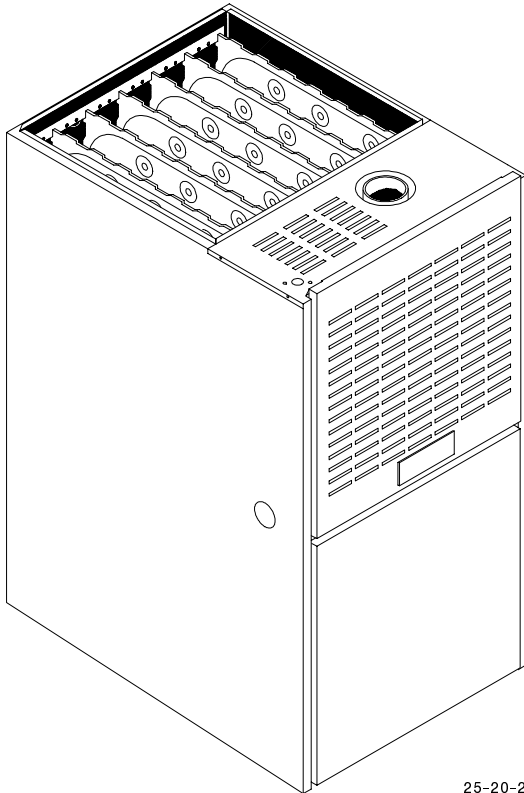


Technical Support Manual



25-20-24

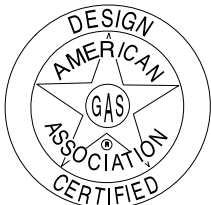
Models

NTC5050BFE1	GNJ050N12D1
NTC5075BFE1	GNJ075N12D1
NTC5075BHE1	GNJ075N16D1
NTC5100BFE1	GNJ100N12D1
NTC5100BJE1	GNJ100N16D1
NTC5100BKE1	GNJ100N20D1
NTC5125BKE1	GNJ125N20D1
NTC5150BKE1	GNJ150N20D1
NTN5050BFC1	GNJ050M12C1
NTN5075BFC1	GNJ075M12C1
NTN5075BHC1	GNJ075M16C1
NTN5100BHC1	GNJ100M16C1
NTN5100BKC1	GNJ100M20C1
NTN5125BKC1	GNJ125M20C1

Manufactured by:

Inter-City Products Corporation (USA)
Lewisburg, TN USA 37091

FAN ASSISTED COMBUSTION GAS FURNACES



Design Certified
by A.G.A.

Save This Manual For Future Reference

1. Technical Specifications - Blower Performance Data

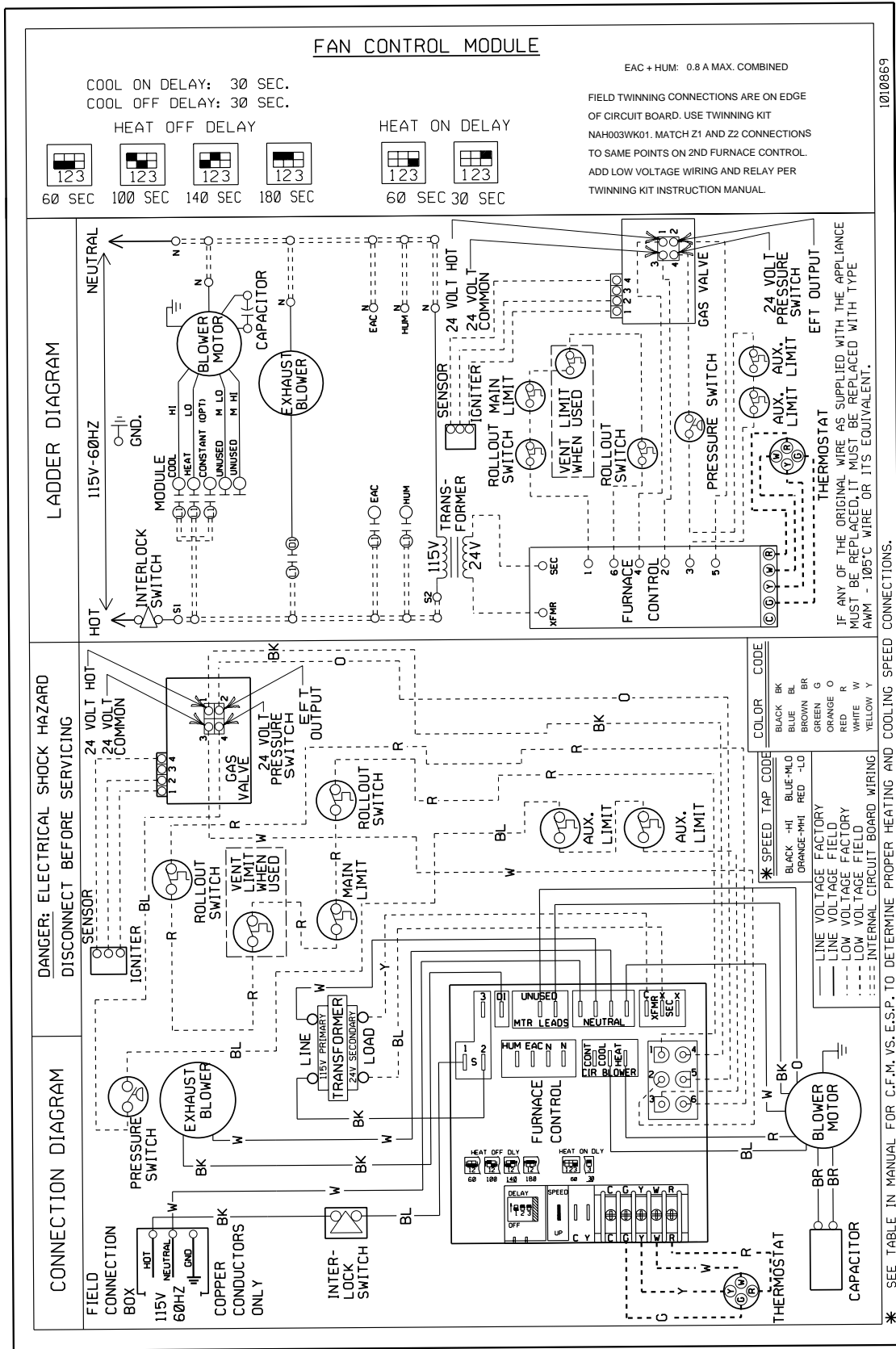
Figure 1		Blower Performance Data								
Model Number		NTC5 / GNJ								
		050BF/ 050N12	075BF/ 075N12	075BH/ 075N16	100BF/ 100N12	----	100BJ/ 100N16	100BK/ 100N20	125BK/ 125N20	150BK/ 150N20
		NTN5 / GNJ								
		050BF/ 050M12	075BF/ 075M12	075BH/ 075M16	---	100BH/ 100M16	---	100BK/ 100M20	125BK/ 125M20	---
ESP (")	SPEED TAP	CFM								
.10	LO	675	675	1503	815	1333	1278	1210	1264	1357
	MD LO	859	859	-	1043	-	1546	1441	1520	1542
	MD	-	-	1722	-	1545	-	-	-	-
	MD HI	1015	1015	-	1324	-	1822	1773	1841	1709
	HI	1394	1394	1887	1649	1835	2302	2104	2161	2073
.20	LO	662	662	1460	783	1305	1264	1201	1251	1325
	MD LO	846	846	-	1030	-	1543	1430	1506	1525
	MD	-	-	1660	-	1520	-	-	-	-
	MD HI	999	999	-	1302	-	1784	1740	1803	1750
	HI	1342	1342	1810	1616	1790	2731	2078	2132	2040
.30	LO	651	651	1420	755	1284	1244	1197	1249	1290
	MD LO	819	819	-	1021	-	1499	1453	1486	1503
	MD	-	-	1608	-	1496	-	-	-	-
	MD HI	977	977	-	1280	-	1737	1740	1772	1761
	HI	1289	1289	1752	1592	1754	2171	2061	2079	2014
.40	LO	636	636	1370	735	1250	1212	1191	1219	1270
	MD LO	795	795	-	989	-	1471	1441	1456	1480
	MD	-	-	1540	-	1460	-	-	-	-
	MD HI	952	952	-	1255	-	1683	1718	1736	1740
	HI	1227	1227	1670	1546	1700	2098	2020	2042	1975
.50	LO	608	608	1318	704	1218	1185	1167	1168	1243
	MD LO	765	765	-	968	-	1417	1425	1427	1464
	MD	-	-	1484	-	1420	-	-	-	-
	MD HI	914	914	-	1218	-	1641	1707	1702	1740
	HI	1163	1163	1599	1502	1655	2012	2005	1991	1953
.60	LO	564	564	1250	668	1160	1178	1160	1178	1225
	MD LO	735	735	-	941	-	1367	1390	1415	1430
	MD	-	-	1400	-	1380	-	-	-	-
	MD HI	870	870	-	1171	-	1574	1676	1672	1650
	HI	1086	1086	1520	1425	1585	1921	1953	1914	1885
.70	LO	514	514	1182	646	1088	1119	1130	1143	1195
	MD LO	685	685	-	881	-	1304	1365	1358	1401
	MED	-	-	1322	-	1325	-	-	-	-
	MD HI	818	818	-	1100	-	1495	1654	1614	1602
	HI	1002	1002	1425	1353	1497	1826	1917	1838	1827

2. Technical Service Data

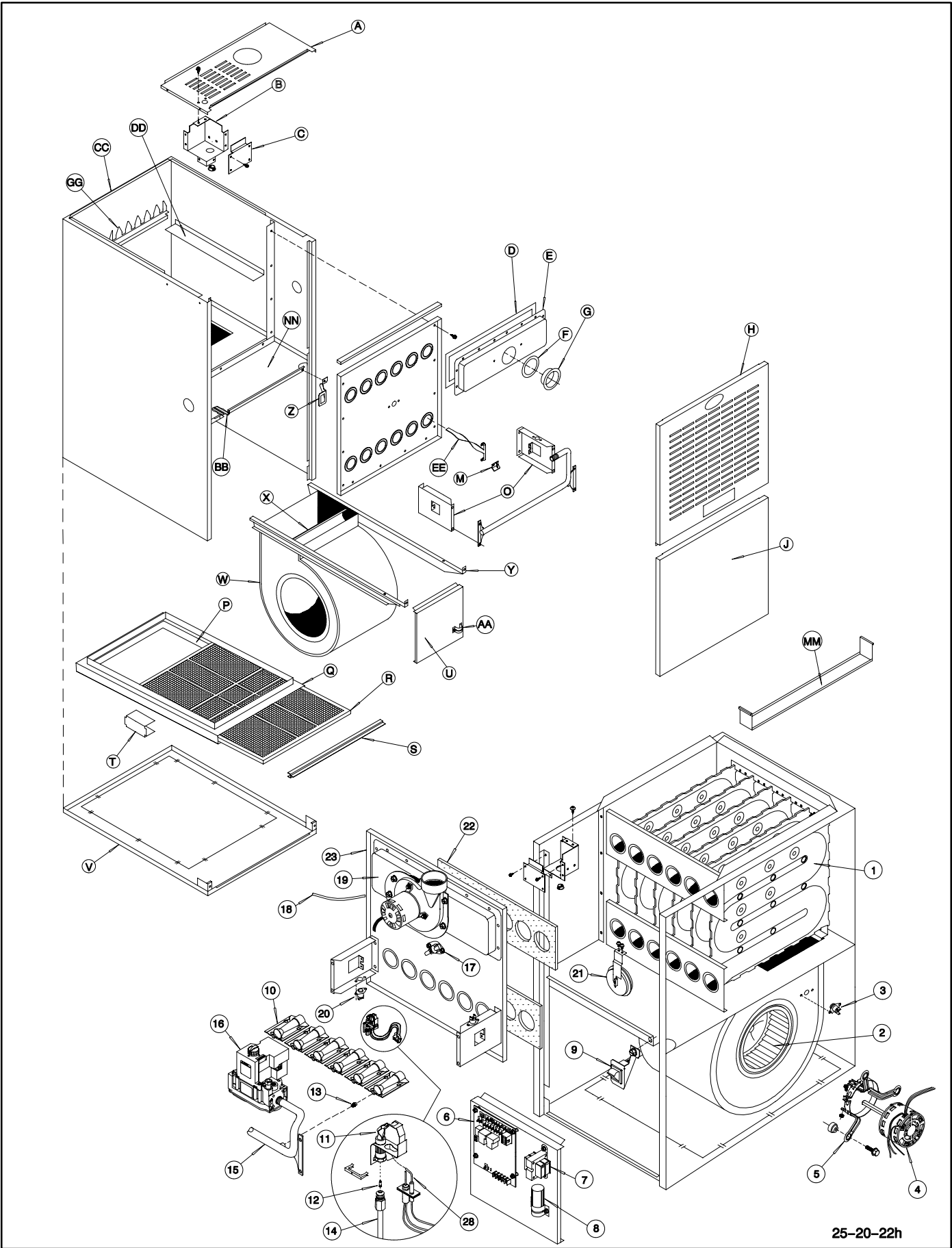
Figure 2		Blower and Motor Data				
Model Number	Blower Type & Size	Motor & Type	Motor Speeds	Temperature Rise	Volts/Amps	Limit Setting
NTC/N5050BF GNJ050N/M12	DD10-8	1/3PSC	4	35F - 65F	115/9	270
NTC/N5075BF GNJ075N/M12	DD10-8	1/3PSC	4	35F - 65F	115/5	300
NTC/N5075BH GNJ075N/M16	DD10-10	1/2PSC	3	25F - 55F	115/12	300
NTC5100BF GNJ100N12	DD10-10	1/3PSC	4	45F - 75F	115/7.5	270
NTN5100BH GNJ100M16	DD10-10	1/2PSC	3	35F - 65F	115/12	195
NTC5100BJ GNJ100N16	DD11-10	3/4PSC	4	35F - 65F	115/12	195
NTC/N5100BK GNJ100N/M20	DD11-10	3/4PSC	4	35F - 65F	115/12	130
NTC/N5125BK GNJ125N/M20	DD11-10	3/4PSC	4	40F - 70F	115/12	150
NTC5150BK GNJ150N20	DD12-12	3/4PSC	4	45F - 75F	115/12	150

Figure 3		Specifications					
		NTC/N5050BF GNJ050N/M12	NTC/N5075BF/H GNJ075N/M12/16	NTC5100BF/J/K GNJ100N12/16/20	NTN5100BH/K GNJ100M16/20	NTC/N5125BK GNJ125N/M20	NTC5150BKE GNJ150N20D
Gas Type		NATURAL	NATURAL	NATURAL	NATURAL	NATURAL	NATURAL
Input (Btuh)		50,000	75,000	100,000	100,000	125,000	150,000
Output		40,000	59,000	79,000	79,000	99,000	120,000
Rated Ext. Static Press.		.10/0.5	.12/0.5	.15/0.5	.15/0.5	.20/0.5	.20/0.5
Transformer Size (VA)		40	40	40	40	40	40
Anticipator Setting		.30	.30	.30	.30	.30	.30
Timer Setting	DELAY ON	30-60	30-60	30-60	30-60	30-60	30-60
(sec.)	DELAY OFF	60-180	60-180	60-180	60-180	60-180	60-180
Gas Valve Mfg/Type		HW/SV9500M	HW/SV9500M	HW/SV9500M	HW/SV9500M	HW/SV9500M	HW/SV9500M
Regulation Type		SNAP	SNAP	SNAP	SNAP	SNAP	SNAP
Manifold Pressure		3.5	3.5	3.5	3.5	3.5	3.5
Orifice Quantity/Size		2/#42	2/#42	4/#42	4/#42	5/#42	6/#42
Ignition Type		HW/HSP	HW/HSP	HW/HSP	HW/HSP	HW/HSP	HW/HSP
Pilot Orifice Size		.018	.018	.018	.018	.018	.018
Pressure Switch (Opens)		-0.40	-0.40	-0.50	-0.65	-0.65	-0.65

3. Wiring Diagram



1010869



25-20-22h

Replacement Parts - NTC&N5/GNJ“N&M” (Natural Gas)

Models - NTC5050BFE1, NTC50750BFE1, NTC5075BHE1, NTC5100BFE1, NTC5100BJE1, NTC5100BKE1, NTC5125BKE1, NTC5150BKE1: GNJ050N12D1, GNJ075N12D1, GNJ075N16D1, GNJ100N12D1, GNJ100N16D1, GNJ100N20D1, GNJ125N20D1, GNJ150N20D1 & NTN5050BFC1, NTN5075BFC1, NTN5075BHC1, NTN5100BHC1, NTN5100BKC1, NTN5125BKC1: GNJ050M12C1, GNJ075M12C1, GNJ075M16C1, GNJ100M16C1, GNJ100M20C1, GNJ125M20C1

Replacement part supplied will be current active part. For parts not listed, consult place of purchase.

Key No.	Description	Part Number	NTC5/GNJ									
			050BF/ 050N12	075BF/ 075N12	075BH/ 075N16	100BF/ 100N12	---	100BJ/ 100N16	100BK/ 100N20	125BK/ 125N20	150BK/ 150N20	
			NTN5/GNJ									
			050BF/ 050M12	075BF/ 075M12	075BH/ 075M16	---	100BH/ 100M16	---	100BK/ 100M20	125BK/ 125M20	---	
1	Heat Exchanger	231010102	1	-	-	-	-	-	-	-	-	-
		231010103	-	1	-	-	-	-	-	-	-	-
		231010104	-	-	-	1	1	1	1	1	-	-
		231010105	-	-	-	-	-	-	-	-	1	-
		231010106	-	-	-	-	-	-	-	-	-	1
2	Blower Wheel	601210	-	-	1	1	1	-	-	-	-	-
		600587	1	1	-	-	-	-	-	-	-	-
		1009147	-	-	-	-	-	-	1	1	1	-
		1008618	-	-	-	-	-	-	-	-	-	1
3	Switch, Auxiliary Limit	1000735	2	2	2	2	2	2	2	2	2	
4	Blower Motor	1009054	1	1	-	-	-	-	-	-	-	-
		1008414	-	-	1	-	1	-	-	-	-	-
		1009053	-	-	-	1	-	-	-	-	-	-
		1008619	-	-	-	-	-	-	1	1	1	1
		1010263	-	-	-	-	-	-	1	-	-	-
5	Motor Mount Kit	609227	1	1	1	1	1	-	-	-	-	-
		522020024	-	-	-	-	-	-	1	1	1	-
		1002804	-	-	-	-	-	-	-	-	-	1
6	Control, Fan Timer	1009838	1	1	1	1	1	1	1	1	1	
7	Transformer, 40VA	1008782	1	1	1	1	1	1	1	1	1	
8	Capacitor 10mf 370V 5mf 370V 7.5mf 370V	1094956	-	-	1	-	1	1	1	1	1	1
		1094954	1	1	-	-	-	-	-	-	-	-
		1094239	-	-	-	1	-	-	-	-	-	-
9	Switch Door	1010886	1	1	1	1	1	1	1	1	1	
10	Burner Assembly	1009178	1	-	-	-	-	-	-	-	-	-
		1008724	-	1	1	-	-	-	-	-	-	-
		1008725	-	-	-	1	1	1	1	1	-	-
		1008726	-	-	-	-	-	-	-	-	1	-
		1009179	-	-	-	-	-	-	-	-	-	1
11	Pilot, Natural & LP	1149856	1	1	1	1	1	1	1	1	1	
12	Pilot Orifice, NAT (.018) Pilot Orifice, LP (.011)	503211	1	1	1	1	1	1	1	1	1	
		1009136	1	1	1	1	1	1	1	1	1	
13	Orifice, #42 NAT Orifice, #54 LP	1004143	2	3	3	4	4	4	4	5	6	
		1004142	2	3	3	4	4	4	4	5	6	
14	Tube, Pilot	64930	1	1	1	1	1	1	1	1	1	
15	Manifold	1010919	1	-	-	-	-	-	-	-	-	-
		1010920	-	1	1	-	-	-	-	-	-	-
		1010921	-	-	-	1	1	1	1	1	-	-
		1010922	-	-	-	-	-	-	-	-	1	-
		1010923	-	-	-	-	-	-	-	-	-	1
16	Valve, Natural & LP	1009093	1	1	1	1	1	1	1	1	1	
17	Switch, Limit	1320365	1	-	-	1	-	-	-	-	-	-
		34333002	-	1	1	-	-	-	-	-	-	-
		1320363	-	-	-	-	1	1	-	-	-	-
		1320364	-	-	-	-	-	-	1	-	-	-
		1320362	-	-	-	-	-	-	-	-	1	1
18	Tubing, Silicone 24"	1149483	1	1	1	1	1	1	1	1	1	
19	Combustion Blower Assembly	1010238	1	1	1	1	1	1	1	1	1	
20	Rollout Switch, Limit	1005549	2	2	2	2	2	2	2	2	2	
21	Plastic Switch, Pressure	See chart on page 9										
22	Heat Exchanger Gaskets	2480904	2	-	-	-	-	-	-	-	-	-
		2480905	-	2	2	-	-	-	-	-	-	-
		2480906	-	-	-	2	2	2	2	2	-	-
		2480907	-	-	-	-	-	-	-	-	2	-
		2480908	-	-	-	-	-	-	-	-	-	2
23	Heat Exchanger Front Partition	1008068	1	-	-	-	-	-	-	-	-	-
		1008069	-	1	-	-	-	-	-	-	-	-
		1008070	-	-	1	-	-	-	-	-	-	-
		1008072	-	-	-	1	1	1	1	1	-	-
		1008071	-	-	-	-	-	-	-	1	-	-
		1008073	-	-	-	-	-	-	-	-	1	-
1008074	-	-	-	-	-	-	-	-	-	1		

Replacement Parts - NTC/GNJ "N&M" (Natural Gas)

Models - NTC5050BFE1, NTC50750BFE1, NTC5075BHE1, NTC5100BFE1, NTC5100BJE1, NTC5100BKE1, NTC5125BKE1, NTC5150BKE1: GNJ050N12D1, GNJ075N12D1, GNJ075N16D1, GNJ100N12D1, GNJ100N16D1, GNJ100N20D1, GNJ125N20D1, GNJ150N20D1 & NTN5050BFC1, NTN5075BFC1, NTN5075BHC1, NTN5100BHC1, NTN5100BKC1, NTN5125BKC1: GNJ050M12C1, GNJ075M12C1, GNJ075M16C1, GNJ100M16C1, GNJ100M20C1, GNJ125M20C1

Replacement part supplied will be current active part. For parts not listed, consult place of purchase.

Key No.	Description	Part Number	NTC5/GNJ									
			050BF/ 050N12	075BF/ 075N12	075BH/ 075N16	100BF/ 100N12	---	100BJ/ 100N16	100BK/ 100N20	125BK/ 125N20	150BK/ 150N20	
			NTN5/GNJ									
			050BF/ 050M12	075BF/ 075M12	075BH/ 075M16	---	100BH/ 100M16	---	100BK/ 100M20	125BK/ 125M20	---	
28	Ignitor/Sensor with clip	1009524	1	1	1	1	1	1	1	1	1	
(	PART NOT ILLUSTRATED										
(	Wire Harness Asy. Low Volt	1010891	1	1	1	1	1	1	1	1	1
A	Top	1010600	1	1	-	-	-	-	-	-	-	
		1010601	-	-	1	-	-	-	-	-	-	
		1010602	-	-	-	1	1	1	-	-	-	
		1010603	-	-	-	-	-	-	1	1	1	
B	Field Connect Box	1010359	1	1	1	1	1	1	1	1	1	
C	Cover, Field Connect	1010360	1	1	1	1	1	1	1	1	1	
D	Gasket, Collector	1093661	1	1	1	-	-	-	-	-	-	
		1093662	-	-	-	1	1	1	1	-	-	
		1093663	-	-	-	-	-	-	-	1	1	
E	Collector	742010327	1	1	-	1	-	-	-	-	-	
		742010328	-	-	1	-	1	1	1	-	-	
		742010329	-	-	-	-	-	-	-	1	1	
F	Gasket, Combustion Blower	2480903	2	2	2	2	2	2	2	2	2	
G	Restrictor Blower	See Chart on page 9										
H	Door, Louvered NTC/N&GNJ "M"	1010178	1	1	-	-	-	-	-	-	-	
	" NTC/N&GNJ "M"	1010179	-	-	1	1	1	1	-	-	-	
	" NTC/N&GNJ "M"	1010180	-	-	-	-	-	-	1	1	1	
	Door, Louvered GNJ "N"	1010174	1	1	-	-	-	-	-	-	-	
	" GNJ "N"	1010166	-	-	1	1	-	1	-	-	-	
	" GNJ "N"	1010167	-	-	-	-	-	-	1	1	1	
J	Door, Blower	1010191	1	1	-	-	-	-	-	-	-	
		1010190	-	-	1	1	1	1	-	-	-	
		1010192	-	-	-	-	-	-	1	1	1	
M	Bracket, Pilot	1010901	1	1	1	1	1	1	1	1	1	
O	Manifold Support Bracket	1010900	2	2	2	2	2	2	2	2	2	
P	Filter Rack Wrapper	See Chart on page 9										
Q	Filter Rack Front	See Chart on page 9										
R	Filter	See Chart on page 9										
S	Filter Cover Plastic	See Chart on page 9										
T	Clip, Filter	1008482	3	3	3	3		3	3	3	3	
U	Fan Timer Bracket	1010989	1	1	1	1	1	1	1	1	1	
V	Base	1010112	1	1	-	-	-	-	-	-	-	
		1010113	-	-	1	1	1	1	-	-	-	
		1010114	-	-	-	-	-	-	1	1	1	
W	Blower Housing	1010475	1	1	-	-	-	-	-	-	-	
		1010479	-	-	-	1	-	-	-	-	-	
		1010322	-	-	-	-	-	1	1	1	-	
		1009898	-	-	-	-	-	-	-	-	1	
		1009897	-	-	1	-	1	-	-	-	-	
X	Blower Cutoff	721020008	-	-	1	1	1	1	1	1	-	
		721020013	1	1	-	-	-	-	-	-	-	
		721020015	-	-	-	-	-	-	-	-	1	
Y	Blower Hanger	1010690	2	2	2	2	2	2	2	2	2	
AA	Strap Capacitor	1095020	1	1	1	1	1	1	1	1	1	
BB	Rail, Blower Slide	57059	2	2	2	2	2	2	2	2	2	
CC	Casing, Wrapper	1010610	1	1	-	-	-	-	-	-	-	
		1010611	-	-	1	1	1	1	-	-	-	
		1010612	-	-	-	-	-	-	1	1	1	
DD	Baffle, Circulating Air	707010031	2	2	-	2	2	2	2	2	2	
		1009880	-	-	2	-	-	-	-	-	-	
EE	NOx Baffle	See Chart on page 9										
GG	Heat Exchanger Support	1011026	1	-	-	-	-	-	-	-	-	
		750010045	-	1	-	-	-	-	-	-	-	
		750010046	-	-	1	-	-	-	-	1	-	
		1010353	-	-	-	1	1	1	-	-	-	
		750010047	-	-	-	-	-	-	-	-	1	
MM	Baffle, Air Heat Exch.	738010022	-	-	-	-	-	-	-	-	3	

Replacement Parts - NTC/GNJ "N&M" (Natural Gas)

Models - NTC5050BFE1, NTC50750BFE1, NTC5075BHE1, NTC5100BFE1, NTC5100BJE1, NTC5100BKE1, NTC5125BKE1, NTC5150BKE1: GNJ050N12D1, GNJ075N12D1, GNJ075N16D1, GNJ100N12D1, GNJ100N16D1, GNJ100N20D1, GNJ125N20D1, GNJ150N20D1 & NTN5050BFC1, NTN5075BFC1, NTN5075BHC1, NTN5100BHC1, NTN5100BKC1, NTN5125BKC1: GNJ050M12C1, GNJ075M12C1, GNJ075M16C1, GNJ100M16C1, GNJ100M20C1, GNJ125M20C1

Replacement part supplied will be current active part. For parts not listed, consult place of purchase.

Key No.	Description Non-Functional	Part Number	NTC5/GNJ								
			050BF/ 050N12	075BF/ 075N12	075BH/ 075N16	100BF/ 100N12	---	100BJ/ 100N16	100BK/ 100N20	125BK/ 125N20	150BK/ 150N20
			NTN5/GNJ								
			050BF/ 050M12	075BF/ 075M12	075BH/ 075M16	---	100BH/ 100M16	---	100BK/ 100M20	125BK/ 125M20	---
NN	Partition, Blower	1010810	1	1	-	-	-	-	-	-	-
		1010811	-	-	1	1	1	1	-	-	-
		1011075	-	-	-	-	-	-	1	1	-
		1010812	-	-	-	-	-	-	-	-	1
)	PART NOT ILLUSTRATED										
)	Manual, Homeowners	441 02200100	1	1	1	1	1	1	1	1	1
)	Manual, Installation	441 01230400	1	1	1	1	1	1	1	1	1
)	Manual, Tech Support	441 03230400	1	1	1	1	1	1	1	1	1
)	Conversion Kit Natural to LP	1160991	1	1	1	1	1	1	1	1	1
)	Conversion Kit LP to Nat	1009510	1	1	1	1	1	1	1	1	1
)	Conversion Kit Nat High Altitude	1160993	1	1	1	1	1	1	1	1	1
)	Conversion Kit LP High Altitude	1160992	1	1	1	1	1	1	1	1	1

Replacement Parts - NTC/GNJ "N&M" (Natural Gas)

Models - NTC5050BFE1, NTC50750BFE1, NTC5075BHE1, NTC5100BFE1, NTC5100BJE1, NTC5100BKE1, NTC5125BKE1, NTC5150BKE1: GNJ050N12D1, GNJ075N12D1, GNJ075N16D1, GNJ100N12D1, GNJ100N16D1, GNJ100N20D1, GNJ125N20D1, GNJ150N20D1 & NTN5050BFC1, NTN5075BFC1, NTN5075BHC1, NTN5100BHC1, NTN5100BKC1, NTN5125BKC1: GNJ050M12C1, GNJ075M12C1, GNJ075M16C1, GNJ100M16C1, GNJ100M20C1, GNJ125M20C1

Replacement part supplied will be current active part. For parts not listed, consult place of purchase.

Key No.	Description Non-Functional	Part Number	NTC5/GNJ								
			050BF/ 050N12	075BF/ 075N12	075BH/ 075N16	100BF/ 100N12	---	100BJ/ 100N16	100BK/ 100N20	125BK/ 125N20	150BK/ 150N20
21	Switch, Pressure	1010897	1	1	1	-	-	-	-	-	-
		1010896	-	-	-	1	-	1*	1	-	-
		1010898	-	-	-	-	-	-	-	1	1
G	Restrictor Blower	734020026	1	-	-	-	-	-	-	-	-
		734020027	-	1	1	-	-	-	-	-	-
		734020028	-	-	-	1	-	1	1	1	-
		734020036	-	-	-	-	-	-	-	-	1
P	Filter Rack Wrapper	741010042	1	1	-	-	-	-	-	-	-
		741010039	-	-	1	1	-	1	2	2	2
Q	Filter Rack Front	741020004	1	1	-	-	-	-	-	-	-
		741020001	-	-	1	1	-	1	2	2	2
R	Filter 14" x 25" x 1/2"	1010364	1	1	-	-	-	-	-	-	-
		1010365	-	-	1	1	-	1	2	2	2
S	Filter Cover Plastic	2791042	1	1	-	-	-	-	-	-	-
		2791043	-	-	1	1	-	1	2	2	2

* NTC5 ONLY

Key No.	Description Non-Functional	Part Number	NTN5/GNJ								
			050BF/ 050M12	075BF/ 075M12	075BH/ 075M16	---	100BH/ 100M16	---	100BK/ 100M20	125BK/ 125M20	---
21	Switch, Pressure	1010897	1	1	1	-	-	-	-	-	-
		1010896	-	-	-	-	-	-	-	-	-
		1010898	-	-	-	-	1	-	1	1	1
G	Restrictor Blower	734020038	1	-	-	-	-	-	-	-	-
		734020039	-	1	1	-	-	-	-	-	-
		734020029	-	-	-	-	-	-	1	1	-
P	Filter Rack Wrapper	741010042	1	1	-	-	-	-	-	-	-
		741010039	-	-	1	-	1	-	-	-	-
		741010040	-	-	-	-	-	-	1	1	-
Q	Filter Rack Front	741020004	1	1	-	-	-	-	-	-	-
		741020001	-	-	1	-	1	-	-	-	-
		741020002	-	-	-	-	-	-	1	1	-
R	Filter 14" x 25" x 1/2"	1010364	1	1	-	-	-	-	-	-	-
		1010365	-	-	1	-	1	-	-	-	-
		1009748	-	-	-	-	-	-	2	2	-
S	Filter Cover Plastic	2791042	1	1	-	-	-	-	-	-	-
		2791043	-	-	-	-	-	-	-	-	-
		2791044	-	-	1	-	-	-	1	1	-
EE	NOx Baffle	1009876	2	3	3	-	4	-	4	5	-