static pressure between the outlet of the evaporator coil and the inlet of the air handler
- Since the evaporator coil is not part of the blower unit or furnace, *it must be not considered in calculating the static pressure of the blower unit or furnace.*
- **NOTE:** Both readings may be taken simultaneously if so desired.

Checking Static Pressure Furnace



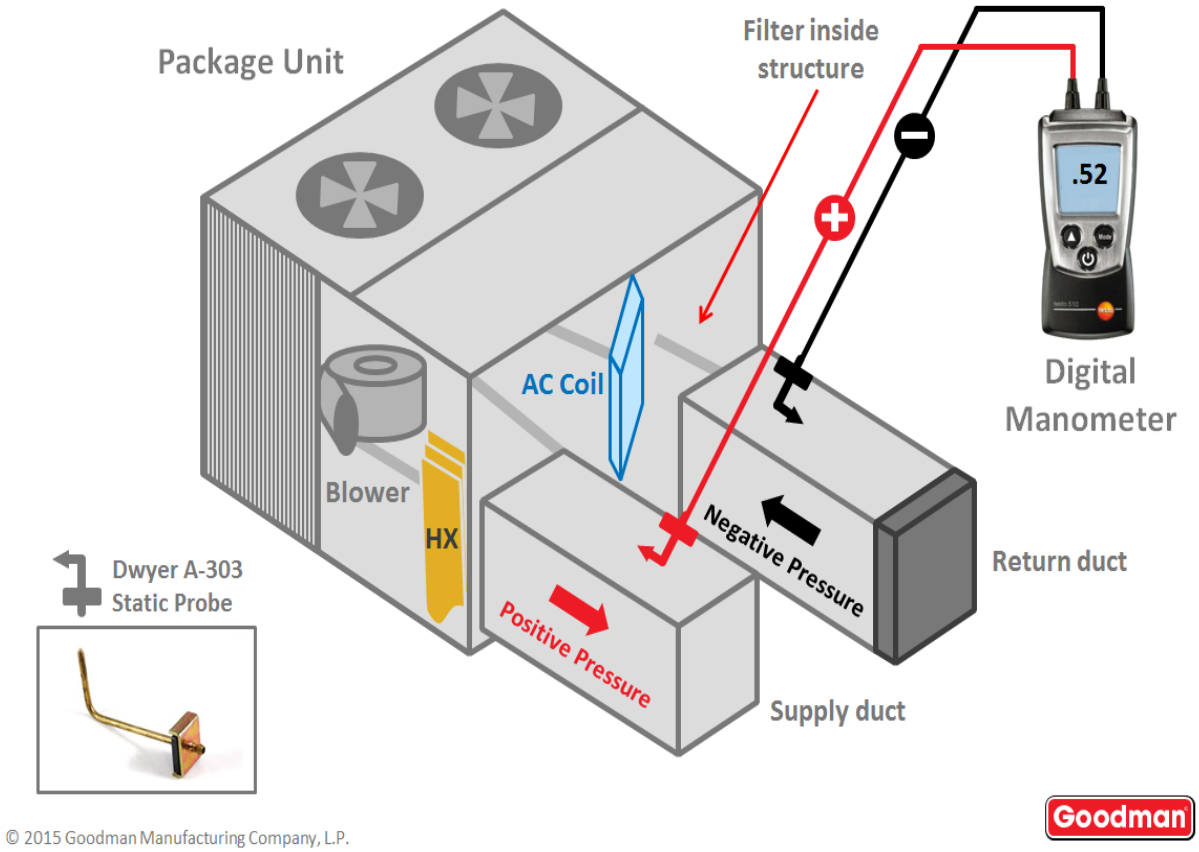
- Measure static pressure of the return duct at the inlet of the furnace.
- Measure the static pressure of the supply duct at the outlet of the furnace.
- **NOTE:** Both readings may be taken simultaneously and read if so desired.

Checking Static Pressure Residential Package



- Measure the static pressure of the return duct at the inlet of the unit.
- Measure the static pressure of the supply duct at the outlet of the unit.
- **NOTE:** Both readings may be taken simultaneously and read if so desired.

Checking Static Pressure Light Commercial Package



- Measure the static pressure of the return duct at the inlet of the unit.
- Measure the static pressure of the supply duct at the outlet of the unit.
- **NOTE:** Both readings may be taken simultaneously and read if so desired.