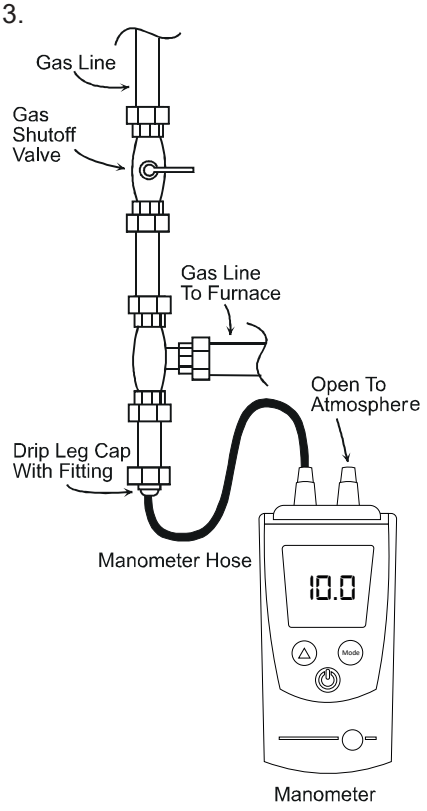
NOTE: If measuring gas pressure at the drip leg, a field-supplied hose barb fitting must be installed prior to making the hose connection. If using the inlet pressure tap on the White-Rodgers 36J22 gas valve, then use the 36G/J Valve Pressure Check Kit, Part No. 0151K00000S.

3. Turn ON the gas supply and operate the furnace and all other gas consuming appliances on the same gas supply line.
4. Measure furnace gas supply pressure with burners firing. Supply pressure must be within the range specified in the Inlet Gas Supply Pressure table.

Manifold Gas Pressure		
Gas	Range	Nominal
Natural	3.2 - 3.8" w.c.	3.5" w.c.
Propane	9.7 - 10.3" w.c.	10.0" w.c.

If supply pressure differs from table, make the necessary adjustments to pressure regulator, gas piping size, etc., and/or consult with local gas utility.

5. Turn OFF gas to furnace at the manual shutoff valve and disconnect manometer. Reinstall plug before turning on gas to furnace.
6. Turn OFF any unnecessary gas appliances stated in step 3.



INLET GAS SUPPLY PRESSURE		
Natural Gas	Minimum: 4.5" w.c.	Maximum: 10.0" w.c.
Propane Gas	Minimum: 11.0" w.c.	Maximum: 13.0" w.c.

Gas Manifold Pressure Measurement and Adjustment

Only small variations in gas pressure should be made by adjusting the gas valve pressure regulator. The manifold pressure must be measured with the burners operating. To measure and adjust the manifold pressure, use the following procedure.

1. Turn OFF gas to fur nace at the manual gas shutoff valve external to the furnace.
2. Turn off all electrical power to the system.
3. Outlet pressure tap connections:
   White-Rodgers 36J22 valve: Back outlet pressure test screw (inlet/outlet pressure tap) out one turn (counterclockwise, not more than one turn).
4. Attach a hose and manometer to the outlet pressure tap (White-Rodgers valve).
5. Turn ON the gas supply.
6. Turn on power and close thermostat “R” and “W” contacts to provide a call for heat.
7. Measure the gas manifold pressure with burners firing. Adjust manifold pressure using the *Manifold Gas Pressure* table shown on this page.
8. Remove regulator cover screw from the outlet pressure regulator adjust tower and turn screw clockwise to increase pressure or counterclockwise to decrease pressure. Replace regulator cover screw.
9. Turn off all electrical power and gas supply to the system.
10. Remove the manometer hose from the hose barb fitting or outlet pressure tap.
11. Replace outlet pressure tap: White-Rodgers 36J22 valve: Turn outlet pressure test screw in to seal pressure port (clockwise, 7 in-lb minimum).
12. Turn on electrical power and gas supply to the system.
13. Close thermostat contacts “R” and “W” to energize the valve.

Using a leak detection solution or soap suds, check for leaks at outlet or screw (White-Rodgers valve). Bubbles forming indicate a leak. SHUT OFF GAS AND REPAIR ALL LEAKS IMMEDIATELY!

NOTE: For gas to gas conversion, consult your dealer for appropriate conversion.

CAUTION

To prevent unreliable operation or equipment damage, the inlet gas supply pressure must be as specified on the unit rating plate with all other household gas fired appliances operating.

Gas Input Rate Measurement (Natural Gas Only)

The actual gas input rate to the furnace must never be greater than that specified on the unit rating plate. To measure natural gas input using the gas meter, use the following procedure.

1. Turn OFF the gas supply to all other gas-burning appliances except the furnace.
2. While the furnace is operating at high fire rate, time and record one complete revolution of the gas meter dial, measuring the smallest quantity, usually the dial that indicates ½ cu. ft. per revolution. You will use this number to calculate the quantity of gas in cubic ft. if the furnace would consume if it ran steadily for one hour (3600 seconds).
3. If the ½ cu. ft. dial was used, multiply your number x 2. **EXAMPLE:** If it took 23 seconds to complete one revolution of the ½ ft. dial (23 x 2 = 46).

This tells us that at this rate, it would take 46 seconds to consume one cu. ft. of gas. 3600 / 46 = 78.

This tells us that in one hour, the furnace would consume 78 cu. ft. of gas.

The typical value range for 1 cu. ft. of natural gas is around 1000 BTU. Check with your gas utility, if possible. In this example, the furnace is consuming 78,000 BTUH.

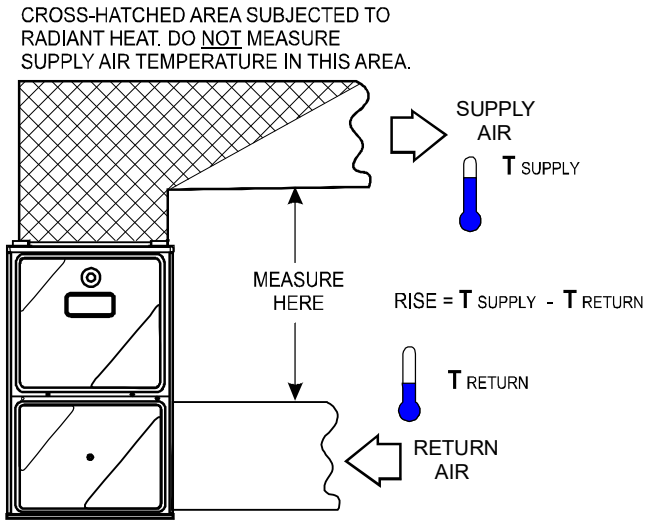
NOTE: The final manifold pressure cannot vary by more than ± 0.3" w.c. for Natural and + 0.5" for LP from the specified setting. Consult your local gas supplier if additional input rate adjustment is required.

4. Turn ON gas to and relight all other appliances turned off in step 1. Be certain that all appliances are functioning properly and that all pilot burners are operating.

Temperature Rise

Temperature rise must be within the range specified on the unit rating plate. An incorrect temperature rise may result in condensing in or overheating of the heat exchanger. An airflow and temperature rise table is provided in the Specification Sheet applicable to your model. Determine and adjust temperature rise as follows:

1. Operate furnace with burners firing for approximately ten minutes. Ensure all registers are open and all duct dampers are in their final (fully or partially open) position.
2. Place thermometers in the return and supply ducts as close to the furnace as possible. Thermometers must not be influenced by radiant heat by being able to "see" the heat exchanger.
3. Subtract the return air temperature from the supply air temperature to determine the air temperature rise. Allow adequate time for thermometer readings to stabilize.
4. Adjust temperature rise by adjusting the circulator blower speed. Increase blower speed to reduce temperature rise. Decrease blower speed to increase temperature rise. Refer to Startup Procedure and Adjustment - Circulator Blower Speeds for speed changing details.



Temperature Rise Measurement
Figure 50

OPERATIONAL CHECKS

The burner flames should be inspected with the burner compartment door installed. Flames should be stable, quiet, soft, and blue (dust may cause orange tips but they must not be yellow). Flames should extend directly outward from the burners without curling, floating, or lifting off. Flames must not impinge on the sides of the heat exchanger firing tubes.

SAFETY CIRCUIT DESCRIPTION

A number of safety circuits are employed to ensure safe and proper furnace operation. These circuits serve to control any potential safety hazards and serve as inputs in the monitoring and diagnosis of abnormal function. These circuits are continuously monitored during furnace operation by the integrated control module.

WARNING

Do not bypass safety devices.

Integrated Control Module

The integrated control module is an electronic device which, if a potential safety concern is detected, will take the necessary precautions and provide diagnostic information through an LED.

Primary Limit

The primary limit control is located on the partition panel and monitors heat exchanger compartment temperatures. It is a normally-closed (electrically), automatic reset, temperature-activated sensor. The limit guards against overheating as a result of insufficient conditioned air passing over the heat exchanger.

Auxiliary Limit
The auxiliary limit controls are located on or near the circulator blower and monitors blower compartment temperatures. They are a normally closed (electrically), automatic reset, temperature-activated sensor. These limits guard against overheating as a result of insufficient conditioned air passing over the heat exchanger.

Rollout Limit
The rollout limit controls are mounted on the burner/ manifold assembly and monitor the burner flame. They are normally closed (electrically), manual reset sensors. These limits guard against burner flames not being properly drawn into the heat exchanger.

Pressure Switches
The pressure switches are normally-open (closed during operation) negative air pressure-activated switches. They monitor the airflow (combustion air and flue products) through the heat exchanger via pressure taps located on the induced draft blower and the coil front cover. These switches guard against insufficient airflow (combustion air and flue products) through the heat exchanger and/or blocked condensate drain conditions.

Flame Sensor
The flame sensor is a probe mounted to the burner/ manifold assembly which uses the principle of flame rectification to determine the presence or absence of flame.

MAINTENANCE

Annual Inspection
The furnace should be inspected by a qualified installer, or service agency at least once per year. This check should be performed at the beginning of the heating season. This will ensure that all furnace components are in proper working order and that the heating system functions appropriately. Pay particular attention to the following items. Repair or service as necessary.

- Flue pipe system. Check for blockage and/or leakage. Check the outside termination and the connections at and internal to the furnace.
- Heat exchanger. Check for corrosion and/or buildup within the heat exchanger passageways.
- Burners. Check for proper ignition, burner flame, and flame sense.
- Drainage system. Check for blockage and/or leakage. Check hose connections at and internal to furnace.
- Wiring. Check electrical connections for tightness and/or corrosion. Check wires for damage.
- Filters.
- R-32 Sensor Wire. Check R-32 sensor wire connection for tightness and check wire for damage.

FILTERS

Filter Maintenance
Improper filter maintenance is the most common cause of inadequate heating or cooling performance. Filters should be cleaned (permanent) or replaced (disposable) every two months or as required. When replacing a filter, it must be replaced with a filter of the same type and size.

Filter Removal
Depending on the installation, differing filter arrangements can be applied. Filters can be installed in either the central return register or a side panel external filter rack (upflow only). A media air filter or electronic air cleaner can be used as an alternate filter. Follow the filter sizes given in the Recommended Minimum Filter size table to ensure proper unit performance.

To remove filters from an external filter rack in an upright upflow installation, follow the directions provided with external filter rack kit.

Horizontal Unit Filter Removal
Filters in horizontal installations are located in the central return register or the ductwork near the furnace.

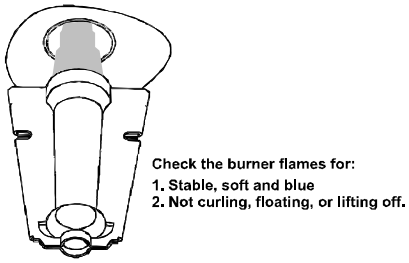
To remove:

1. Turn OFF electrical power to furnace.
2. Remove filter(s) from the central return register or ductwork.
3. Replace filter(s) by reversing the procedure for removal.
4. Turn ON electrical power to furnace.

Media Air Filter or Electronic Air Cleaner Removal
Follow the manufacturer’s directions for service.

Burners
Visually inspect the burner flames periodically during the heating season. Turn on the furnace at the thermostat and allow several minutes for flames to stabilize, since any dislodged dust will alter the flames normal appearance. Flames should be stable, quiet, soft, and blue (dust may cause orange tips but they must not be yellow). They should extend directly outward from the burners without curling, floating, or lifting off. Flames must not impinge on the sides of the heat exchanger firing tubes.

Induced Draft and Circulator Blowers
The bearings in the induced draft blower and circulator blower motors are permanently lubricated by the manufacturer. No further lubrication is required. Check motor windings for accumulation of dust which may cause overheating. Clean as necessary.



Burner Flame

Condensate Trap and Drain System (Qualified Servicer Only)

Annually inspect the drain tubes, drain trap, and field-supplied drain line for proper condensate drainage. Check drain system for hose connection tightness, blockage, and leaks. Clean or repair as necessary.

Flame Sensor (Qualified Servicer Only)

Under some conditions, the fuel or air supply can create a nearly invisible coating on the flame sensor. This coating acts as an insulator causing a drop in the flame sense signal. If the flame sense signal drops too low the furnace will not sense flame and will lock out. The flame sensor should be carefully cleaned by a qualified servicer using emery cloth or steel wool. Following cleaning, the flame sense signal should be as indicated in the Specifications Sheet.

Flue Passages (Qualified Servicer Only)

The heat exchanger flue passageways should be inspected at the beginning of each heating season.

BEFORE LEAVING AN INSTALLATION

- Cycle the heating, cooling and fan only operations to verify each operation is working properly.
- Review the Owner's Manual with the homeowner and discuss proper furnace operation and maintenance.
- Leave literature packet near furnace.

REPAIR AND REPLACEMENT PARTS

- When ordering any of the listed functional parts, be sure to provide the furnace model, manufacturing, and serial numbers with the order.
- Although only functional parts are shown in the parts list, all sheet metal parts, doors, etc. may be ordered by description.
- Parts are available from your distributor.

Functional Parts List-

Gas Valve	Blower Motor
Gas Manifold	Blower Wheel
Natural Gas Orifice	Blower Mounting Bracket
Propane Gas Orifice	Blower Cutoff
Igniter	Blower Housing
Flame Sensor	Pressure Switch
Rollout Limit Switch	Door Switch
Primary Limit Switch	Auxiliary Limit Switch
Coil Front Cover	Integrated Control Module
Transformer	Door Switch
Induced Draft Blower	
Heat Exchanger with Recuperator Coil	

1 STAGE STATUS CODES

Menu Description	LED Display		Notes
	Main Menu	Option Menu	
Active Alarm menu	Er r	Exx	(xx: code numbers)
Last 10 Faults	F10	Exx	(xx: code numbers)
Code Release Number	Cr	CR Number	
Reset to Factory Default	r Fd	yes, no	
Blower Speed for Continous Fan Mode	FSd	Fxx	(xx: Blower Speed Number F01, F02..)
Blower Speed for 1st Stage Compressor Mode	AC1	Fxx	(xx: Blower Speed Number F01, F02..)
Blower Speed for 2nd Stage Compressor Mode	AC2	Fxx	(xx: Blower Speed Number F01, F02..)
Cool On Delay	Cnd	Delay, Seconds	Default set at 7 Secs, Adjustments can be made in 7 Secs increments from 0 to 35 Secs
Cool Off Delay	Cf d	Delay, Seconds	Default set at 65 Secs, Adjustments can be made in 5 Secs increments from 0 to 120 Secs
Blower Speed for Gas Heat Mode	gAF	Fxx	(xx: Blower Speed Number F01, F02..)
Gas Heat On Delay	gnd	Delay, Seconds	Default set at 30 Secs, Adjustments can be made in 5 Secs increments from 5 to 30 Secs
Gas heat Off Delay	gFd	Delay, Seconds	Default set at 90 Secs, Adjustments can be made in 30 Secs increments from 30 to 180 Secs
Automatic Heat Staging - For Two Stage Control	AHS	no, 10, 20, 30, 60, AUt	Refer to Section " CHANGING HEATING MODE SETTING"
A2L Function Verification	A2u	yes, no	Refer to the R-32 Information Section
A2L Function Enabled	A2E	yes, no	Refer to the R-32 Information Section

1 STAGE STATUS CODES

STATUS MENU

Mode	Main Menu
Idle	I dL
Continous Fan	FAn
Compressor Cooling, Low Stage	1AC
Compressor Cooling, High Stage	2AC
Gas heat - Single Stage Control	gH
OEM test Mode	EOL

1 STAGE TROUBLESHOOTING CODES

Symptom	LED Status	Fault Description	Corrective Actions
Normal operation	I dL	Normal operation	None
Furnace fails to operate	EE0	Furnace lockout due to an excessive number of ignition “retries” (3 total) Failure to establish flame Loss of flame after establishment	Locate and correct gas interruption Check front cover pressure switch operation and verify proper drainage (hose, wiring, contact operation), correct if necessary Replace or realign igniter Check flame sense signal, clean sensor if coated or oxidized Check flue piping for blockage, proper length, elbows, and termination Verify proper induced draft blower performance
Furnace fails to operate	EE1	Pressure switch circuit is closed at start of heating cycle Pressure switch contacts sticking Short in pressure switch circuit wiring	Replace low stage pressure switch Repair short in wiring
Induced draft blower runs continuously with no furnace operation	EE2	Pressure switch circuit is not closed Pressure switch hose blocked pinched, or connected improperly Blocked flue and/or inlet air pipe, blocked drain system or weak induced draft blower Incorrect pressure switch set point or malfunctioning switch contacts Loose or improperly connected wiring	Inspect pressure switch hose, repair/replace if necessary Inspect flue and/or inlet air piping for blockage, proper length, elbows, and termination Check drain system, correct as necessary Check induced draft blower performance, correct as necessary Check pressure switch operation, replace as needed Tighten or correct wiring connection
Circulator blower runs continuously No furnace operation	EE3	Primary limit circuit is open Insufficient conditioned air over the heat exchanger Blocked filters, restrictive ductwork, improper circulator blower speed, or failed circulator blower motor Loose or improperly connected wiring in high limit circuit	Check filters and ductwork for blockage Clean filters or remove obstruction Check circulator blower speed and performance Correct speed or replace blower motor if necessary Tighten or correct wiring connection
Induced draft blower and circulator blower runs continuously No furnace operation	EE4	Flame sensed with no call for heat Short to ground in flame sense circuit Lingering burner flame Slow closing gas valve	Correct short at flame sensor or in flame sensor wiring Check for lingering or lazy flame Verify proper operation of gas valve

1 STAGE TROUBLESHOOTING CODES

Symptom	LED Status	Fault Description	Corrective Actions
No furnace operation	EE5	Open fuse Short in low voltage wiring	Replace fuse Locate and correct short in low voltage wiring
Normal furnace operation	EE6	Flame sense micro amp signal is minimal Flame sensor is coated/oxidized Flame sensor incorrectly positioned in burner fame Lazy burner flame due to improper gas pressure or combustion air	Clean flame sensor if coated or oxidized Inspect for proper flame sensor alignment Check inlet air piping for blockage, proper length, elbows, and termination Compare current gas pressure to rating plate and adjust as needed
Furnace fails to operate	EEL	Problem with igniter circuit Improperly connected or shorted igniter Poor unit ground Igniter relay fault on integrated control module	Check and correct wiring from integrated control module to igniter Diagnose and replace shorted igniter as needed Verify and correct unit ground wiring if needed Check igniter output from control, replace if necessary
Furnace fails to operate	EEA	Polarity of 115 volt AC is reversed Poor unit ground	Correct polarity, check and correct wiring if necessary Verify proper ground, correct if necessary
Furnace fails to operate	EEb	Gas valve is not energized when it should be External Gas Valve Error	Check wiring in gas valve circuit Replace integrated control board
Furnace fails to operate	EEC	Gas valve is energized when it should not be Internal gas valve error	Check wiring in gas valve circuit Replace integrated control board
Furnace fails to operate. Integrated control module LED display provides no signal	None	No 115 power to furnace or no 24 volt power to integrated control module. Blown fuse or tripped circuit breaker Integrated control module is non-functional	Restore high voltage power to furnace and integrated control module. Correct condition which caused fuse to open, replace fuse Replace non-functional integrated control module.
Furnace fails to operate	E10	Grounding fault Poor neutral connection	Verify neutral wire connection to furnace & continuity to ground source

1 STAGE TROUBLESHOOTING CODES

Symptom	LED Status	Fault Description	Corrective Actions
Furnace fails to operate	E11	Open roll out switch	Check for correct gas pressure Check for correct burner alignment Check for and correct burner restriction
Furnace fails to operate	EEn	Ignitor Open	Check for Ignitor wiring. Replace Damaged Ignitor
Furnace fails to operate	EEJ	Inducer relay Error	Replace integrated control board
Twinning feature not working	EEH	TWIN Error	Check for wiring connections. Replace integrated control board
Furnace fails to operate	EEE	Internal Faults or IRQ Loss in Control Board	Replace integrated control board
Furnace fails to operate and goes to hard lockout	EbL	Main blower motor is consuming very little current after heat on delay, below an expected value	Check for loose motor wiring connections. Verify the blower motor voltage, amps and proper speed setting. If blower motor is not operating correctly, replace the motor.
Furnace fails to operate and goes to hard lockout	EbU	Main blower motor is consuming too much current during inducer pre-purge, above an expected value.	Verify wiring connections to and from motor are not loose. Verify that line voltage wires to the control and the main blower motor are not reversed at the control.
Furnace stops heating and only the fan is operating	EAF	Furnace has lost communication with the R-32 sensor and the furnace is in mitigation mode.	Furnace may not be paired with an R-32 cooling unit. Refer to the R-32 Information Section. Verify wire connection to R-32 sensor is not loose. Verify that the R-32 sensor wire is not damaged. Replace R-32 Sensor.
Furnace stops heating and only the fan is operating	EAL	R-32 sensor has detected a refrigerant leak and furnace is in mitigation mode.	Investigate the indoor coil for a refrigerant leak. Furnace will resume normal operation once a leak is not detected and the 5 minute delay period is over.
Furnace stops heating and only the fan is operating	EAS	R-32 sensor has detected a fault and the furnace is in mitigation mode.	Investigate the R-32 sensor. Replace the R-32 sensor.
Furnace stops heating and only the fan is operating	Ear	A2L relay in the furnace control board has detected a fault and the furnace is in mitigation mode.	Investigate A2L relay. Cycle power on the furnace. Replace integrated control board.

To View & Clear Fault Codes

- Press either the Left or Right switch until L 5 F is displayed.
- Press the center switch to view stored faults.
- Press and hold the center switch for 5 to 30 seconds.
- All stored faults will be erased, and the display will flash - - - three times and return to L 5 F.

AIRFLOW TABLES *D9S96

FAN & COOLING AIFLOW

MODEL	THERMOSTAT CALL	TAP #	EXTERNAL STATIC PRESSURE (INCHES WATER COLUMN)											
			0.1	0.2	0.3	0.4	0.5		0.6		0.7		0.8	
			CFM	CFM	CFM	CFM	CFM	Watts	CFM	Watts	CFM	Watts	CFM	Watts
D9S960403B	Y/Y1, Y2, G	F01	632	574	510	448	388	80	332	85	277	89	234	93
		F02	727	677	623	565	510	101	455	106	403	111	351	116
		F03	878	839	797	751	701	146	653	151	607	157	561	162
		F04^	948	910	870	828	785	169	739	175	693	181	652	187
		F05	1106	1076	1044	1010	974	243	939	250	899	256	860	263
		F06	1156	1125	1096	1063	1028	268	996	276	960	282	927	290
		F07	1237	1205	1174	1145	1115	317	1081	324	1050	332	1016	341
		F08	1334	1306	1275	1249	1220	385	1194	391	1163	398	1136	408
		F09	1382	1354	1327	1302	1276	418	1246	424	1219	432	1190	439
D9S960603B	Y/Y1, Y2, G	F01	771	698	632	560	491	104	428	110	372	115	307	119
		F02	1197	1150	1102	1057	1014	254	968	262	926	272	877	279
		F03	1309	1264	1224	1180	1141	318	1098	325	1058	334	1018	343
		F04^	1138	1091	1043	993	949	227	901	235	853	243	805	249
		F05	944	884	824	774	716	151	660	158	605	163	554	169
		F06	963	907	852	803	745	160	689	166	639	173	587	179
		F07	1332	1289	1245	1200	1160	327	1120	335	1081	343	1036	353
		F08	1366	1319	1277	1235	1192	347	1154	354	1117	363	1074	371
		F09	1468	1436	1393	1359	1323	418	1285	427	1248	436	1210	445
D9S960804C	Y/Y1, Y2, G	F01	873	778	682	630	578	90	490	94	419	100	347	105
		F02	1442	1386	1335	1280	1221	288	1157	297	1110	307	1054	316
		F03	1643	1588	1534	1478	1415	339	1357	350	1299	361	1246	375
		F04^	1600	1555	1505	1460	1412	375	1364	384	1309	395	1260	403
		F05	1338	1269	1206	1133	1063	211	999	220	934	229	861	239
		F06	1796	1744	1691	1638	1584	430	1532	441	1473	453	1422	462
		F07	1874	1823	1775	1729	1675	482	1621	492	1567	500	1512	517
		F08	1798	1754	1719	1672	1627	500	1585	510	1546	520	1497	530
		F09	1991	1947	1900	1854	1808	573	1759	585	1707	592	1655	606
D9S961005C	Y/Y1, Y2, G	F01	1176	1107	1037	969	891	184	825	194	753	201	692	207
		F02	1773	1721	1671	1621	1571	465	1521	474	1470	485	1421	495
		F03	1709	1658	1607	1556	1503	426	1451	436	1399	445	1349	455
		F04^	1651	1597	1542	1491	1437	392	1384	401	1332	410	1278	421
		F05	1467	1409	1352	1307	1240	297	1182	306	1124	315	1063	325
		F06	1834	1785	1738	1691	1643	513	1593	522	1545	532	1502	543
		F07	1924	1881	1836	1796	1750	583	1701	592	1652	602	1606	614
		F08	2028	1994	1937	1899	1863	683	1814	690	1769	702	1724	713
		F09	2193	2145	2106	2076	2032	844	1998	852	1945	862	1903	874
D9S961205D	Y/Y1, Y2, G	F01	1187	1101	1013	931	847	165	764	174	677	180	604	186
		F02	1973	1916	1864	1810	1756	502	1702	513	1650	525	1590	536
		F03	1918	1859	1807	1748	1696	463	1643	476	1591	486	1531	497
		F04^	1835	1776	1720	1657	1602	414	1544	425	1483	436	1428	447
		F05	1236	1152	1073	990	919	181	834	190	749	198	679	204
		F06	1521	1459	1391	1327	1253	271	1187	281	1116	291	1053	302
		F07	1673	1609	1549	1493	1430	345	1362	354	1305	365	1242	375
		F08	2033	1981	1929	1878	1822	541	1771	553	1716	565	1669	578
		F09	2257	2201	2151	2099	2057	704	2008	719	1959	732	1906	742

RECOMMENDED AIRFLOW SPEEDS FOR CONNECTION WITH 2 STAGE OUTDOOR MODELS		
FURNACE MODEL	Y2	Y1
*D9S961005CN	F06	F01
*D9S961205DN	F04	F05

NOTE:

1. F04 is Default Speed for Y/Y1
2. F05 is Default Speed for Y2
3. F01 is Default Speed for G
4. For a single-stage outdoor unit, the Y connection from the thermostat can be connected to the Y/Y1 or Y2 connection on the furnace control module. A call for cooling will energize that connection on the furnace control module. The desired cooling fan speed should be adjusted for the furnace control module connection used (Y1 or Y2) to provide the correct cooling airflow.

AIRFLOW TABLES

*D9S96

HEATING AIRFLOW															
MODEL	TSTAT CALL	TAP #	EXTERNAL STATIC PRESSURE, (INCHES WATER COLUMN)												TEMP RANGE
			0.1		0.2		0.3		0.4		0.5		0.6	0.7	0.8	
			CFM	RISE	CFM	RISE	CFM	RISE	CFM	RISE	CFM	RISE	CFM	CFM	CFM	
D9S960403B	W/W1	F01^^	632	N/A	574	N/A	510	N/A	448	N/A	388	N/A	332	277	234	35-65
		F02^	727	48	677	51	623	54	565	60	510	65	455	403	351	
		F03	878	41	839	42	797	45	751	47	701	51	653	607	561	
		F04	948	38	910	39	870	41	828	43	785	45	739	693	652	
D9S960603B	W/W1	F01^^	771	N/A	698	N/A	632	N/A	560	N/A	491	N/A	428	372	307	35-65
		F02^	1197	45	1150	46	1102	48	1057	50	1014	53	968	926	877	
		F03	1309	41	1264	42	1224	44	1180	45	1141	47	1098	1058	1018	
		F04	1138	47	1091	49	1043	51	993	54	949	56	901	853	805	
D9S960804C	W/W1	F01^^	873	N/A	778	N/A	682	N/A	630	N/A	578	N/A	490	419	347	40-70
		F02^	1442	49	1386	51	1335	53	1280	56	1221	58	1157	1110	1054	
		F03	1643	43	1588	45	1534	46	1478	48	1415	50	1357	1299	1246	
		F04	1600	44	1555	46	1505	47	1460	49	1412	50	1364	1309	1260	
D9S961005C	W/W1	F01^^	1176	N/A	1107	N/A	1037	N/A	969	N/A	891	N/A	825	753	692	40-70
		F02^	1773	50	1721	52	1671	53	1621	55	1571	57	1521	1470	1421	
		F03^^	1709	52	1658	54	1607	55	1556	57	1503	59	1451	1399	1349	
		F04	1651	54	1597	56	1542	58	1491	60	1437	62	1384	1332	1278	
D9S961205D	W/W1	F01^^	1187	N/A	1101	N/A	1013	N/A	931	N/A	847	N/A	764	677	604	45-75
		F02^	1973	54	1916	56	1864	57	1810	59	1756	61	1702	1650	1590	
		F03	1918	56	1859	57	1807	59	1748	61	1696	63	1643	1591	1531	
		F04	1835	58	1776	60	1720	62	1657	64	1602	67	1544	1483	1428	

NOTE:
^DEFAULT & RECOMMENDED
^^NOT RECOMMENDED FOR HEATING

AIRFLOW TABLES

*R9S92

FAN & COOLING AIFLOW													
MODEL	THERMOSTAT CALL	TAP #	EXTERNAL STATIC PRESSURE (INCHES WATER COLUMN)										
			0.1	0.2	0.3	0.4	0.5		0.6		0.7		0.8	
			CFM	CFM	CFM	CFM	CFM	Watts	CFM	Watts	CFM	Watts	CFM	Watts
R9S920403A	Y/Y1, Y2, G	F01	610	559	513	467	419	84	368	89	316	95	285	98
		F02	925	887	852	818	787	181	754	187	720	192	685	200
		F03	846	808	772	737	703	149	667	155	630	161	594	167
		F04^	781	739	701	663	625	129	586	133	547	139	508	144
		F05	1038	1003	970	940	909	232	879	239	849	245	820	251
		F06	1106	1072	1041	1011	981	271	953	278	926	285	898	291
		F07	1215	1180	1151	1121	1095	336	1066	343	1043	352	1017	361
		F08	1238	1210	1180	1153	1126	360	1099	368	1073	376	1047	383
		F09	1319	1299	1273	1246	1220	429	1194	436	1169	444	1146	455
R9S920603B	Y/Y1, Y2, G	F01	723	663	604	539	476	93	404	99	347	104	291	110
		F02	1052	1010	962	920	875	181	829	189	785	198	740	206
		F03	1125	1084	1042	1003	964	211	918	218	875	227	834	237
		F04^	1206	1166	1129	1091	1054	249	1012	258	977	267	947	277
		F05	901	854	809	758	703	136	653	145	604	151	552	159
		F06	948	900	855	810	762	149	708	156	662	164	608	172
		F07	1273	1237	1206	1169	1128	286	1094	294	1057	302	1020	311
		F08	1365	1321	1292	1251	1219	331	1184	341	1152	349	1120	358
		F09	1426	1387	1360	1326	1292	374	1257	383	1226	392	1193	400
R9S920803B	Y/Y1, Y2, G	F01	718	662	611	551	486	99	419	104	358	111	300	115
		F02	1373	1341	1307	1279	1253	410	1226	414	1197	420	1172	428
		F03	1309	1265	1232	1192	1162	324	1129	332	1093	337	1057	347
		F04^	1233	1194	1165	1131	1097	309	1070	317	1039	324	1008	330
		F05	874	828	791	750	703	147	655	153	602	157	547	164
		F06	950	908	865	826	786	168	739	175	689	181	638	188
		F07	1097	1056	1019	988	952	236	921	243	880	248	842	255
		F08	1166	1127	1092	1060	1027	268	994	276	960	281	926	286
		F09	1407	1373	1338	1308	1282	424	1253	431	1229	438	1203	446
R9S920804C	Y/Y1, Y2, G	F01	804	740	670	586	501	93	407	98	347	103	0	0
		F02	1422	1375	1332	1288	1245	271	1200	281	1154	290	1108	299
		F03	1502	1455	1410	1365	1322	304	1278	314	1237	325	1195	335
		F04^	1567	1519	1476	1441	1402	339	1360	349	1319	361	1278	371
		F05	1347	1299	1253	1205	1157	238	1111	245	1063	255	1013	263
		F06	1692	1648	1609	1567	1529	406	1490	416	1451	428	1413	440
		F07	1772	1728	1689	1652	1614	456	1574	462	1534	474	1498	486
		F08	1793	1753	1720	1679	1643	470	1604	479	1562	489	1524	500
		F09	1875	1833	1797	1759	1727	529	1686	539	1652	552	1616	563
R9S920805C	Y/Y1, Y2, G	F01	869	782	684	575	482	100	395	104	331	110	122	58
		F02	1823	1776	1720	1679	1642	409	1597	424	1553	442	1504	456
		F03	1778	1729	1690	1648	1605	398	1558	412	1497	425	1449	439
		F04^	1722	1660	1609	1553	1507	350	1455	369	1402	383	1350	395
		F05	1498	1442	1388	1332	1278	264	1215	277	1154	290	1090	301
		F06	1634	1583	1536	1489	1440	325	1387	339	1330	351	1275	365
		F07	1925	1879	1836	1795	1752	471	1711	489	1664	503	1621	521
		F08	1993	1941	1899	1852	1813	508	1778	525	1741	545	1693	560
		F09	2216	2172	2131	2087	2046	663	2011	681	1973	697	1935	717
R9S921004C	Y/Y1, Y2, G	F01	809	740	669	603	536	98	449	105	377	110	319	115
		F02	1754	1707	1673	1640	1604	487	1568	493	1538	505	1509	514
		F03	1648	1620	1586	1552	1515	426	1480	435	1449	442	1412	454
		F04^	1558	1517	1479	1441	1403	368	1366	378	1330	386	1295	396
		F05	1303	1255	1210	1167	1125	241	1081	250	1041	260	999	271
		F06	1406	1362	1321	1281	1240	283	1197	291	1157	301	1118	311
		F07	1445	1403	1363	1324	1287	307	1247	315	1208	325	1167	336
		F08	1778	1743	1700	1669	1634	508	1600	518	1568	530	1542	544
		F09	1824	1785	1747	1714	1680	536	1647	548	1617	559	1585	568
R9S921005C	Y/Y1, Y2, G	F01	906	813	717	613	519	103	439	109	368	114	0	0
		F02	1871	1818	1769	1720	1667	435	1614	446	1565	459	1511	468
		F03	1831	1782	1729	1679	1624	413	1571	424	1520	437	1465	449
		F04^	1653	1596	1538	1480	1422	324	1362	335	1306	346	1247	357
		F05	1496	1437	1376	1315	1250	259	1189	269	1126	279	1056	288
		F06	1640	1587	1527	1471	1414	314	1357	324	1294	336	1235	347
		F07	1955	1937	1909	1860	1813	513	1765	527	1712	541	1662	553
		F08	2086	2039	1991	1944	1896	574	1855	588	1810	593	1763	607
		F09	2222	2178	2133	2088	2043	683	1998	699	1954	711	1910	727
R9S921205D	Y/Y1, Y2, G	F01	1056	962	866	772	666	130	574	136	501	143	429	150
		F02	2096	2050	2005	1948	1899	532	1848	545	1800	559	1755	575
		F03	2023	1973	1927	1877	1829	488	1781	501	1731	515	1680	532
		F04^	1946	1900	1848	1795	1741	441	1689	455	1637	470	1584	485
		F05	1231	1151	1078	992	913	171	812	181	725	189	651	196
		F06	1503	1440	1382	1318	1251	256	1179	270	1108	281	1039	293
		F07	1704	1646	1586	1532	1473	328	1412	340	1346	357	1284	372
		F08	1831	1775	1720	1668	1610	388	1560	401	1511	413	1457	430
		F09	2222	2173	2125	2078	2029	607	1980	622	1933	636	1884	652

RECOMMENDED AIRFLOW SPEEDS FOR CONNECTION WITH 2 STAGE OUTDOOR MODELS		
FURNACE MODEL	Y2	Y1
*R9S921205DN	F08	F05

NOTE:

1. F04 is Default Speed for Y/Y1

2. F05 is Default Speed for Y2

3. F01 is Default Speed for G

4. For a single-stage outdoor unit, the Y connection from the thermostat can be connected to the Y/Y1 or Y2 connection on the furnace control module. A call for cooling will energize that connection on the furnace control module. The desired cooling fan speed should be adjusted for the furnace control module connection used (Y1 or Y2) to provide the correct cooling airflow.

AIRFLOW TABLES

*R9S92

HEATING AIRFLOW															
MODEL	TSTAT CALL	TAP #	EXTERNAL STATIC PRESSURE, (INCHES WATER COLUMN)												TEMP RANGE
			0.1		0.2		0.3		0.4		0.5		0.6	0.7	0.8	
			CFM	RISE	CFM	RISE	CFM	RISE	CFM	RISE	CFM	RISE	CFM	CFM	CFM	
R9S920403A	W/W1	F01^^	610	56	559	N/A	513	N/A	467	N/A	419	N/A	368	316	285	30-60
		F02^	925	37	887	38	852	40	818	42	787	43	754	720	685	
		F03	846	40	808	42	772	44	737	46	703	49	667	630	594	
		F04	781	44	739	46	701	49	663	51	625	55	586	547	508	
R9S920603B	W/W1	F01^^	723	N/A	663	N/A	604	N/A	539	N/A	476	N/A	404	347	291	35-65
		F02^	1052	49	1010	51	962	53	920	56	875	58	829	785	740	
		F03	1125	45	1084	47	1042	49	1003	51	964	53	918	875	834	
		F04	1206	42	1166	44	1129	45	1091	47	1054	48	1012	977	947	
R9S920803B	W/W1	F01^^	718	N/A	662	N/A	611	N/A	551	N/A	486	N/A	419	358	300	35-65
		F02^	1373	50	1341	51	1307	52	1279	53	1253	54	1226	1197	1172	
		F03	1309	52	1265	54	1232	55	1192	57	1162	59	1129	1093	1057	
		F04	1233	55	1194	57	1165	59	1131	60	1097	62	1070	1039	1008	
R9S920804C	W/W1	F01^^	804	N/A	740	N/A	670	N/A	586	N/A	501	N/A	407	347	N/A	35-65
		F02^	1422	48	1375	50	1332	51	1288	53	1245	55	1200	1154	1108	
		F03	1502	45	1455	47	1410	48	1365	50	1322	52	1278	1237	1195	
		F04	1567	44	1519	45	1476	46	1441	47	1402	49	1360	1319	1278	
R9S920805C	W/W1	F01^^	869	N/A	782	N/A	684	N/A	575	N/A	482	N/A	395	331	122	25-55
		F02^	1823	37	1776	38	1720	40	1679	41	1642	41	1597	1553	1504	
		F03	1778	38	1729	39	1690	40	1648	41	1605	42	1558	1497	1449	
		F04	1722	40	1660	41	1609	42	1553	44	1507	45	1455	1402	1350	
R9S921004C	W/W1	F01^^	809	N/A	740	N/A	669	N/A	603	N/A	536	N/A	449	377	319	35-65
		F02^	1754	49	1707	50	1673	51	1640	52	1604	53	1568	1538	1509	
		F03	1648	52	1620	53	1586	54	1552	55	1515	56	1480	1449	1412	
		F04	1558	55	1517	56	1479	58	1441	59	1403	61	1366	1330	1295	
R9S921005C	W/W1	F01^^	906	N/A	813	N/A	717	N/A	613	N/A	519	N/A	439	368	N/A	35-65
		F02^	1871	46	1818	47	1769	48	1720	50	1667	51	1614	1565	1511	
		F03	1831	47	1782	48	1729	49	1679	51	1624	52	1571	1520	1465	
		F04^^	1653	52	1596	53	1538	55	1480	58	1422	60	1362	1306	1247	
R9S921205D	W/W1	F01^^	1056	N/A	962	N/A	866	N/A	772	N/A	666	N/A	574	501	429	35-65
		F02^	2096	49	2050	50	2005	51	1948	52	1899	54	1848	1800	1755	
		F03	2023	51	1973	52	1927	53	1877	54	1829	56	1781	1731	1680	
		F04^^	1946	53	1900	54	1848	55	1795	57	1741	59	1689	1637	1584	

NOTE:
^DEFAULT & RECOMMENDED
^^NOT RECOMMENDED FOR HEATING

AIRFLOW TABLES

*R9S96

FAN & COOLING AIFLOW													
MODEL	THERMOSTAT CALL	TAP #	EXTERNAL STATIC PRESSURE (INCHES WATER COLUMN)										
			0.1	0.2	0.3	0.4	0.5		0.6		0.7		0.8	
			CFM	CFM	CFM	CFM	CFM	Watts	CFM	Watts	CFM	Watts	CFM	Watts
R9S960403A	Y/Y1, Y2, G	F01	705	661	617	564	509	103	455	108	405	115	362	120
		F02	1079	1055	1027	994	965	256	935	264	906	271	863	277
		F03	915	881	846	814	780	174	737	180	695	186	652	193
		F04^	887	855	823	790	751	164	705	170	666	176	608	183
		F05	1135	1106	1078	1049	1021	281	994	290	965	299	933	306
		F06	1189	1163	1138	1111	1085	321	1059	331	1032	341	1001	349
		F07	1266	1243	1218	1197	1172	372	1148	383	1123	394	1099	400
		F08	1313	1288	1261	1239	1215	403	1189	412	1165	422	1143	432
		F09	1342	1324	1305	1280	1263	440	1239	452	1216	463	1193	473
R9S960603B	Y/Y1, Y2, G	F01	758	696	636	572	512	104	460	110	412	115	354	121
		F02	1218	1178	1140	1100	1060	275	1016	284	977	292	937	299
		F03	1164	1123	1084	1042	1003	249	960	258	920	268	871	276
		F04^	1121	1083	1041	996	953	230	906	236	861	245	818	252
		F05	902	851	801	746	689	145	637	153	585	158	542	164
		F06	960	917	864	812	764	164	708	171	661	179	614	184
		F07	1273	1240	1207	1171	1128	309	1089	318	1051	327	1012	336
		F08	1335	1301	1266	1228	1192	347	1154	356	1118	365	1078	373
		F09	1427	1390	1362	1327	1297	408	1260	414	1224	423	1193	434
R9S960803B	Y/Y1, Y2, G	F01	715	658	589	524	465	93	412	99	360	104	279	108
		F02	1415	1385	1355	1322	1291	394	1255	403	1219	407	1186	417
		F03	1388	1360	1325	1291	1259	375	1223	385	1191	393	1157	403
		F04^	1290	1252	1215	1182	1143	311	1107	319	1071	329	1032	337
		F05	916	867	817	767	710	147	657	154	608	159	563	166
		F06	985	940	892	842	797	169	746	176	693	184	649	190
		F07	1118	1078	1037	992	952	222	910	230	863	239	822	247
		F08	1191	1153	1114	1074	1034	255	993	264	951	272	911	281
		F09	1471	1440	1409	1377	1347	427	1314	436	1283	446	1247	456
R9S960804C	Y/Y1, Y2, G	F01	1019	952	878	796	706	138	619	144	542	150	485	157
		F02	1791	1743	1700	1663	1626	472	1583	487	1538	499	1489	510
		F03	1625	1559	1512	1468	1425	359	1370	369	1325	385	1271	395
		F04^	1537	1490	1447	1403	1354	326	1301	337	1247	347	1190	357
		F05	1289	1234	1180	1122	1058	217	991	226	917	234	840	242
		F06	1431	1375	1329	1283	1227	276	1169	285	1108	295	1043	304
		F07	1836	1784	1741	1703	1664	496	1628	515	1585	528	1537	540
		F08	1919	1890	1846	1807	1771	566	1735	585	1694	600	1650	613
		F09	1952	1921	1885	1843	1804	590	1769	611	1731	629	1691	643
R9S960805C	Y/Y1, Y2, G	F01	1029	959	890	811	727	149	647	157	579	163	511	170
		F02	1814	1766	1722	1679	1637	486	1595	502	1555	517	1511	531
		F03	1893	1844	1803	1763	1723	541	1685	556	1641	569	1604	588
		F04^	1738	1680	1637	1596	1554	437	1510	452	1469	465	1420	477
		F05	1193	1135	1087	1016	950	198	880	208	805	217	738	225
		F06	1421	1369	1323	1272	1222	283	1168	295	1108	306	1045	318
		F07	1582	1536	1491	1445	1404	358	1358	370	1309	382	1255	395
		F08	1962	1919	1889	1851	1816	601	1780	620	1743	638	1702	655
		F09	2068	2024	1986	1947	1912	692	1873	709	1837	726	1797	744
R9S961005C	Y/Y1, Y2, G	F01	1008	934	855	779	702	142	628	148	557	155	493	161
		F02	2026	1981	1929	1901	1858	659	1819	677	1773	685	1733	701
		F03	1921	1879	1840	1791	1751	577	1705	588	1656	604	1610	617
		F04^	1804	1755	1710	1664	1619	490	1574	502	1526	514	1479	524
		F05	1475	1421	1369	1314	1260	307	1207	317	1152	326	1097	337
		F06	1626	1578	1522	1475	1427	381	1353	390	1328	401	1283	412
		F07	1693	1639	1588	1542	1491	422	1437	432	1390	442	1340	453
		F08	1775	1723	1674	1629	1580	472	1529	485	1484	497	1435	508
		F09	2161	2122	2084	2048	2010	739	1973	755	1940	776	1914	796
R9S961205D	Y/Y1, Y2, G	F01	1118	1035	952	860	750	149	663	156	590	165	519	171
		F02	2143	2095	2047	2002	1954	619	1891	632	1850	647	1802	663
		F03	2025	1977	1930	1897	1848	539	1798	553	1750	567	1703	583
		F04^	1906	1877	1828	1778	1726	474	1674	487	1622	501	1568	515
		F05	1220	1145	1070	995	907	177	811	187	725	194	651	201
		F06	1684	1620	1561	1499	1438	345	1378	358	1318	371	1259	383
		F07	1766	1712	1666	1612	1558	387	1506	401	1450	412	1395	425
		F08	1863	1807	1754	1698	1642	432	1587	445	1532	459	1476	472
		F09	2454	2396	2347	2296	2250	889	2202	905	2157	922	2113	941

RECOMMENDED AIRFLOW SPEEDS FOR CONNECTION WITH 2 STAGE OUTDOOR MODELS		
FURNACE MODEL	Y2	Y1
*R9S960805CN	F02	F05
*R9S961205DN	F08	F05

NOTE:

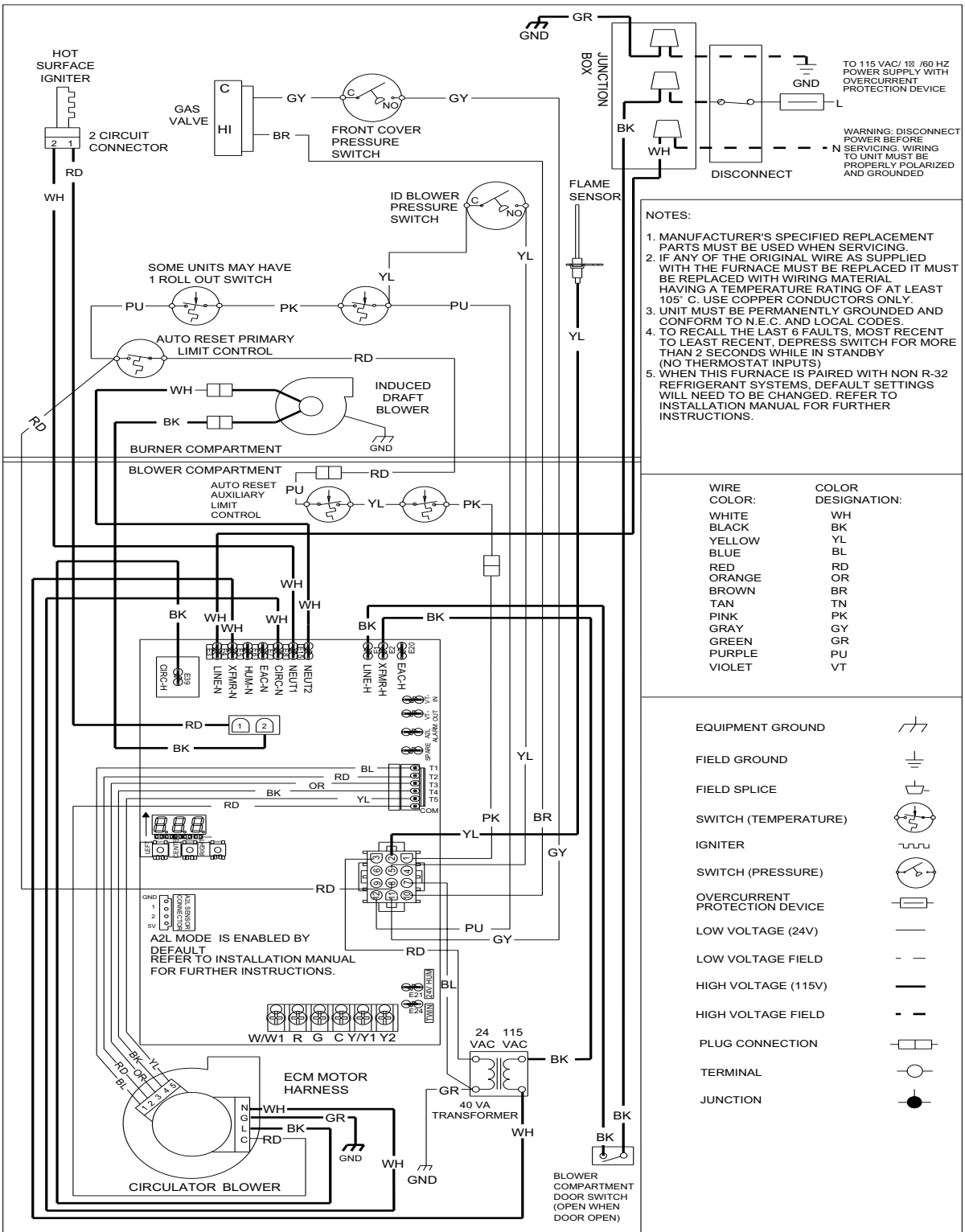
1. F04 is Default Speed for Y/Y1
2. F05 is Default Speed for Y2
3. F01 is Default Speed for G
4. For a single-stage outdoor unit, the Y connection from the thermostat can be connected to the Y/Y1 or Y2 connection on the furnace control module. A call for cooling will energize that connection on the furnace control module. The desired cooling fan speed should be adjusted for the furnace control module connection used (Y1 or Y2) to provide the correct cooling airflow.

HEATING AIRFLOW															
MODEL	TSTAT CALL	TAP #	EXTERNAL STATIC PRESSURE, (INCHES WATER COLUMN)												TEMP RANGE
			0.1		0.2		0.3		0.4		0.5		0.6	0.7	0.8	
			CFM	RISE	CFM	RISE	CFM	RISE	CFM	RISE	CFM	RISE	CFM	CFM	CFM	
R9S960403A	W/W1	F01^^	705	50	661	54	617	N/A	564	N/A	509	N/A	455	405	362	25-55
		F02^	1079	33	1055	34	1027	35	994	36	965	37	935	906	863	
		F03	915	39	881	40	846	42	814	44	780	46	737	695	652	
		F04	887	40	855	42	823	43	790	45	751	47	705	666	608	
R9S960603B	W/W1	F01^^	758	N/A	696	N/A	636	N/A	572	N/A	512	N/A	460	412	354	35-65
		F02^	1218	44	1178	45	1140	47	1100	48	1060	50	1016	977	937	
		F03	1164	46	1123	47	1084	49	1042	51	1003	53	960	920	871	
		F04	1121	48	1083	49	1041	51	996	54	953	56	906	861	818	
R9S960803B	W/W1	F01^^	715	N/A	658	N/A	589	N/A	524	N/A	465	N/A	412	360	279	35-65
		F02^	1415	50	1385	51	1355	52	1322	54	1291	55	1255	1219	1186	
		F03	1388	51	1360	52	1325	54	1291	55	1259	57	1223	1191	1157	
		F04	1290	55	1252	57	1215	59	1182	60	1143	62	1107	1071	1032	
R9S960804C	W/W1	F01^^	1019	N/A	952	N/A	878	N/A	796	N/A	706	N/A	619	542	485	25-55
		F02^	1791	40	1743	41	1700	42	1663	43	1626	44	1583	1538	1489	
		F03	1625	44	1559	46	1512	47	1468	48	1425	50	1370	1325	1271	
		F04	1537	46	1490	48	1447	49	1403	51	1354	53	1301	1247	1190	
R9S960805C	W/W1	F01^^	1029	N/A	959	N/A	890	N/A	811	N/A	727	N/A	647	579	511	25-55
		F02^	1814	39	1766	40	1722	41	1679	42	1637	43	1595	1555	1511	
		F03	1893	38	1844	39	1803	39	1763	40	1723	41	1685	1641	1604	
		F04	1738	41	1680	42	1637	43	1596	45	1554	46	1510	1469	1420	
R9S961005C	W/W1	F01^^	1008	N/A	934	N/A	855	N/A	779	N/A	702	N/A	628	557	493	30-60
		F02^	2026	44	1981	45	1929	46	1901	47	1858	48	1819	1773	1733	
		F03	1921	46	1879	47	1840	48	1791	50	1751	51	1705	1656	1610	
		F04	1804	49	1755	51	1710	52	1664	53	1619	55	1574	1526	1479	
R9S961205D	W/W1	F01^^	1118	N/A	1035	N/A	952	N/A	860	N/A	750	N/A	663	590	519	35-65
		F02^	2143	50	2095	51	2047	52	2002	53	1954	55	1891	1850	1802	
		F03	2025	53	1977	54	1930	55	1897	56	1848	58	1798	1750	1703	
		F04^^	1906	56	1877	57	1828	58	1778	60	1726	62	1674	1622	1568	

NOTE:
^DEFAULT & RECOMMENDED
^^NOT RECOMMENDED FOR HEATING

WARNING

HIGH VOLTAGE!
Disconnect ALL power before servicing or installing this unit. Multiple power sources may be present. Failure to do so may cause property damage, personal injury or death.



NOTES:

1. MANUFACTURER'S SPECIFIED REPLACEMENT PARTS MUST BE USED WHEN SERVICING.
2. IF ANY OF THE ORIGINAL WIRE AS SUPPLIED WITH THE FURNACE MUST BE REPLACED IT MUST BE REPLACED WITH WIRING MATERIAL HAVING A TEMPERATURE RATING OF AT LEAST 105° C. USE COPPER CONDUCTORS ONLY.
3. UNIT MUST BE PERMANENTLY GROUNDED AND CONFORM TO N.E.C. AND LOCAL CODES.
4. TO RECALL THE LAST 6 FAULTS, MOST RECENT TO LEAST RECENT, DEPRESS SWITCH FOR MORE THAN 2 SECONDS WHILE IN STANDBY (NO THERMOSTAT INPUTS)
5. WHEN THIS FURNACE IS PAIRED WITH NON R-32 REFRIGERANT SYSTEMS, DEFAULT SETTINGS WILL NEED TO BE CHANGED. REFER TO INSTALLATION MANUAL FOR FURTHER INSTRUCTIONS.

WIRE COLOR:	COLOR DESIGNATION:
WHITE	WH
BLACK	BK
YELLOW	YL
BLUE	BL
RED	RD
ORANGE	OR
BROWN	BR
TAN	TN
PINK	PK
GRAY	GY
GREEN	GR
PURPLE	PU
VIOLET	VT

EQUIPMENT GROUND
FIELD GROUND
FIELD SPLICE
SWITCH (TEMPERATURE)
IGNITER
SWITCH (PRESSURE)
OVERCURRENT PROTECTION DEVICE
LOW VOLTAGE (24V)
LOW VOLTAGE FIELD
HIGH VOLTAGE (115V)
HIGH VOLTAGE FIELD
PLUG CONNECTION
TERMINAL
JUNCTION

ERROR CODE STATUS READ CODES FROM LEFT TO RIGHT	SEVEN SEGMENT DISPLAY Seg#3	Seg#2	Seg#1
INTERNAL FAULTS OR IRQ LOSS	E	E	E
LOCKOUT DUE TO EXCESSIVE RETRIES RECYCLE	E	E	0
PRESSURE SWITCH STUCK CLOSED	E	E	1
PRESSURE SWITCH OPEN	E	E	2
OPEN HIGH LIMIT SWITCH	E	E	3
FLAME DETECTED WHEN NO FLAME SHOULD BE PRESENT	E	E	4
OPEN FUSE	E	E	5
LOW FLAME SIGNAL	E	E	6
IGNITOR RELAY FAULT	E	E	L
REVERSED LINE POLARITY OR GROUNDING ERROR	E	E	A
INTERNAL GAS VALVE ERROR	E	E	b
EXTERNAL GAS VALVE ERROR	E	E	C
OPEN ROLLOUT SWITCH	E	1	1
IGNITOR OPEN	E	E	n
INDUCER RELAY ERROR	E	E	J

ERROR CODE STATUS READ CODES FROM LEFT TO RIGHT	SEVEN SEGMENT DISPLAY Seg#3	Seg#2	Seg#1
TWIN ERROR	E	E	H
GROUNDING ERROR	E	1	0
LOW CIRCULATOR CURRENT	E	b	L
CIRCULATOR CURRENT UNEXPECTED	E	b	U
A2L COMMUNICATION ALARM	E	A	F
A2L LEAKAGE ALARM	E	A	L
A2L INTERNAL ALARM	E	A	S
A2L RELAY ALARM	E	A	r

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Wiring is subject to change. Always refer to the wiring diagram on the unit for the most up-to-date wiring.

SPECIAL INSTRUCTIONS FOR PRODUCTS INSTALLED IN THE STATE OF MASSACHUSETTS

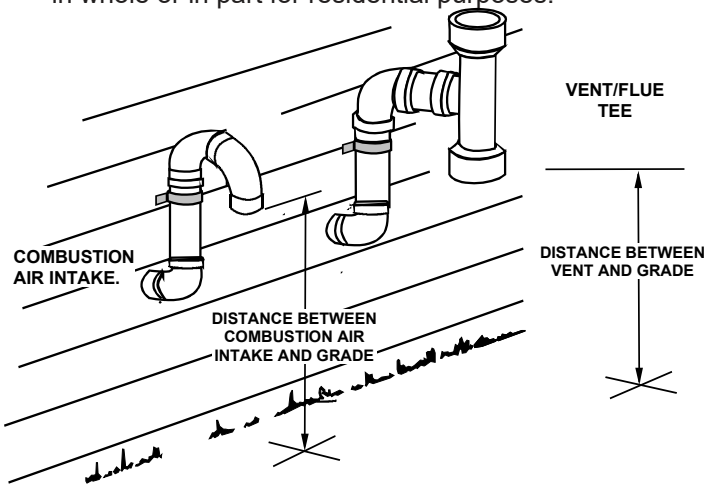
For all side wall horizontally vented gas fueled equipment installed in every dwelling, building or structure used in whole or in part for residential purposes, including those owned or operated by the Commonwealth and where the side wall exhaust vent termination is less than seven (7) feet above finished grade in the area of the venting, including but not limited to decks and porches, the following requirements shall be satisfied:

1. INSTALLATION OF CARBON MONOXIDE DETECTORS. At the time of installation of the side wall horizontal vented gas fueled equipment, the installing plumber or gasfitter shall observe that a hard wired carbon monoxide detector with an alarm and battery back-up is installed on the floor level where the gas equipment is to be installed. In addition, the installing plumber or gasfitter shall observe that a battery operated or hard wired carbon monoxide detector with an alarm is installed on each additional level of the dwelling, building or structure served by the side wall horizontal vented gas fueled equipment. It shall be the responsibility of the property owner to secure the services of qualified licensed professionals for the installation of hard wired carbon monoxide detectors
   a. In the event that the side wall horizontally vented gas fueled equipment is installed in a crawl space or an attic, the hard wired carbon monoxide detector with alarm and battery back-up may be installed on the next adjacent floor level.
   b. In the event that the requirements of this subdivision can not be met at the time of completion of installation, the owner shall have a period of thirty (30) days to comply with the above requirements; provided, however, that during said thirty (30) day period, a battery operated carbon monoxide detector with an alarm shall be installed.
2. APPROVED CARBON MONOXIDE DETECTORS. Each carbon monoxide detector as required in accordance with the above provisions shall comply with NFPA 720 and be ANSI/UL 2034 listed and IAS certified.
3. SIGNAGE. A metal or plastic identification plate shall be permanently mounted to the exterior of the building at a minimum height of eight (8) feet above grade directly in line with the exhaust vent terminal for the horizontally vented gas fueled heating appliance or equipment. The sign shall read, in print size no less than one-half (1/2) inch in size, “GAS VENT DIRECTLY BELOW. KEEP CLEAR OF ALL OBSTRUCTIONS”.
4. INSPECTION. The state or local gas inspector of the side wall horizontally vented gas fueled equipment shall not approve the installation unless, upon inspection, the inspector observes carbon monoxide detectors and signage installed in accordance with the provisions of 248 CMR 5.08(2)(a)1 through 4.

EXEMPTIONS

The following equipment is exempt from 248 CMR 5.08(2)(a)1 through 4:

1. The equipment listed in Chapter 10 entitled “Equipment Not Required To Be Vented” in the most current edition of NFPA 54 as adopted by the Board; and
2. Product Approved side wall horizontally vented gas fueled equipment installed in a room or structure separate from the dwelling, building or structure used in whole or in part for residential purposes.



   c. MANUFACTURER REQUIREMENTS - GAS EQUIPMENT VENTING SYSTEM PROVIDED. When the manufacturer of Product Approved side wall horizontally vented gas equipment provides a venting system design or venting system components with the equipment, the instructions provided by the manufacturer for installation of the equipment and the venting system shall include:
3. Detailed instructions for the installation of the venting system design or the venting system components and;
4. A complete parts list for the venting system design or venting system.
   d. MANUFACTURER REQUIREMENTS - GAS EQUIPMENT VENTING SYSTEM NOT PROVIDED. When the manufacturer of a Product Approved side wall horizontally vented gas fueled equipment does not provide the parts for venting the flue gases, but identifies “special venting systems”, the following requirements shall be satisfied by the manufacturer:
5. The referenced “special venting system” instructions shall be included with the appliance or equipment installation instructions; and
6. The “special venting systems” shall be Product Approved by the Board, and the instructions for that system shall include a parts list and detailed installation instructions.
   e. A copy of all installation instructions for all Product Approved side wall horizontally vented gas fueled equipment, all venting instructions, all parts lists for venting instructions, and/or all venting design instructions shall remain with the appliance or equipment at the completion of the installation.

START-UP CHECKLIST

Furnace				
	Model Number			
	Serial Number			
ELECTRICAL				
Line Voltage (Measure **L1 to N** and **N to Ground** Voltage)	L - N			
	N - G			
Secondary Voltage (Measure Transformer Output Voltage)	R - C			
Blower Amps				
BLOWER EXTERNAL STATIC PRESSURE				
Return Air Static Pressure			IN. W.C.	
Supply Air Static Pressure			IN. W.C.	
Total External Static Pressure (Ignoring +/- from the reading above, add total here)			IN. W.C.	
TEMPERATURES				
Return Air Temperature (Dry bulb / Wet bulb)			DB °F	WB °F
Cooling Supply Air Temperature (Dry bulb / Wet bulb)			DB °F	WB °F
Heating Supply Air Temperature			DB °F	
Temperature Rise			DB °F	
Delta T (Difference between Supply and Return Temperatures)			DB °F	
GAS PRESSURES				
Gas Inlet Pressure			IN. W.C.	
Gas Manifold Pressure (Low Fire)			IN. W.C.	
Gas Manifold Pressure (High Fire)			IN. W.C.	
Gas Type (NG) = Natural Gas / (LP) = Liquid Propane				
Additional Checks				
Check wire routings for any rubbing				
Check for kinked pressure switch tubing.				
Check flue elbow for alignment and clamp tightness.				
Check screw tightness on blower wheel.				
Check factory wiring and wire connections.				
Check product for proper clearances as noted by installation instructions				
Check R-32 sensor wire is connected properly (if applicable)				
°F to °C formula: (°F - 32) divided by 1.8 = °C **°C to °F formula: (°C multiplied by 1.8) + 32 = °F**				

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CUSTOMER FEEDBACK

We are very interested in all product comments.
Please fill out the feedback form on one of the following links:
Goodman® Brand Products: (http://www.goodmanmfg.com/about/contact-us).
Amana® Brand Products: (http://www.amana-hac.com/about-us/contact-us).
You can also scan the QR code on the right for the product brand you purchased to be directed to the feedback page.

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