University of Illinois Department of Agricultural Engineering
Bioenvironmental and Structural Systems Lab
Final Report

Project Number: 96157
Test Date: June 26, 1996

Fan:		Motor:			
Make-	Chore-Time	Make-	GE	hp-	1/3
Model-	36760-242	Model-	5KCP39SGL763S	Amps-	2.0
Size-	24"	RPM-	1075	Volts-	230

Attachments: Plastic housing, guard (intake & exhaust), blow-out door & wind hood

Notes:

Test Conditions:

T(wb):	63	Barometric pressure, recorded	29.61
T(db):	76.5	Barometric Pressure, corrected	29.48

# Nozzle	Size (inch)	Pressure Drop	Static Pressure	Airflow (cfm)	rpm	Volts	Amps	Watts	cfm/Watt
3	8	1.68	0.00	5441	1085	229.3	1.63	374	14.5
3	8	1.54	0.05	5217	1081	229.5	1.64	377	13.8
3	8	1.28	0.10	4746	1080	229.5	1.65	380	12.5
3	8	1.04	0.15	4275	1079	229.4	1.65	381	11.2
3	8	0.75	0.20	3624	1077	229.2	1.65	381	9.5
2	8	1.06	0.25	2884	1077	228.6	1.64	378	7.6
2	8	0.51	0.27	1997	1072	228.4	1.68	384	5.2
200V									
3	8	1.57	0.00	5259	1055	200.0	1.88	364	14.4
3	8	1.37	0.05	4920	1050	199.5	1.90	374	13.2
3	8	1.16	0.10	4526	1050	200.3	1.91	371	12.2
3	8	0.93	0.15	4051	1050	200.6	1.91	374	10.8
2	8	1.58	0.20	3523	1053	200.2	1.93	377	9.3
2	8	0.70	0.25	2342	1050	199.5	1.92	374	6.3
180V									
3	8	1.48	0.00	5114	1026	180.2	2.04	360	14.2
3	8	1.27	0.05	4737	1023	180.0	2.05	362	13.1
3	8	1.08	0.10	4357	1020	179.8	2.06	362	12.0
3	8	0.84	0.15	3850	1017	179.4	2.06	361	10.7
2	8	1.31	0.20	3207	1019	180.1	2.06	365	8.8
1	8	1.67	0.25	1811	1011	179.5	2.09	371	4.9
160V									
3	8	1.35	0.00	4884	981	160.5	2.11	339	14.4
3	8	1.15	0.05	4497	973	159.9	2.12	342	13.1
3	8	0.90	0.10	3985	970	159.9	2.12	337	11.8
3	8	0.65	0.15	3384	966	159.1	2.13	337	10.0
2	8	0.69	0.20	2316	969	159.9	2.13	345	6.7
1	8	0.86	0.24	1298	946	160.4	2.24	365	3.6
140V									
3	8	1.15	0.00	4507	905	139.6	2.13	302	14.9
2	8	2.13	0.05	4086	902	140.3	2.14	306	13.4
2	8	1.48	0.10	3404	896	139.5	2.16	310	11.0
2	8	0.90	0.15	2657	893	139.5	2.16	310	8.6
1	8	0.65	0.19	1128	861	139.6	2.25	328	3.4
120V									
2	8	2.06	0.00	4023	808	120.6	2.11	264	15.2
2	8	1.48	0.05	3404	799	120.6	2.14	274	12.4
2	8	0.72	0.10	2375	793	120.5	2.14	274	8.7
1	8	0.65	0.13	1128	764	120.1	2.20	281	4.0