

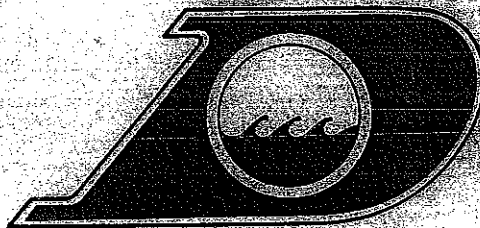
THE DEXTER COMPANY

COMMERCIAL DRYERS

SERVICE PROCEDURES AND PARTS DATA

FOR

DN3 SERIES



FAIRFIELD, IOWA 52556 / TELEPHONE 515-472-5131

Laundry Specialists Since 1894

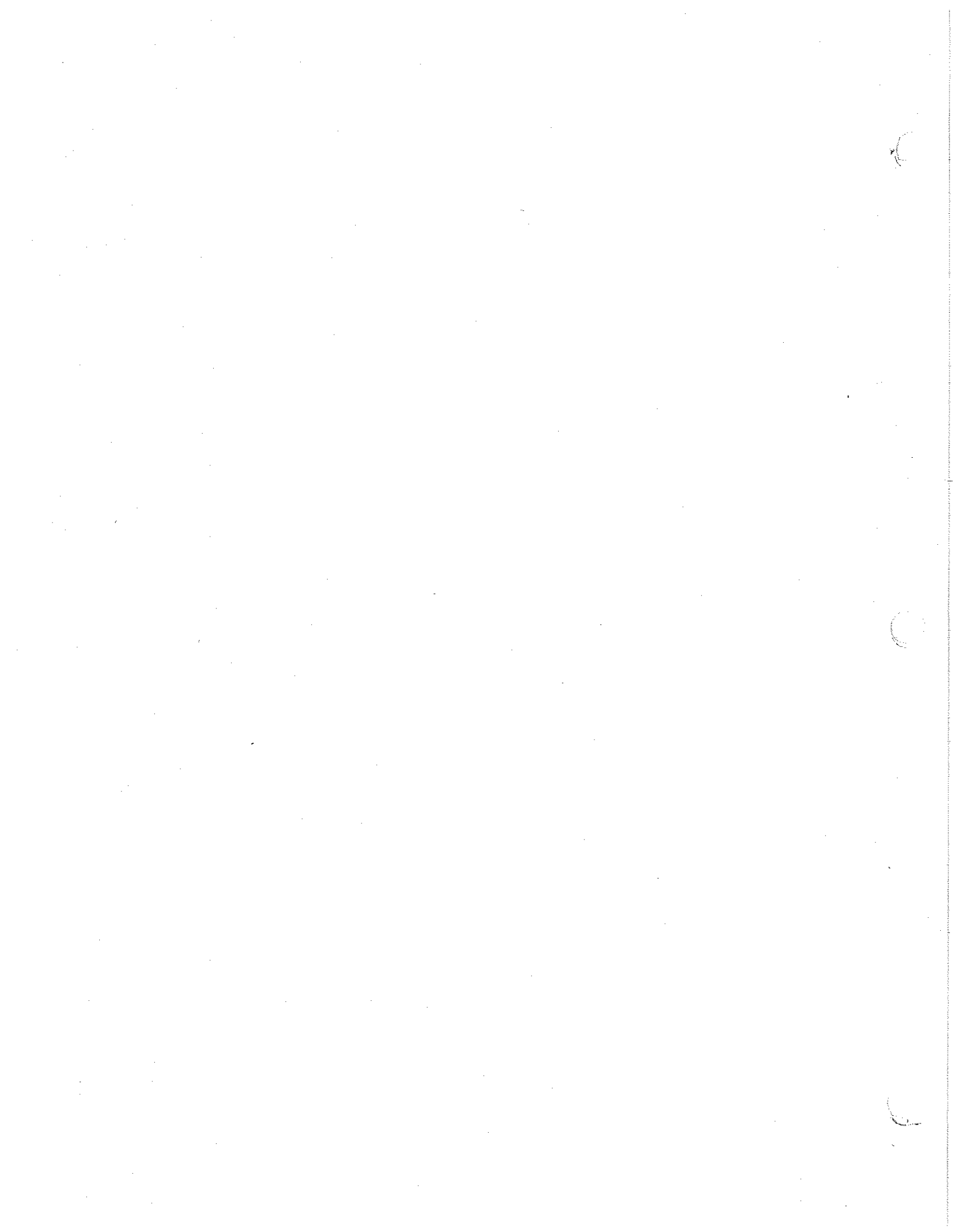


TABLE OF CONTENTS

SECTION 1 — PRIMARY SERVICE DATA

DN3 SERIES PAGE	DN3 SERIES PAGE
Uncrating ----- 1-1	Pilot Adjustment (Standing Pilot) ----- 1-5
Equipment Installation ----- 1-1	Exhausting ----- 1-5
Electrical Requirements ----- 1-2	Lighting The Pilot (Standing Pilot) ----- 1-7
Clearance Requirements ----- 1-2	Pilot Ignition (Electronic Control) ----- 1-7
Gas Requirements ----- 1-2	Coin Box Lock and Key ----- 1-7
Orifice Capacity Chart (Table I) ----- 1-4	Operating Instructions ----- 1-8
Orifice Capacity BTU/Hr. (Table II) ----- 1-4	Specifications ----- 1-9
Main Burner Adjustment ----- 1-5	Dimensions ----- 1-10

SECTION 2 — WIRING DIAGRAM

Standing Pilot Models ----- 2-1	Electronic Control Models ----- 2-2
---------------------------------	-------------------------------------

SECTION 3 — SERVICE PROCEDURES

Upper Service Door Removal ----- 3-1	Thermostat Recalibration ----- 3-7
Coin Meter Removal ----- 3-2	Hi-Limit Thermostat ----- 3-8
Timing Specifications ----- 3-2	Gas Control (Standing Pilot) ----- 3-8
Timer Removal (Manual Models) ----- 3-3	Gas Control (Electronic Ignition) ----- 3-9
Clothes Door Removal ----- 3-3	Gas Control Servicing (Standing Pilot) ----- 3-10
Installation and Adjustment - Clothes Door ----- 3-3	Gas Control Servicing (Electronic Ignition) ----- 3-10
Installation - Clothes Door Window and Gasket ----- 3-3	Pilot Burner ----- 3-10
Door Handle Disassembly ----- 3-4	Main Burner ----- 3-12
Door Switch Removal and Installation ----- 3-4	Main Burner Orifices ----- 3-12
Lower Service Door ----- 3-4	Pressure Regulator Adjustment ----- 3-12
Front Panel Removal ----- 3-4	Motor and Impeller Removal ----- 3-12
Lint Screen and Lint Hood Removal ----- 3-4	Drive Belt Removal ----- 3-13
Blower Impeller Removal ----- 3-5	Cylinder Pulley Removal ----- 3-13
Damper Switch Removal and Adjustment ----- 3-5	Intermediate Pulley and Tension Arm Removal ----- 3-13
Control Thermostat and	Cylinder Removal ----- 3-14
Cool Down By-Pass Switch ----- 3-6	Cylinder Adjustment ----- 3-15
Thermostat Temperature Check ----- 3-7	Bearing Housing Removal ----- 3-16
Thermostat Calibration ----- 3-7	

SECTION 4 — PREVENTIVE MAINTENANCE & TROUBLE SHOOTING GUIDE

Preventive Maintenance Schedule ----- 4-1	Trouble Shooting Guide ----- 4-1,2,3
---	--------------------------------------

SECTION 5 — PARTS DATA

Cabinet Group ----- 5-1,2	Damper and Damper Switch Group ----- 5-11
Detailed Illustration (Figure 5-1) ----- 5-3	Detailed Illustration (Figure 5-6) ----- 5-11
Coin Meter and Timer Group ----- 5-4	Lint Hood and Screen Group ----- 5-11
Detailed Illustration (Figure 5-2) ----- 5-5	Detailed Illustration (Figure 5-7) ----- 5-11
Electrical Control Group ----- 5-6	Tumbler Assembly Group ----- 5-11
Detailed Illustration (Figure 5-3) ----- 5-7	Detailed Illustration (Figure 5-8) ----- 5-11
Temperature Control Thermostat ----- 5-6	Pulley, Belt and Motor Group ----- 5-12
Detailed Illustration (Figure 5-4) ----- 5-7	Detailed Illustration (Figure 5-9) ----- 5-13
Burner Housing and Gas Control Group ----- 5-8	Bearing Housing Group ----- 5-12
Detailed Illustration (Figure 5-5) (Stdg. Pilot) ----- 5-9	Detailed Illustration (Figure 5-10) ----- 5-14
Detailed Illustration (Fig. 5-5A) (Elect. Control) ----- 5-10	Wiring Group ----- 5-15

Section 1

Commercial Dryer

PRIMARY SERVICE DATA

1-1 UNCRATING

1. Remove cardboard container and innerpack.
2. Complete the uncrating as per the procedure listed on the instruction sheet taped to the loading door glass.

1-2 EQUIPMENT INSTALLATION

All commercial dryer installations should be made in accordance with National Fuel Gas Code ANSI-Z2231.1-1974 and must be electrically grounded in accordance with the National Electrical Code ANSI-C1-1975.

In addition, all requirements of the authority having jurisdiction in the area must be adhered to. For Canadian installations refer to Canadian Standards Association Standard B149.

Commercial dryers should be located where a minimum amount of exhaust venting is necessary. (See Exhausting).

A minimum of 10" of unobstructed air space above the dryer is necessary for proper air supply to the dryer.

NOTE: 1/4" clearance must be provided at top in front for clearance of upper service door opening.

A false ceiling of lattice-work or perforations consisting of metal or nonflammable material can be used for installations. This arrangement allows hot ceiling air to be drawn into the dryers, which will make the occupied room air more comfortable and aid in drying efficiency.

Any partitions or bulkheads that might be used on dryer installations should be constructed completely of non-flammable material.

Adequate make-up air must be supplied to replace air exhausted by the dryers. Provide a minimum of one sq. ft. make-up air opening to the outside for each dryer.

The source of make-up air should be located sufficiently away from the dryers to allow an even air flow to the air intakes of all dryers.

Whenever it is necessary to supply make-up air through the ceiling or wall adjacent to the dryers, multiple openings should be provided. Additionally a deflector baffle or duct is recommended for these openings to disperse the air and allow even distribution of air flow over the dryers.

Locate the dryers out from the wall sufficiently to allow for servicing from the rear. (See Clearance Requirements).

All dryers should be level and resting solidly on the floor or foundation. This is accomplished by adjustment of the leveling legs provided with each dryer.

NOTE: The following considerations must be observed for gas dryer installations where dry cleaners are installed. The sources of all make-up air and room ventilation air movement to all dryers must be located away from any dry cleaners. This is necessary so solvent vapors will not be drawn into the dryer inlet ducts. Dry cleaner solvent vapors will decompose on contact with an open flame. The decomposition products are highly corrosive and will cause damage to dryers, ducts and clothes load.

1-3 ELECTRICAL REQUIREMENTS

The electrical power requirements necessary to operate the unit satisfactorily is listed on the serial plate located on the back panel of each dryer. The electrical connection should be made at the pig tail leads provided at the service box outlet (or terminal block if supplied) on the rear of the unit, using a wire size adequate to handle the voltage listed on the serial plate but never smaller than No. 12. Additionally, separate lines should be run to each unit with an overload protection device installed. A master control panel with an individual circuit breaker (15 amp.) for each unit is recommended.

The unit should be grounded in accordance with all local and national electrical codes. It is recommended the cabinet be grounded by means of the grounding wire used with a three wire power supply cable. Secure one end of the cable ground wire to the cabinet and the other end can be secured to the supply outlet box if the box itself is grounded. Another method would be to securely ground the cabinet with a stranded wire secured to a physical ground such as a cold water pipe.

1-4 CLEARANCE REQUIREMENTS

1. If the dryer is installed in a confined space, a minimum opening of 144 sq. in. must be provided near the top of the dryer cabinet at the rear, in order to admit combustion and ventilation air.
2. A minimum of 24 in. clearance behind the dryer must be provided to permit maintenance and service.

1-5 GAS REQUIREMENTS

The complete gas requirements necessary to operate the various gas dryers satisfactorily is listed on the serial plate located on the back of each dryer.

The inlet gas pipe connection to the unit is $\frac{1}{2}$ in. However, the local conditions of type and gas pressure, plus the number of fittings and length of pipe are considerations on the size of supply pipe to be used.

1. A joint compound resistant to the action of L.P. gases should be employed in making pipe connections.
2. A drip tee should be provided in the gas piping entering the unit to catch dirt and other foreign articles.
3. All pipe connections should be checked for leakage with soap solution. Never check with an open flame.

NOTE: It is necessary that the local gas company be contacted for the correct size of pipe to be connected from the source to the inlet connection at the units. This information is necessary so the proper gas pressure may be maintained to the dryers.

In the areas where permitted, it is suggested that flexible supply line be used from the main gas supply line to the inlet pipe connection at the dryer. This will allow moving the dryer forward to remove the front panel without disconnecting the gas supply line.

Many installations use a balancing line to insure adequate gas supply when a bank of dryers are to be installed from a manifold type of gas supply line. This arrangement helps to maintain adequate gas supply to all dryers no matter their location on the manifold take-off. The balancing line should be of a pipe diameter which will permit adequate gas supply through the manifold and is connected to each of the manifolds.

All commercial dryers shipped from the factory will be equipped with the main burner orifices drilled to a size to supply the correct B.T.U. per hour heat input as listed on the serial plate on the back panel of the dryer. These orifices will be drilled for use with natural gas of 1050 B.T.U.'s cu. ft., 0.60 specific gravity at $3\frac{1}{2}$ in. water column gas pressure at the main burners.

All dryers are equipped with a non-aerated pilot burner containing a pilot orifice drilled for natural or mixed gases only.

NOTE: It will be necessary to change the main burner orifices to maintain the correct B.T.U. heat input/hour at $3\frac{1}{2}$ " water column gas pressure, when any dryer is to be used with gas which contains different characteristics of heat content and specific gravity than that as shown in the data on the back of dryer. Consult the local gas utility for the characteristics of the gas on which the dryer is to operate. The following charts should then be consulted for the correct main burner orifice drill size required. The charts are to be used only as guides and if your local conditions are not listed, your utility company can advise you of the proper orifice size. Be sure and inform them that two burners are used in the system.

If the dryer is to be used on L.P. gas, a conversion kit is available to make the complete conversion. (See parts list section of the manual).

HOW TO SELECT PROPER ORIFICE SIZE

Natural and Mixed Gases - Table I and II include data for selecting the proper orifice size for a required rate when the heating value, specific gravity, and gas pressure to be used are known. In using these tables a factor is first selected from Table I corresponding to the specific gravity and heating value of the gas supply being considered. This factor is then multiplied by the input rate of the burner in B.T.U. per hour. The proper orifice size may then be selected from Table II by locating the resultant input rate under the desired pressure.

EXAMPLE: Given: Gas condition of 1000 B.T.U./cu. ft., 0.6 specific gravity and 3 in. water column pressure.

Wanted: Drill size for 50,000 B.T.U./burner

In Table I a multiplier of .800 is found ($.800 \times 50,000 = 40,000$ BTU)

In Table II 40,000 BTU is in between a No. 26 and No. 27 drill size.

TABLE I

ORIFICE CAPACITIES

Correction for heating value and specific gravity of gas
(Basic-800 BTU-0.6 Sp. Gr. Gas)
SPECIFIC GRAVITY (AIR=1.0)

HEATING VALUE BTU/cu. ft.	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0	1.1	1.2	1.3	1.4
400	1.41	1.63	1.83	2.00	2.16	2.31	2.45	2.59	2.70	2.83	2.95	3.06
500	1.13	1.31	1.46	1.60	1.73	1.85	1.96	2.07	2.16	2.27	2.36	2.45
525	1.08	1.29	1.39	1.52	1.64	1.76	1.87	1.97	2.06	2.16	2.25	2.33
550	1.03	1.24	1.33	1.45	1.57	1.68	1.78	1.88	1.97	2.06	2.15	2.23
575	0.983	1.14	1.27	1.39	1.50	1.61	1.70	1.80	1.88	1.97	2.05	2.13
600	0.942	1.04	1.22	1.33	1.44	1.54	1.63	1.73	1.80	1.89	1.97	2.04
700	0.810	0.932	1.04	1.12	1.24	1.32	1.39	1.48	1.54	1.62	1.69	1.75
800	0.707	0.816	0.912	1.00	1.08	1.15	1.22	1.30	1.35	1.41	1.48	1.53
825	0.685	0.791	0.885	0.970	1.05	1.12	1.19	1.26	1.31	1.37	1.43	1.48
850	0.665	0.769	0.860	0.942	1.02	1.09	1.15	1.22	1.27	1.33	1.39	1.44
875	0.646	0.746	0.835	0.915	0.987	1.05	1.12	1.19	1.24	1.29	1.35	1.40
900	0.628	0.725	0.811	0.890	0.960	1.03	1.09	1.15	1.20	1.26	1.31	1.36
950	0.595	0.687	0.769	0.842	0.910	0.972	1.03	1.09	1.14	1.19	1.24	1.29
1000	0.565	0.653	0.730	0.800	0.864	0.924	0.980	1.04	1.08	1.14	1.18	1.22
1025	0.551	0.636	0.712	0.781	0.842	0.900	0.955	1.01	1.06	1.10	1.15	1.19
1050	0.538	0.621	0.696	0.762	0.823	0.800	0.934	0.985	1.03	1.08	1.12	1.16
1075	0.526	0.606	0.679	0.745	0.804	0.859	0.911	0.961	1.00	1.05	1.10	1.14
1100	0.514	0.594	0.664	0.727	0.785	0.840	0.891	0.938	0.982	1.03	1.07	1.11

TABLE II

ORIFICE CAPACITIES IN BTU/HR.

(800 BTU-.06 SP. Gr. Gas)

(See Table I for corrections to apply for other gases)

GAS PRESSURE IN INCHES (Water Column)

Orifice Size	Dec. Dim.	3"	4"	Orifice Size	Dec. Dim.	3"	4"
16	.177	58,000	66,900	31	.120	26,700	30,950
17	.173	55,500	64,000	32	.116	24,950	28,900
18	.1695	53,300	61,500	33	.113	23,700	27,450
19	.166	51,000	58,800	34	.111	22,800	26,400
20	.161	48,000	55,400	35	.110	22,400	26,000
21	.159	46,700	53,900	36	.1065	21,000	24,300
22	.157	45,600	52,600	37	.104	20,000	23,200
23	.154	44,000	50,700	38	.1015	19,080	22,100
24	.152	42,700	49,300	39	.0995	18,300	21,200
25	.1495	41,400	48,000	40	.098	17,800	20,600
26	.147	40,100	46,500	41	.096	17,100	19,800
27	.144	38,500	44,600	42	.0935	16,200	18,800
28	.1405	36,600	42,400	43	.089	14,700	17,000
29	.136	34,300	39,700	44	.086	13,730	15,900
30	.1285	30,800	35,700	45	.082	12,450	14,400

1-6 MAIN BURNER ADJUSTMENT

The primary air shutter of each main burner must be properly adjusted for the correct air-gas ratio. Adjust the shutter by closing it sufficiently to give a blue flame with a yellow tip. Next open the shutter until the yellow tips are at a minimum. Securely lock the shutter in position by tightening the screw after adjusting the shutter.

1-6A PILOT ADJUSTMENT (STANDING PILOT MODELS ONLY)

The pilot flame may be adjusted by turning the adjusting screw (marked "pilot adj." on the gas valve). The adjusting screw is protected by a cover screw which must be removed before adjustment can be made. Do not turn the adjustment screw all the way out. The pilot will be at maximum several turns before this is done.

1-7 EXHAUSTING

Exhausting of the dryer(s) should be planned and constructed so that no air restrictions occur. Any restriction due to pipe size or type of installation can cause slow drying time, excessive heat, and lint in the room.

From an operational stand-point, incorrect or inadequate exhausting can cause a cycling of the high limit thermostat which shuts off the main burners and results in inefficient drying.

Individual exhausting of the dryers is recommended. All heat, moisture, and lint should be exhausted outside by attaching a pipe of the proper diameter to the dryer adapter collar and extending it out through an outside wall. This pipe must be very smooth on the inside, as rough surfaces tend to collect lint which will eventually clog the duct and prevent the dryer from exhausting properly. All elbows must be smooth on the inside. All joints must be made so the exhaust end of one pipe is inside the next one downstream. The addition of an exhaust pipe tends to reduce the amount of air the blower can exhaust. This does not affect the dryer operation if held within practical limits. For the most efficient operation, it is recommended that no more than 20 feet of straight 8" diameter pipe be used with two right angle elbows. When more than two elbows are used, two feet of straight pipe should be removed for each additional elbow. No more than four right angle elbows should be used to exhaust a dryer.

If the exhaust pipe passes through a wall, a metal sleeve of slightly larger diameter should be set in the wall and the exhaust pipe passed through this sleeve. This practice is required by some local codes and is recommended in all cases to protect the wall.

This type of installation should have a means provided to prevent rain and high winds from entering the exhaust when the dryer is not in use. A hood with a hinged damper can be used for this purpose. Another method would be to point the outlet end of the pipe downward to prevent entrance of wind and rain. In either case, the outlet should be kept clear of any objects by at least 24" which would cause an air restriction.

Never install a protective screen over the exhaust outlet.

When exhausting a dryer straight up through a roof, the overall length of the duct has the same limits as exhausting through a wall. A rain cap must be placed on top of the exhaust and must be of such a type as to be free from clogging. The type using a cone shaped "roof" over the pipe is suitable for this application.

Exhausting the dryer into a chimney is not recommended under any conditions even though the chimney is being used for other exhausting. Neither is exhausting under a building recommended. In both cases, there is danger of build-up of fine lint over a period of time.

Installation of several dryers where a main discharge duct is necessary, will need the following considerations for installation (see Fig. 1-1). Individual 8" ducts from the dryers into the main discharge duct should be at a 45° angle in the direction of discharge air flow.

NOTE: Never install the individual 8" ducts at a right angle into the main discharge duct. The individual ducts from the dryers can enter at the sides or bottom of the main discharge duct. Figure 1-1 indicates the various round main duct diameter to use with the individual dryer ducts. The main duct can be rectangular or round, provided adequate air flow is maintained. For each individual dryer, the total exhausting (main discharge duct plus duct outlet from the dryer) should not exceed the equivalent of 20 feet and two elbows. The diameter of the main discharge duct at the last dryer must be maintained to exhaust end.

NOTE: A small diameter will restrict air flow; a larger diameter will reduce air velocity — both contributing to lint build up. Inspection door for periodic clean-out of the main duct should be provided.

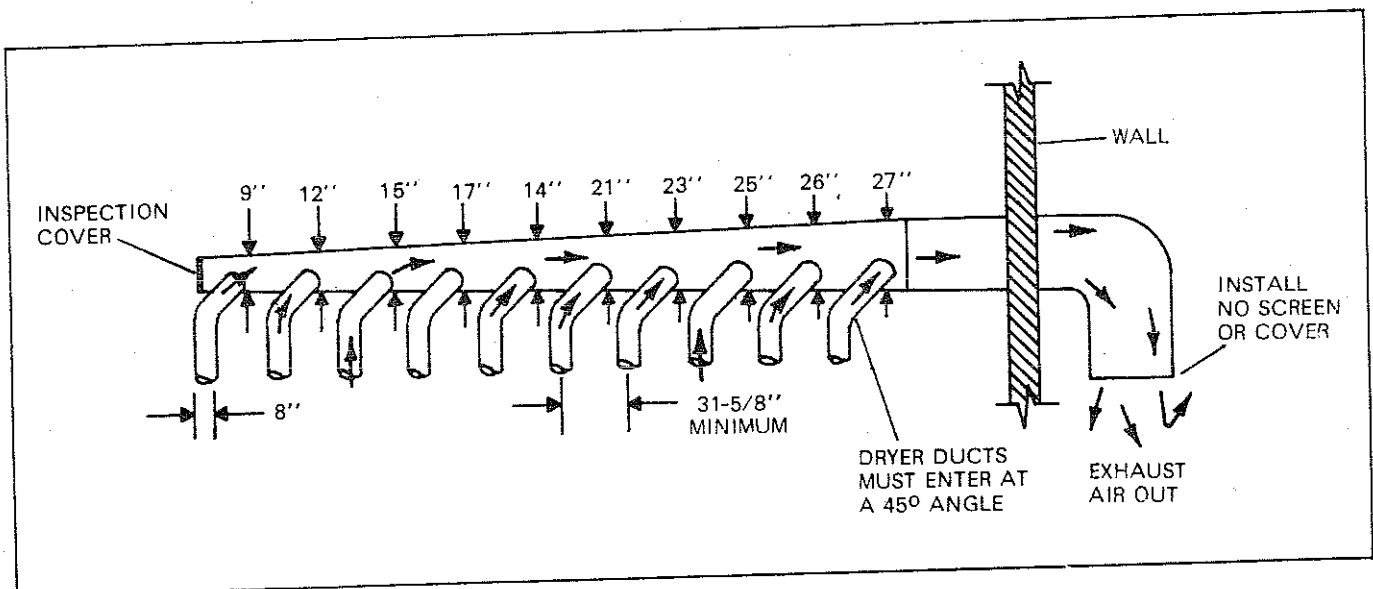


Figure 1-1. Dryer Exhausting Using A Main Discharge Duct

1-8 LIGHTING THE PILOT (STANDING PILOT MODELS ONLY)

1. Before lighting the pilot, the unit should be in the off position (the coin meter timer motor in the off position and the clothes door open).
2. Make certain the main gas shut-off valve has been off for at least five minutes before attempting to light the pilot, then open the main gas shut-off valve.
 - A. Rotate knob to pilot position. Then depress knob while lighting the pilot.
 - B. Light the pilot with a match. Avoid putting the arm or hand inside the combustion chamber. If the pilot does not light immediately, allow time for any air in the pilot line to bleed off.
 - C. After pilot has been lit (and line interrupter has held in) the knob can be turned from pilot to on position by rotating without depressing.

NOTE: Knob cannot be inadvertently turned from pilot to off since knob must first be depressed.

1-8A PILOT IGNITION (SOLID STATE IGNITION MODELS ONLY)

The solid state ignition control lights the pilot burner by spark. The pilot gas is ignited and burns only when the control thermostat calls for heat and the main burners are lit.

1. Before turning on the main electrical switch, be sure the electrical power supply is connected correctly. The white wire is to be connected to the white wire (common) in the junction box and the black wire to the black wire (power leg). Also make sure all gas supply lines are purged of air.
2. Close main gas shut-off valve and wait for five minutes before turning back on.
3. Turn on main electrical power switch, set thermostat knob on high, close loading door, and activate push to start switch.
4. The solid state ignition control will automatically supply energy to the spark gap and the pilot valve when the thermostat contacts close. Spark will continue until flame is realized.
5. The sensing probe detects the presence of the pilot flame and the control de-energizes the spark gap and energizes the main gas valve.

1-9 COIN BOX LOCK AND KEY

The coin box lock and key is not included in any of the Commercial Dryers manufactured by our company.

These are to be purchased from:

Greenwald Industries, Inc.
1340 Metropolitan Ave.
Brooklyn, N. Y. 11237
Telephone: (212) 456-6900

DN3 Series - Greenwald part no. 8-1001-33

These locks and keys can also be purchased from your authorized Commercial Laundry Equipment Distributor or Dealer.

1-10 OPERATING INSTRUCTIONS

1. Place the clothes load to be dried in the cylinder and close the dryer door.
2. Set the temperature selector to the desired setting for the type of clothes to be dried.
3. Insert coin(s) into coin slots at the upper right hand corner on coin operated models. Turn knob until coin drops. Depress push to start button until dryer continues to run when button is released.

NOTE: On manual models, turn timer knob to set time desired and depress push to start button as above.

IMPORTANT: Normally, dryer operation will continue uninterrupted through the complete cycle determined by number of coins inserted (or time set on timer). However, opening the loading door will interrupt the circuits and the drive motor and main burners will cease to function. The signal light will remain on and the time cycle will continue independent of the interruption until expiration of the time purchased or closing of the door and the starting procedure repeated.

4. The drying time depends of the size of the load and the type of clothes, the amount of water left in the clothes from the washer, and the room temperature and humidity.
5. When the temperature selector lever is set on the "Warm" or "Medium" setting, there is an automatic cool down period of approximately one minute at the end of the cycle. During the cool down period, the dryer tumbles and the blower operates with the heat off to cool the clothes.

NOTE: If the temperature selector lever is set on "Hot" the cool down period is eliminated.

SPECIFICATIONS

MODEL DN3 SERIES

DNA3	90,000 B.T.U.	Standing Pilot
DNB3	110,000 B.T.U.	Standing Pilot
DNH3	90,000 B.T.U.	Solid State Ignition & Heat Reclaimer
DNF3	90,000 B.T.U.	Solid State Ignition
DNG3	110,000 B.T.U.	Solid State Ignition

SUFFIX LETTERS DENOTING COIN METER:

D	— 10¢ - 7½ Min.
Q	— 25¢ - 30 Min.
DQ	— 10¢/25¢ - 7½ - 22' Min.
H	— Manual Operated with 15 or 60 Min. Timer

SUFFIX LETTER DENOTING COLOR: No Suffix — White; G — Avocado; HG — Harvest Gold

EXAMPLE: DNH3DQHG — 90,000 B.T.U. - Solid State Ignition, Heat Reclaimer, 10¢/25¢ Coin Meter, Harvest Gold

CAPACITY: 30 pounds of dry clothes

MOTOR: capacitor start, thermal protected.

AIR MOVEMENT: 815 C.F.M.

CYLINDER SPEED: 47 R.P.M.

AIR TEMPERATURES: HOT—195° MEDIUM—160° WARM—145°

COOL DOWN: Approximately one minute at end of cycle on WARM or MEDIUM setting only.

GAS REQUIREMENTS: 90,000 or 110,000 B.T.U./Hr. input @ 3.5" water column (Refer Model Specifications).

NOTE: All dryers adaptable to Natural or L.P. Gas

WEIGHT: Gross: 590 lbs. Net: 440 lbs. (Approx.)

Section 2

COMMERCIAL DRYER

WIRING DIAGRAM

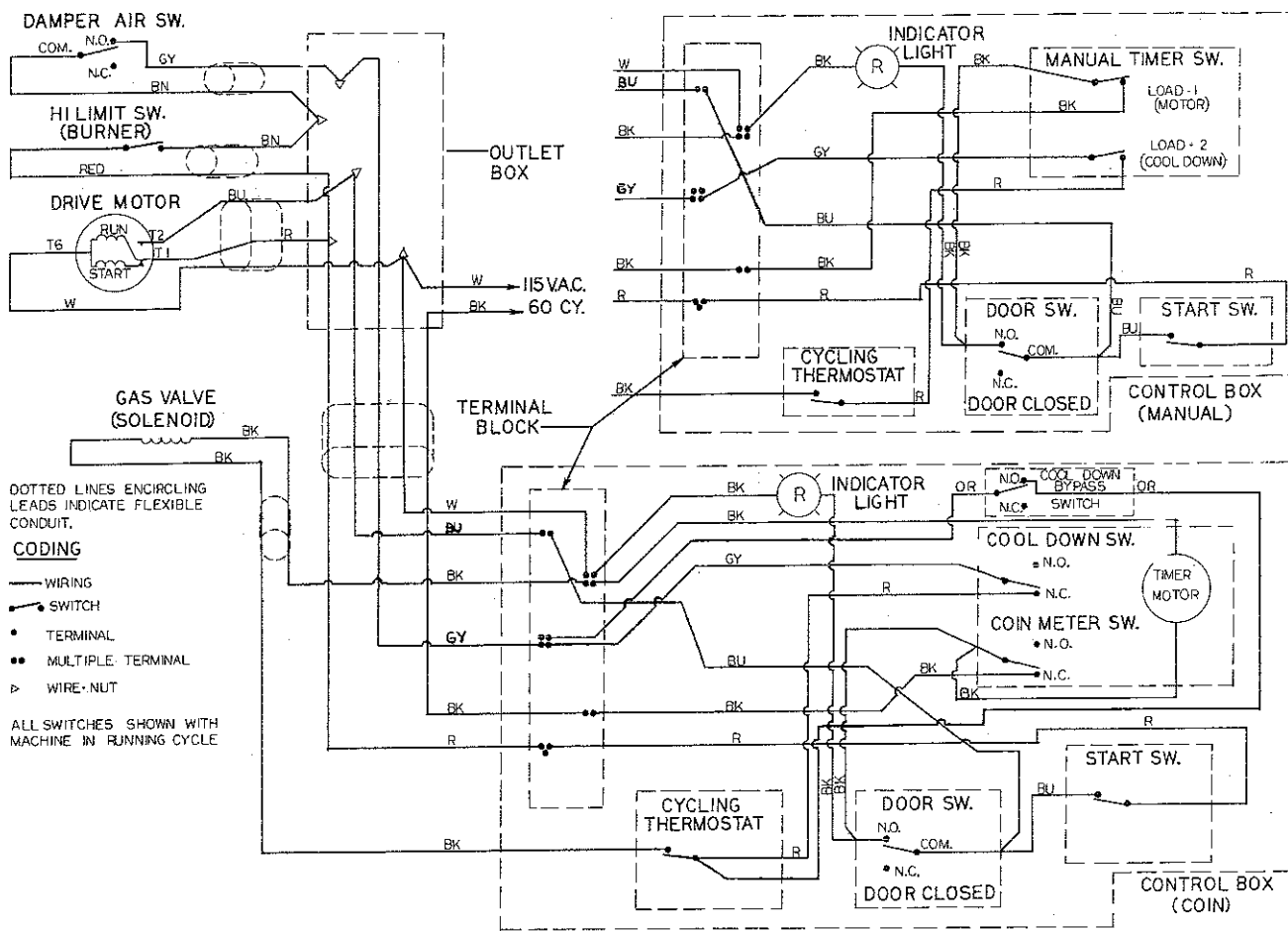


Figure 2-1. Wiring Diagram - Standing Pilot Models Only

COMMERCIAL DRYER

WIRING DIAGRAM

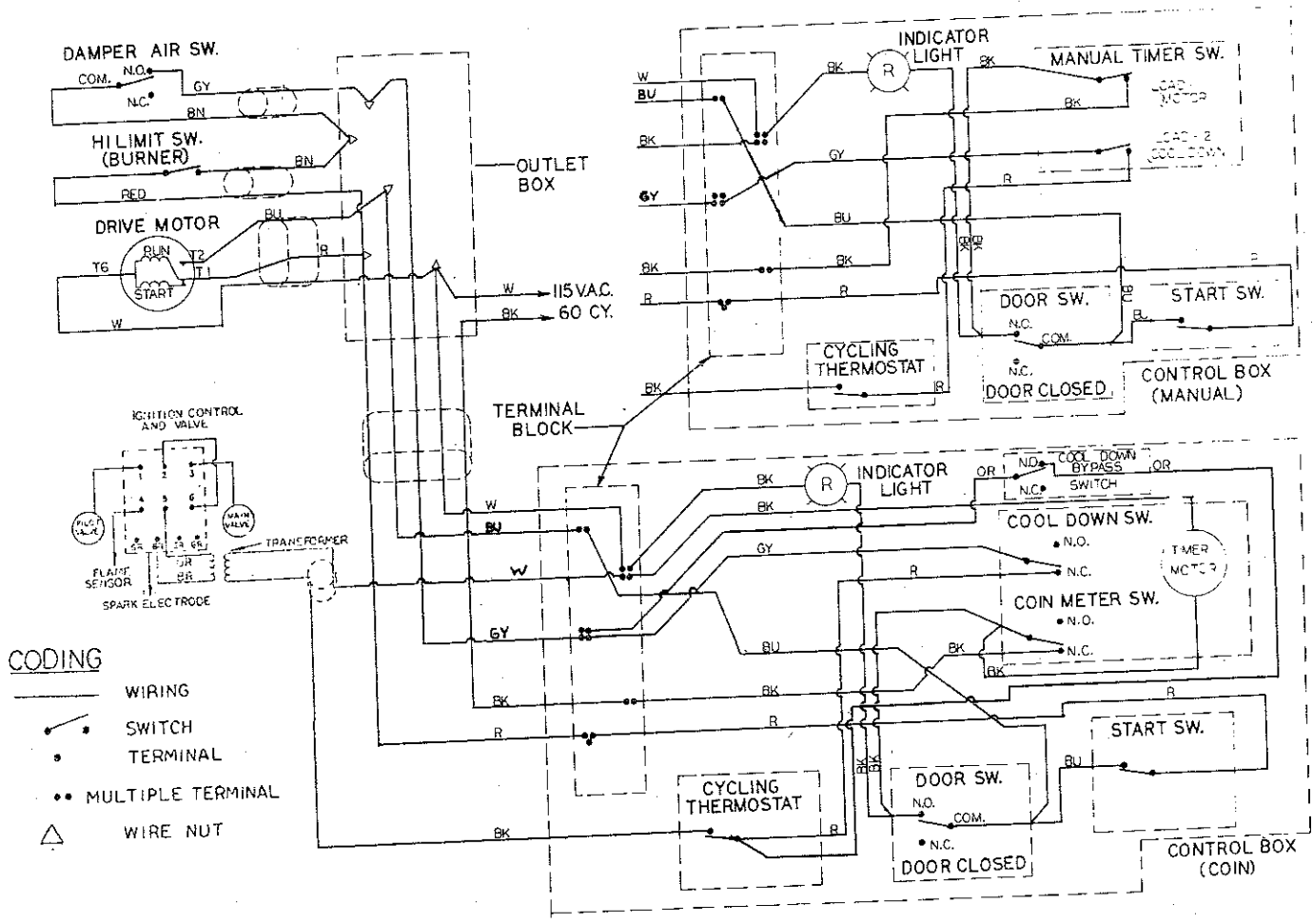


Figure 2-2. Wiring Diagram - Electronic Ignition Models Only

Section 3

SERVICE PROCEDURES

Model DN3 Series

3-1 UPPER SERVICE DOOR REMOVAL

1. Insert key and unlock. Pull door out from bottom and lift to horizontal position. Swing door support wire until it engages with front lip of door and holds it in the raised position. (Refer to figure 3-1).
2. Disconnect wires from push to start switch.
3. Drive the center pins out of the hinge (1 on each side) and retain the pins.
4. Pry the hinges carefully from the door and cabinet.

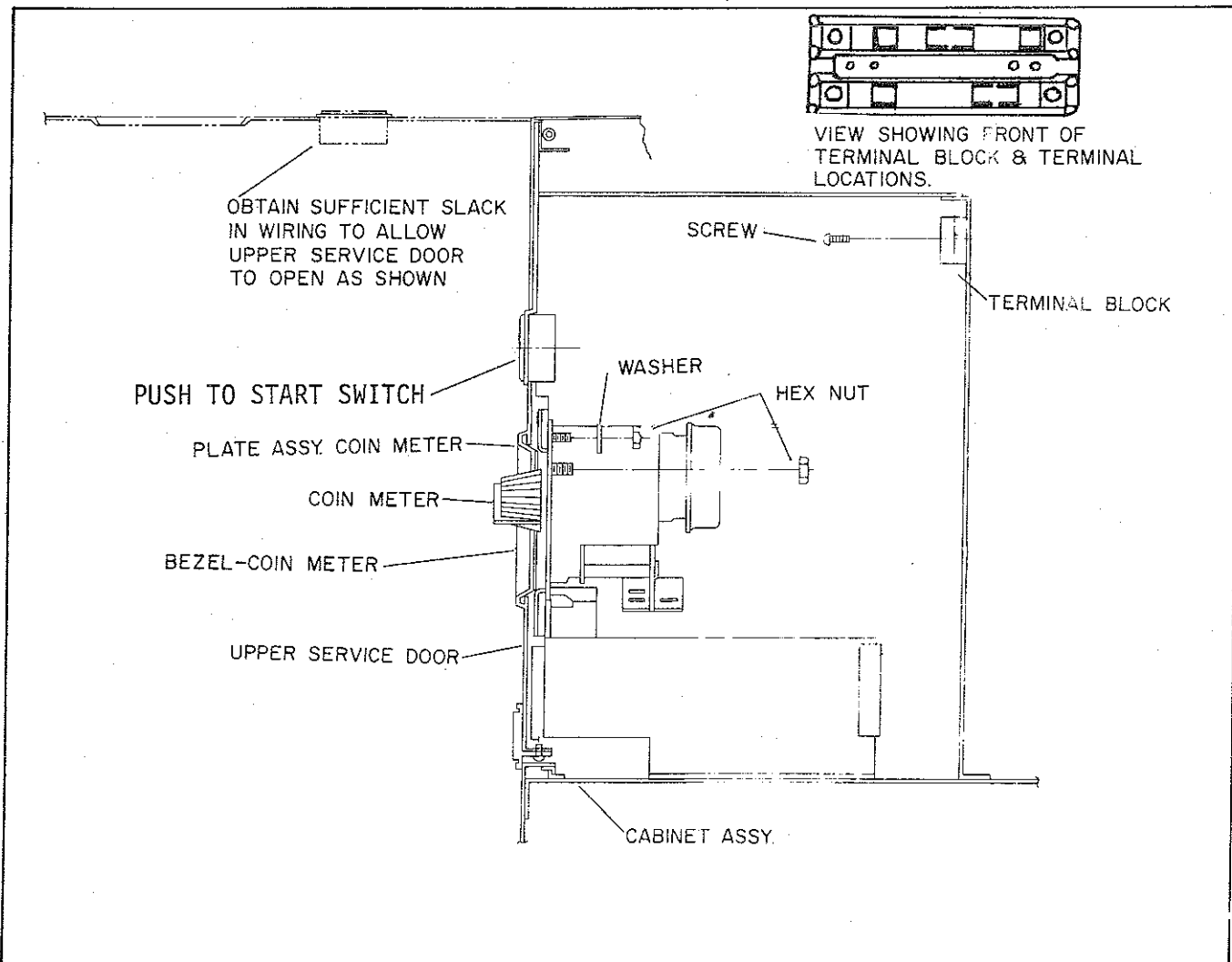


Figure 3-1. Upper Service Door

3-2 COIN METER REMOVAL

The coin meter is located on the right side of the upper service door.

1. Remove the three hex head screws on the meter panel door (two on the right hand side and one on the left hand side) and remove door.

NOTE: For ease of servicing parts in the meter housing and the coin meter, this assembly can be hung in the slots provided in the door panel and cabinet assembly.

2. Remove the four hex nuts holding the meter in place and lift meter off the mounting studs. (Refer to Fig. 3-1).
3. Disconnect the meter wires from the terminal block and other wires from the meter.

3-2A TIMING SPECIFICATIONS

To assist you in determining the length of time allowed for each increment (coin) for the various cams available, we offer the following chart.

60 MINUTE TIMING MOTOR

Greenwald Timing Cam #	No. of Pins	Single Coin Meter	Dual Coin Meter		Dexter Part No.
			10¢	25¢	
59-439-1	1	60	60	180	
59-439-2	2	30	30	90	
59-439-3	3	20	20	60	9095-032-6
59-439-4	4	15	15	45	
59-439-5	5	12	12	36	9095-032-2
59-439-6	6	10	10	30	
59-439-7	7	8 $\frac{3}{8}$	8 $\frac{3}{8}$	24 $\frac{7}{8}$	9095-032-1
59-439-8	8	7 $\frac{1}{2}$	7 $\frac{1}{2}$	22 $\frac{1}{2}$	9095-032-3
59-439-9	9	6 $\frac{2}{3}$	6 $\frac{2}{3}$	20	9095-032-4
59-439-10	10	6	6	18	
59-439-11	11	5 $\frac{1}{2}$	5 $\frac{1}{2}$	16 $\frac{1}{2}$	9095-032-5
59-439-12	12	5	5	15	

NOTE: All replacement parts for the coin meter except those listed in the parts list section of this manual are to be purchased from:

Greenwald Industries, Inc.
1340 Metropolitan Ave.
Brooklyn, N.Y. 11237
Telephone: (212) 456-6900

3-3 TIMER REMOVAL (MANUAL OPERATED MODELS ONLY)

1. Repeat step 1 in paragraph 3-2.
2. Remove the two hex nuts holding the timer assembly to the mounting plate.
3. Remove timer knob by gently prying off of timer shaft.
4. Remove the two screws holding the timer dial and timer to the mounting plate.

3-4 CLOTHES DOOR REMOVAL

1. Remove the six hex head screws securing the clothes door and hinge assembly to the cabinet front panel.

3-5 INSTALLATION AND ADJUSTMENT OF CLOTHES DOOR

1. Replace the door as indicated in paragraph 3-4.
2. Tighten the mounting screws lightly until the door will just support itself on the hinge. Align the door centrally in the front panel opening and center the actuator pin in the hole. Tighten the screws securely.

3-6 CLOTHES DOOR WINDOW AND GASKET REMOVAL

1. Remove the clothes door.
2. Block up the clothes door on a solid surface. Exert a pressure on the window circumference and push the window to free it from the gasket.

3-7 INSTALLATION OF CLOTHES DOOR WINDOW AND GASKET

1. Place the clothes door, with its face down, on a solid surface.
2. Install the window gasket around the clothes door flange. The wider lip of the gasket should be on the bottom side or front face of the clothes door.
3. Install the door glass support into the gasket at the bottom of the clothes door.
4. Lay the window glass on the gasket. Apply a soapy water solution liberally around the circumference of the window.

5. Raise the gasket lip at its end over the glass with a blunt nosed tool. A 4" screwdriver shaft ground to a blunt point will serve this purpose.
6. Work the gasket lip over the glass around its circumference. While performing this operation keep the window positioned in the gasket. Apply the soapy water solution where necessary to facilitate this operation.
7. Finally, position the gasket with the palm of the hand to evenly distribute it around the window and clothes door.

3-8 DISASSEMBLY OF MAGNETIC DOOR HANDLE

1. Remove the two allen screws attaching the handle assembly to the door.
2. Drive the roll pin out of the handle until the pole blocks and magnets can be removed.

3-9 DOOR SWITCH REMOVAL AND INSTALLATION

1. Remove the two screws located on back of the rear panel of the control housing assembly (at the lower left hand corner).
2. Remove the wiring leads from the switch.
3. When installing the door switch — adjust the switch height at the slots in the rear of the control panel housing. The correct setting is such that the door switch actuates on door opening when the latch side of the door is $\frac{1}{4}$ to 1 inch open. The door switch actuator arm is secured to the front of the control panel housing by two tube clips. The door switch actuator arm must operate freely, without binding.

3-10 LOWER SERVICE DOOR REMOVAL

1. Insert the key and unlock door.
2. Pull top of door out from cabinet and lift to remove door from bottom pin slots.

3-11 FRONT PANEL REMOVAL

1. Remove lower service door and raise upper service door.
2. Remove temperature control lever knob.
3. Remove the screws from sides, bottom, and top of the front panel that secures it to the cabinet.

3-12 LINT SCREEN AND LINT TRAP HOOD REMOVAL

1. Remove lower service door.
2. Slide lint screen up and out of screen guide angles (Refer figure 3-2).
3. Remove the six hex nuts that secure the lint trap hood to the blower housing assembly. Pull out to remove lint trap hood (Refer figure 3-3).

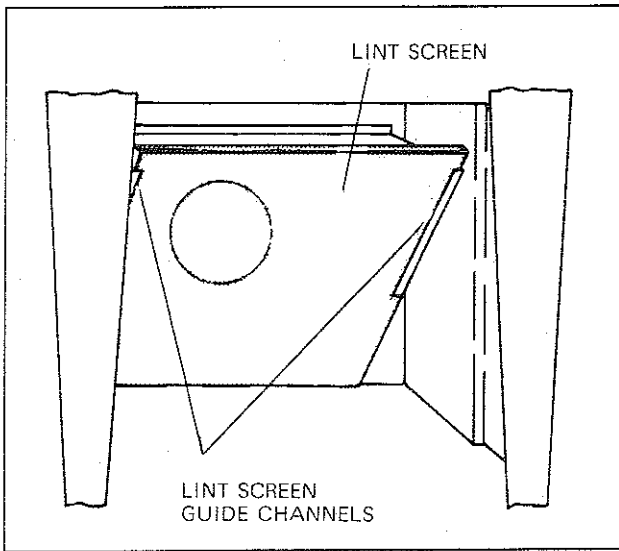


Figure 3-2. Lint Screen

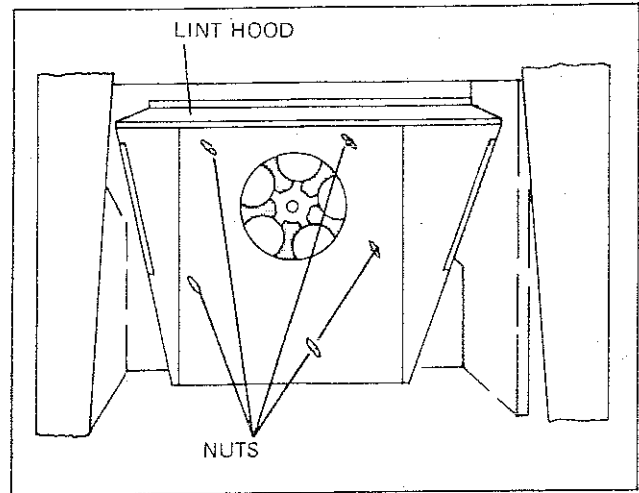


Figure 3-3. Lint Trap Hood

3-13 BLOWER IMPELLER REMOVAL (Refer figure 3-4)

1. Locate the two allen screws in the impeller hub.
2. Attach a wheel puller behind the blades on the impeller hub, remove the impeller from the motor shaft. This method of removal is recommended to prevent any damage to the motor.

3-14 DAMPER SWITCH REMOVAL AND ADJUSTMENT (Refer figure 3-5)

1. Remove lower service door.
2. Remove lint screen and lint trap hood.
3. Remove switch shield by pulling out of slots.
4. Remove screws securing damper switch to bracket.
5. Adjust the damper switch by use of the adjusting screw in the switch arm so the switch operates when the damper is approximately 30° from the extreme up position.

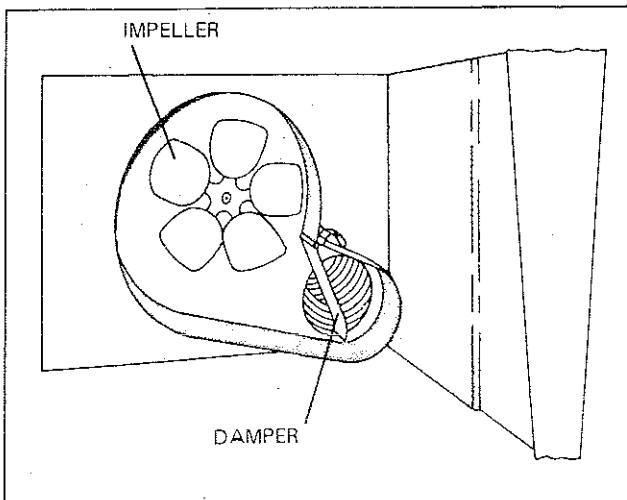


Figure 3-4. Blower Impeller

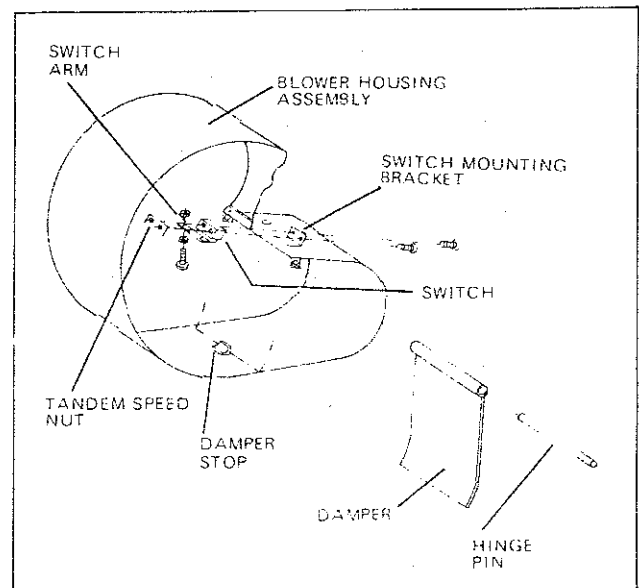


Figure 3-5. Damper Switch Assembly

3-15 TEMPERATURE CONTROL THERMOSTAT AND COOL DOWN BY-PASS SWITCH

1. Remove lower service door, lint screen and lint trap hood.
2. Press the two split grommets, holding the thermostat sensor bulb, out of the baffles and in toward the bulb. Remove the grommets, and pull the sensor bulb and capillary tube away from the baffles.
3. Remove the capillary grommet from the cabinet back and the control housing back. Remove all capillary clips. Pull the sensor bulb and capillary tube out through the back of the cabinet.
4. Open the upper service door and remove the temperature selector lever knob (Refer figure 3-6).
5. Remove the wire leads connected to the thermostat terminals and the cool down by-pass switch terminals.
6. Remove the hex head screws holding the thermostat and mounting bracket assembly to the control housing.
7. Slide the control lever back free of the front panel opening and remove the entire assembly.
8. Disassemble the thermostat and/or by-pass switch as necessary.

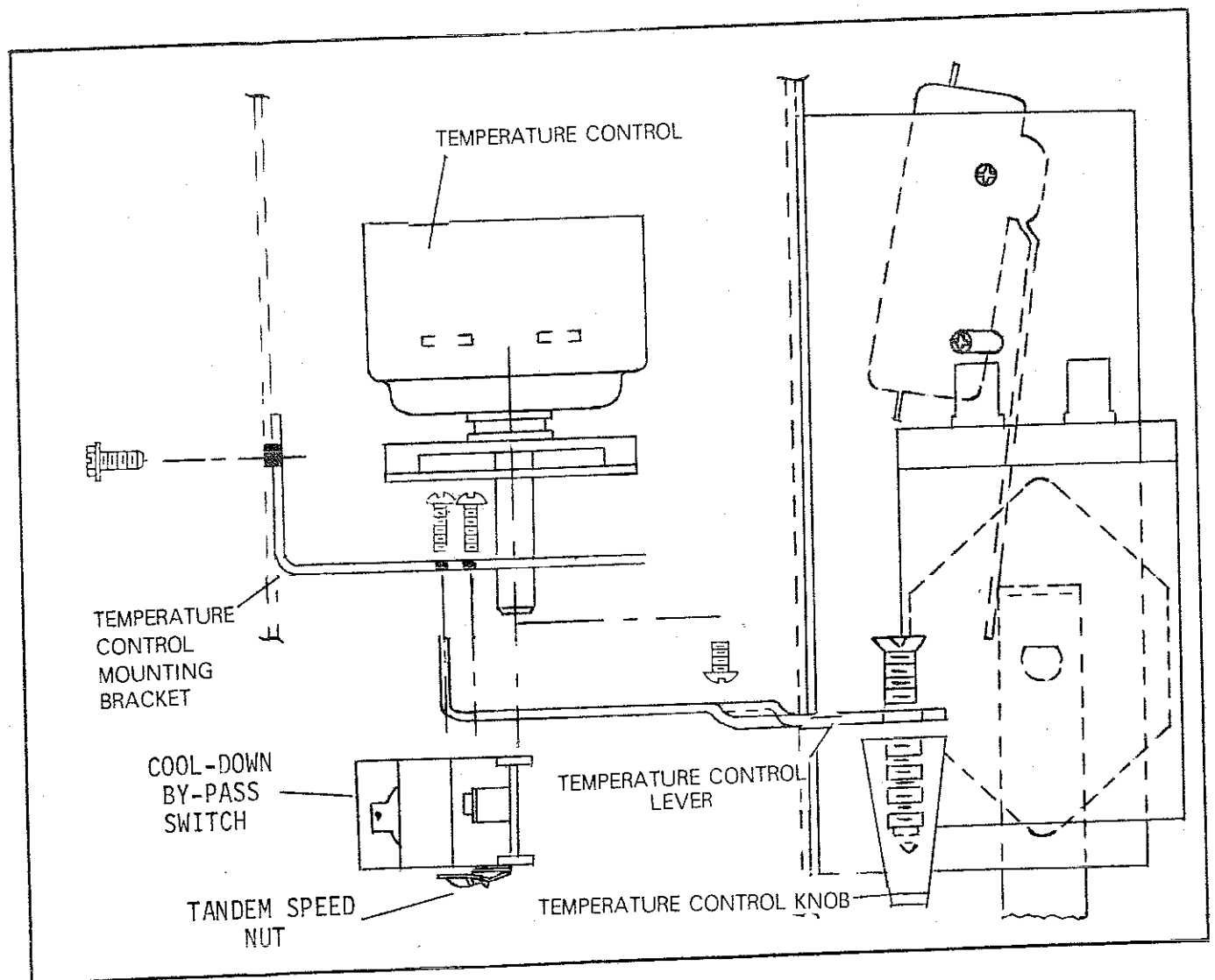


Figure 3-6. Control Thermostat and Cool Down By-Pass Switch

3-16 CONTROL THERMOSTAT TEMPERATURE CHECK

1. To check the temperature at which the control thermostat is cycling off, place a thermocouple or shake down thermometer in the exhaust vent outlet at the back of the dryer. The stabilized temperature at this point with the temperature selector lever set on "Hot" should read approximately 170° F. This indicates the temperature at the capillary bulb on the thermostat is approximately 200° F.

3-17 TO CHECK CALIBRATION

1. Set the temperature selector lever on "Medium" heat setting.
2. Run several cycles to allow temperatures to stabilize and several temperature readings are identical.

3-18 TO RECALIBRATE THERMOSTAT (REFER FIGURE 3-6A)

1. Turn screw "A" clockwise to decrease temperature and counterclockwise to increase temperatures.
2. $\frac{1}{4}$ turn of screw "A" on thermostat will affect temperature approximately 15° F.
3. Recheck as per paragraph 3-17 to determine if calibration has been corrected.

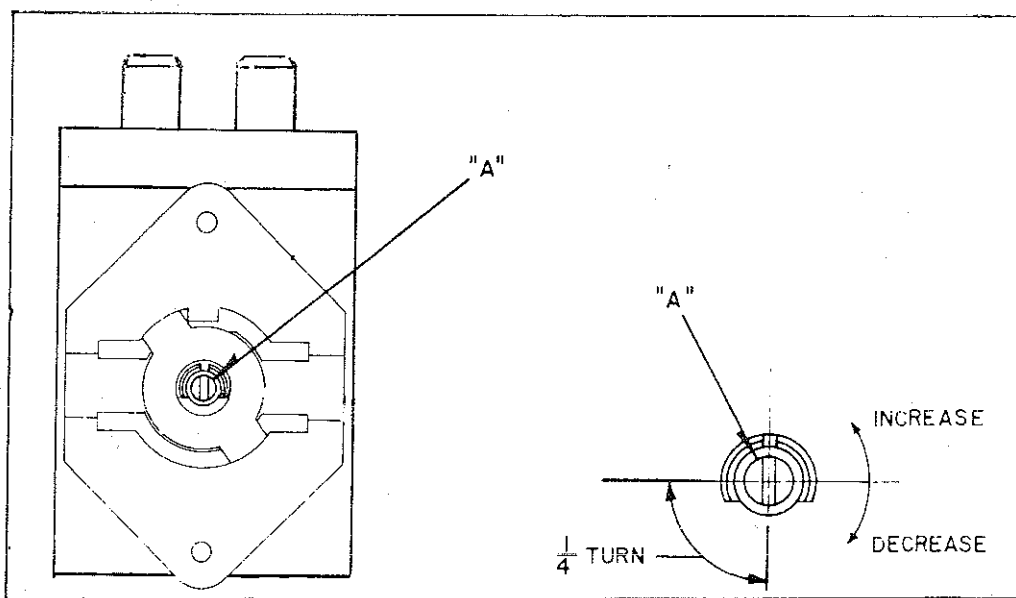


Figure 3-6A. Recalibration of Control Thermostat

3-19 HIGH LIMIT THERMOSTAT REMOVAL

The high limit thermostat is designed to open the circuit to the main burner in the event of malfunction of the control thermostat or gas valve. It is normally closed and is 125 V.A.C. 3 amp. rated. It closes at 185° F. and opens at 225° F. on all models except the DNC3 which is equipped with a heat reclaimer. On this model the thermostat closes at 250° F. and opens at 300° F. This switch is located on the upper front left side of the burner housing.

1. Remove the thermostat cover and wire leads connected to the terminals.
2. Remove the screws securing the thermostat to the bracket.

NOTE: Save spacers between the thermostat and bracket and use on reassembly.

3-20 GAS CONTROL VALVE ASSEMBLY (STANDING PILOT MODELS ONLY)

The automatic pilot and gas control valve consists of three controls in one. The valve must be installed in the correct position, that is, the flow of gas must be in the same direction as the arrow on the valve. The three controls in the valve are: (Refer figure 3-7).

1. A power unit assembly.
2. A pressure regulator assembly.
3. A magnetic operator assembly.

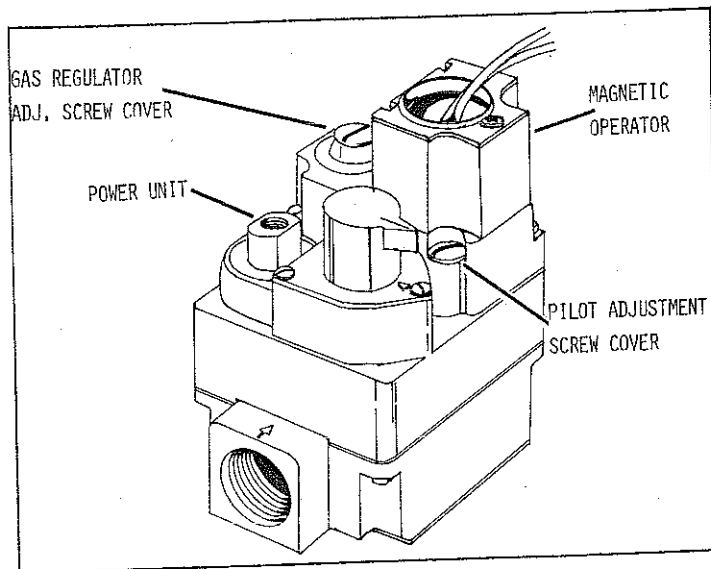


Figure 3-7. Gas Control Valve

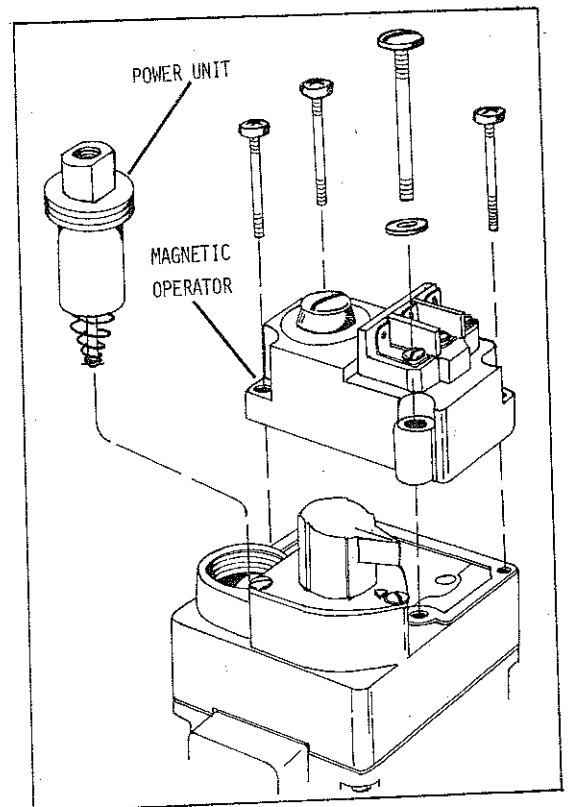


Figure 3-8. Gas Valve Servicing

To operate the control, light the pilot as instructed in paragraph 1-8. Once the pilot is lit it heats a thermocouple which furnished electrical energy to the automatic pilot section at the thermocouple connection. Once the thermocouple is heated, a coil is energized in the power unit assembly and a valve disc is lifted from its seat. The main flow of gas can now proceed to the pressure regulator. The pressure regulator is adjusted at the factory to maintain 3.5 inches of water column at the burner manifold tapping. If this pressure is not adequate, an adjusting screw is provided. Any adjustment made should be checked with a manometer or pressure gauge at the manifold tapping.

Having gone through the pressure regulator, the main gas flow is now at the valve disc of the magnetic operator assembly. This electric valve is controlled by the control thermostat on the dryer.

3-20A GAS CONTROL VALVE ASSEMBLY (SOLID STATE IGNITION MODELS ONLY)

The solid state pilot ignition and gas valve assembly is a complete system engineered to conserve gas energy during the operation of the dryer.

To operate the control, complete the procedure outlined in paragraph 1-8A.

NOTE: Refer to figure 3-8A for the following:

When the thermostat calls for heat the electric spark and valve are automatically energized to produce a pilot flame. The sensing probe proves the presence of the pilot flame, internal switch action de-energizes the spark gap, energizes the main valve and lights the main burner. The main burner remains lit until the thermostat is satisfied at which time the main burner valve and pilot valve are de-energized.

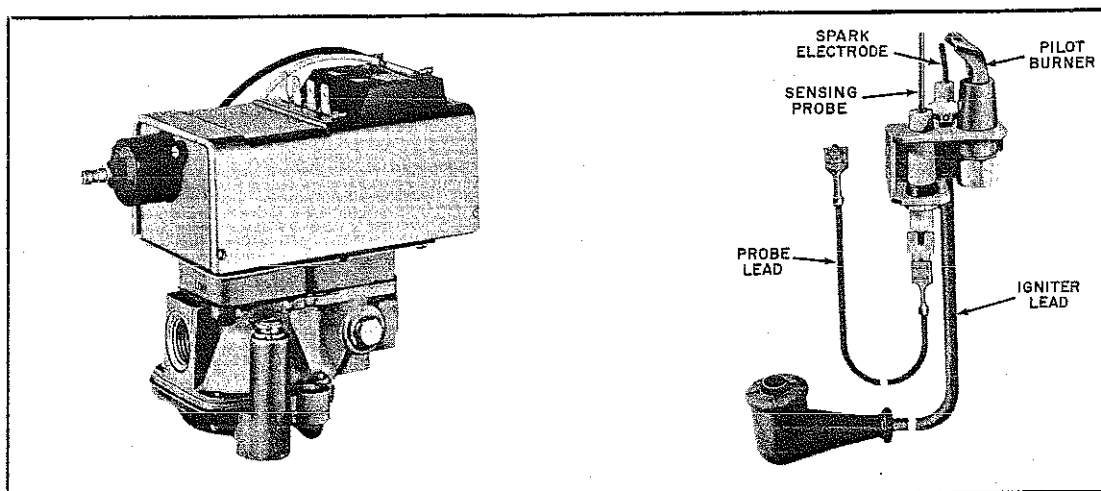


Figure 3-8A. Electronic Gas Control and Pilot Assembly

3-21 GAS CONTROL VALVE SERVICE (Refer figure 3-8) (STANDING PILOT MODELS ONLY)

Repair of the gas control valve is limited to the removal and replacement of the power unit and/or magnetic operator. (As shown in figure 3-8).

3-21 GAS CONTROL VALVE AND SOLID STATE IGNITION SERVICE (SOLID STATE IGNITION MODELS ONLY)

Servicing of the solid state ignition and gas valve system is limited to the parts as shown in figure 3-8B.

3-22 PILOT BURNER REMOVAL

1. Turn off gas supply.
2. Remove the nut securing the thermocouple at the pilot burner. (Standing Pilot Models Only).
3. Remove the two screws holding the pilot burner and shield to the bracket. (Refer figure 3-9).
- 3A. Disconnect the sensing probe lead wire. (Solid State Ignition Models Only).
4. Remove the compression fitting and tubing from the pilot burner.
- 4A. Remove the sensing probe from pilot burner. (Solid State Ignition Models Only).
5. Remove the orifice fitting from the pilot burner, if orifice change is required.

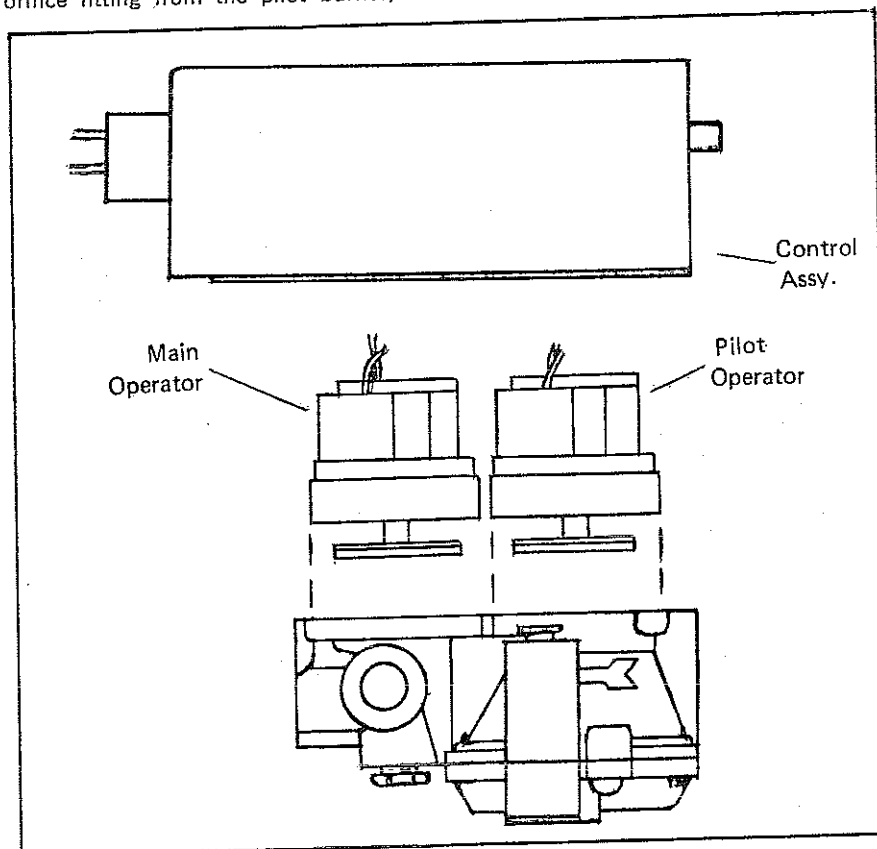


Figure 3-8B. Servicing Electronic Control

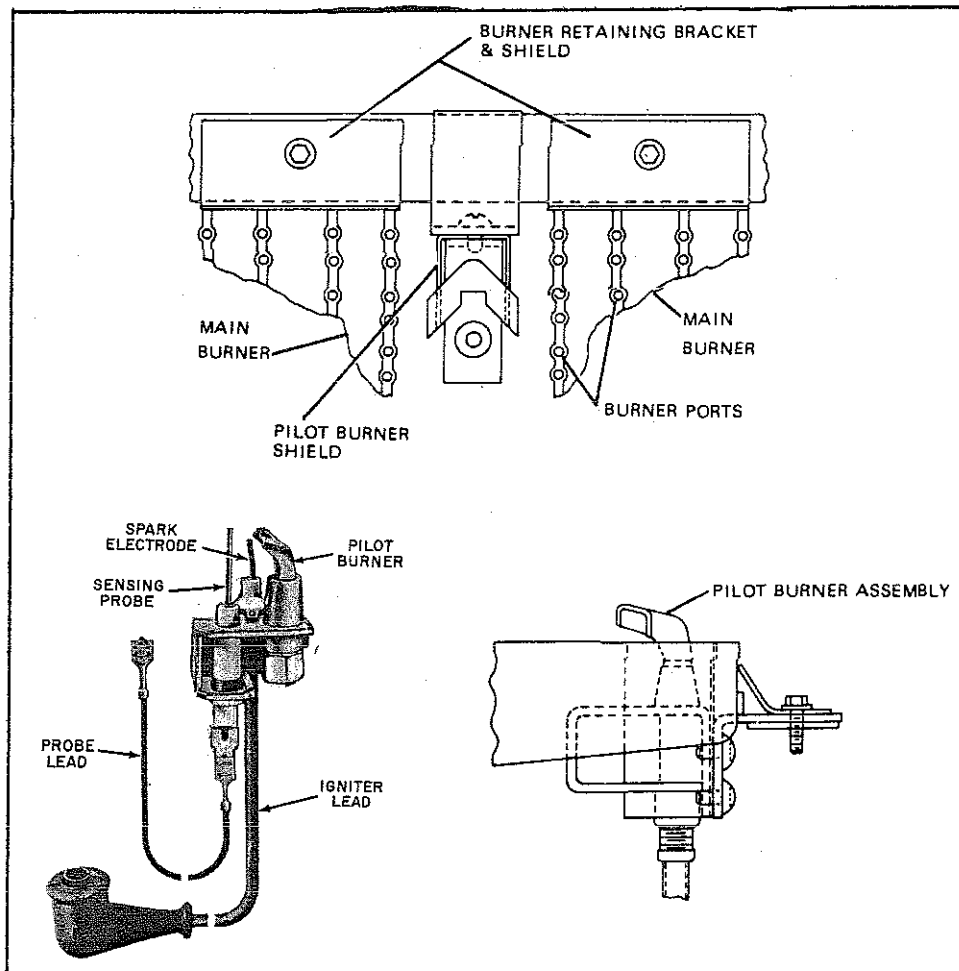


Figure 3-9. Pilot Burner Assembly

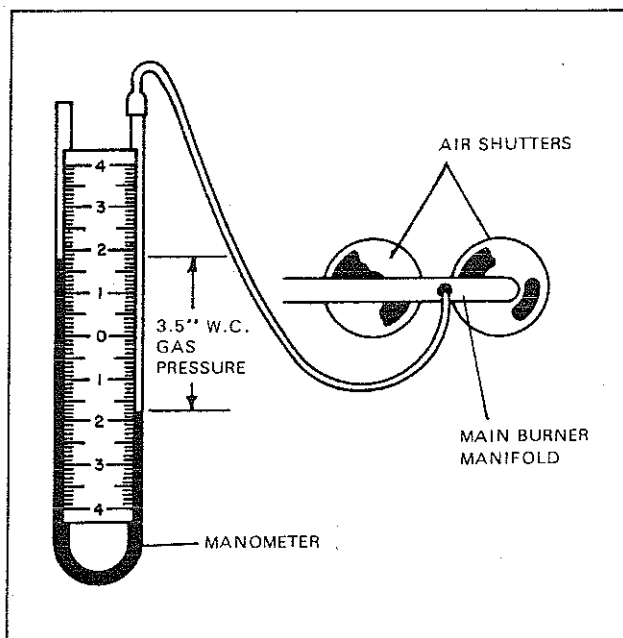


Figure 3-10. Manometer Attached To Main Burner Manifold

3-23 MAIN BURNER REMOVAL

1. Remove the screw securing each burner retainer bracket, remove retainers. (Refer figure 3-9).
2. Remove the burner front support assembly by first removing the screw located at the front left side of burner housing. Lift and remove the front support assembly from the housing.
3. Lift the main burners up from the front of the unit and remove from their mounting.

3-24 MAIN BURNER ORIFICE REMOVAL

1. Remove the manifold by unscrewing the union joint between the manifold and gas control. Withdraw the manifold.
2. Screw out the main burner orifices from the burner manifold.

3-25 PRESSURE REGULATOR ADJUSTMENT

Use the following procedure whenever it is necessary to check the pressure regulator setting.

NOTE: Any adjustment of the pressure regulator must be made with a manometer attached at the plug in the main burner manifold. (Refer figure 3-10).

1. Shut off the gas supply to the dryer.
2. Remove the $\frac{1}{8}$ " pipe plug from the main burner manifold.
3. Attach a manometer to the manifold part.
4. Remove the pressure regulator cover screw on the gas valve.
5. Open the shut-off valve, light the pilot and operate the dryer.
6. Adjust the pressure for a manometer reading of 3.5" water column gas pressure.

NOTE: The main burners must be operating when adjusting the pressure regulator.

7. Shut off the gas supply to the dryer. Remove the manometer and install the $\frac{1}{8}$ " pipe plug in the manifold.
8. Open the shut off valve, check for gas leaks and relight pilot.

3-26 MOTOR AND IMPELLER REMOVAL

1. Remove the drive guard from the back.
2. Remove the four screws holding the impeller cover plate to the back panel.

3. Remove the two set screws (90° apart) on the motor pulley and remove the pulley.
4. Remove the terminal cover plate from the motor and remove the wiring from the terminals and the conduit from the motor.
5. Remove the motor mounting nuts, washers and lockwasher securing the motor to the motor bracket.

3-27 DRIVE BELT REMOVAL

1. Grasp and slide the drive belt off the intermediate pulley. (Refer figure 3-11).

3-28 DRIVEN BELT REMOVAL

1. Grasp and slide the driven belt off the driven pulley as the driven pulley is rotated. (Refer figure 3-11).

NOTE: Be sure the tension spring is in place when belts are replaced.

3-29 CYLINDER PULLEY REMOVAL

1. Remove nut holding pulley to cylinder shaft.

NOTE: Do not lose locking key in cylinder shaft when removing pulley.

3-30 INTERMEDIATE PULLEY AND TENSION ARM REMOVAL (Refer figure 3-11).

1. The intermediate pulley can be removed by removing the snap rings holding the pulley to the tension arms.
2. With the pulley and tension spring removed, remove the snap ring from the center drive pin. The tension arms can now be removed in two pieces.

NOTE: Be sure and note the position in which the tension arms are removed.

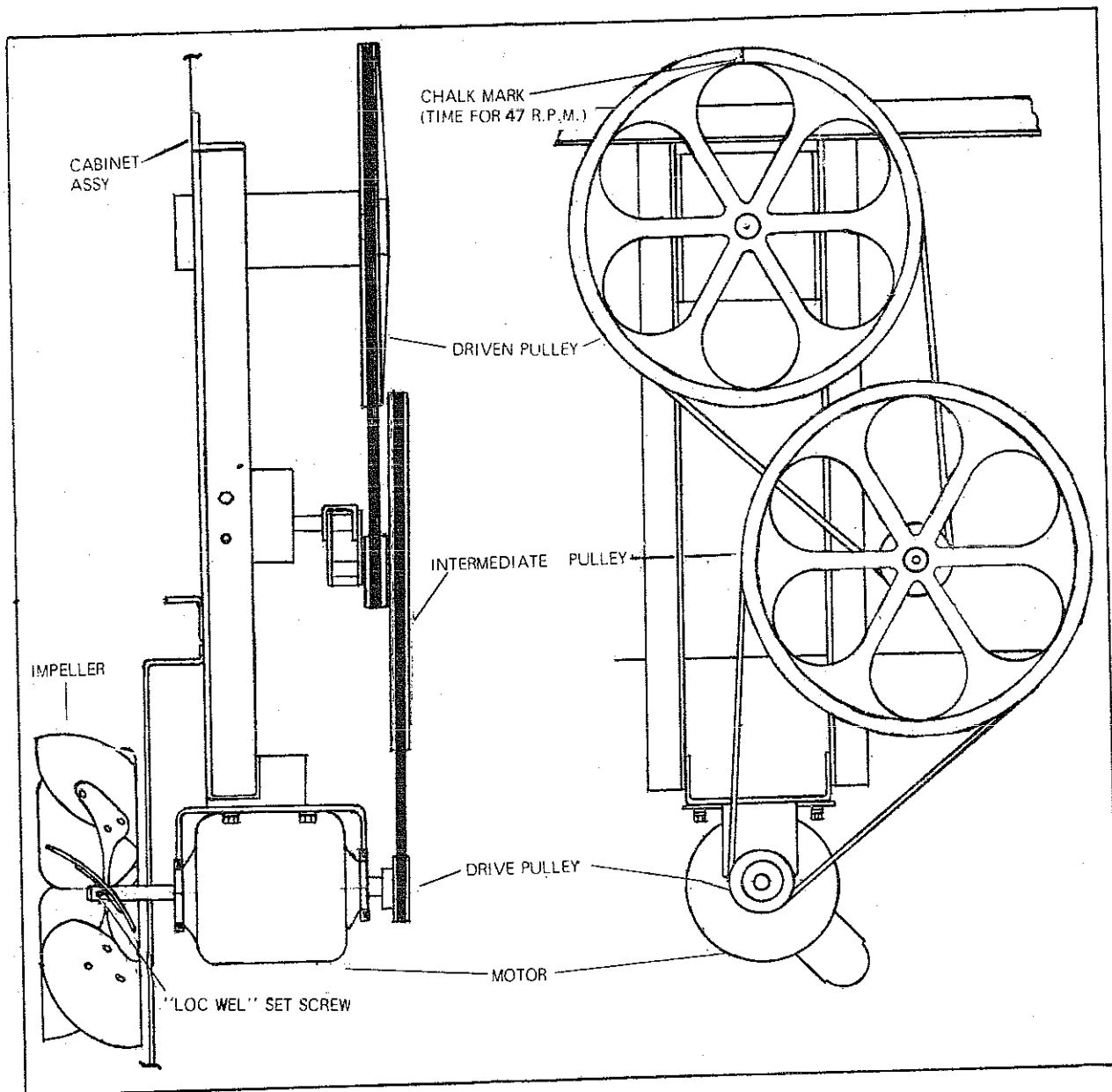


Figure 3-11. Pulley and Belt Assembly

3-31 CYLINDER REMOVAL

1. Remove front panel.
2. Remove driven belt, cylinder pulley, and key from cylinder shaft.
3. From the front of the machine, remove the cylinder and spider assembly. (Refer figure 3-12).

- To reassemble, the cylinder shaft must be guided into and through the tumbler bearing housing assembly. A dummy shaft will be required for insertion into the rear of this housing assembly. This will line up the bearing spacer with the bearings in the housing assembly. (Refer figure 3-13).

NOTE: Be sure the cylinder is pushed all the way to the rear. If there is any doubt use the cylinder pulley and nut as a puller to position cylinder properly.

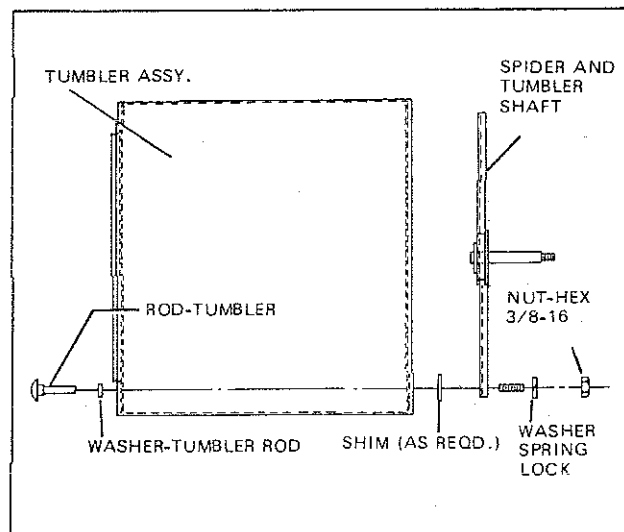


Figure 3-12. Tumbler Assembly

3-32 ADJUSTMENT OF CYLINDER WITH FRONT PANEL IN POSITION (Refer figure 3-13).

- Loosen the two top adjusting bolts and two bottom adjusting nuts and lock nuts holding the bearing housing to the drive plate.
- Loosen the four mounting bolts on the side channels and remove all shims. (Save for reuse if necessary).
- Open the clothes door and insert a $\frac{1}{2}$ " thick shim at the 3 and 9 o'clock position between the front panel flange at the door opening and the opening in the cylinder. Insert a $\frac{3}{4}$ " thick shim at the 12 o'clock position and a $\frac{1}{4}$ " thick shim at the 6 o'clock position.
- Tighten the two bottom adjusting nuts and tighten locking nuts.
- Tighten the bottom right mounting bolt, then the top left mounting bolt. Tighten the remaining two bolts. (Shim where and if necessary).
- Tighten the two top adjusting bolts.
- Remove all the shims from between the front panel flange and cylinder (3,6,9, and 12 o'clock).
- Spin the cylinder to check for rubbing against baffles, pressing down hard while rotating. If rubbing is detected, repeat procedure paying particular attention to placement of shims between bearing housing and side channels.

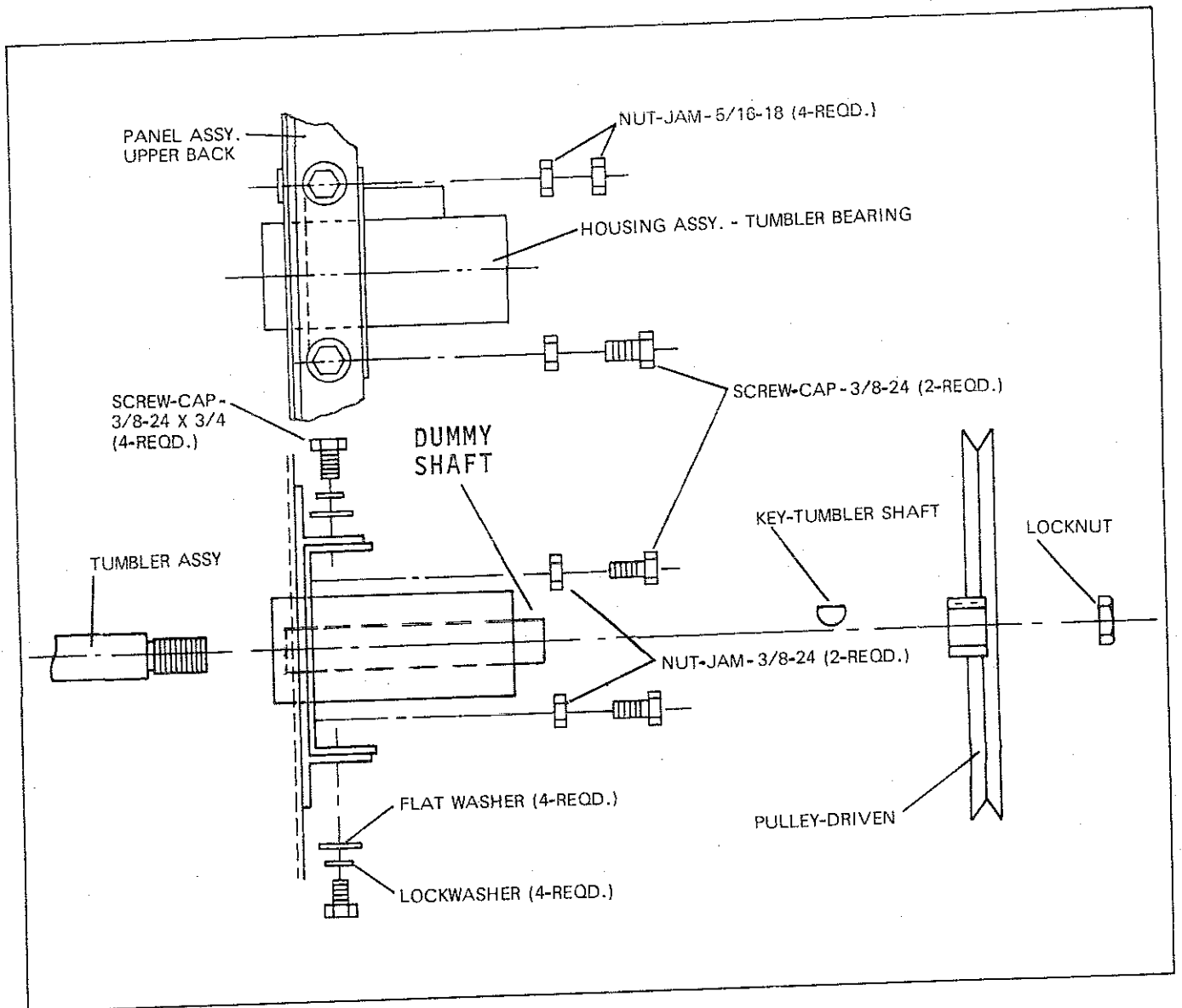


Figure 3-13. Tumbler Bearing Assembly

3-33 BEARING HOUSING BEARING REMOVAL (Refer figure 3-13).

1. With the cylinder removed, insert a punch through the rear bearing and spacer and drive the front bearing out of the bearing housing.
2. From the front of the machine drive out the rear bearing in like manner.

NOTE: To replace drum bearings, keep in mind the bearings must be flush with the bearing housing. Replacing the bearings may be accomplished by either of the following methods.

- A. Place the spacer in the bearing housing. Position the bearings, one at a time, and using a rubber mallet, drive each bearing in flush with the bearing housing.
- B. By using a $\frac{7}{8}$ " bolt and nut 10" long and two $\frac{7}{8}$ " washers. Place a washer over the bolt and place a bearing and the spacer over the bolt. Slip bolt and spacer through the bearing housing. Place the other bearing over the bolt. Locate both bearings squarely in bearing housing. Place washer and nut on bolt. Tighten nut until both bearings are flush with the ends of the bearing housing.

Section 4

PREVENTIVE MAINTENANCE INSTRUCTIONS and TROUBLE SHOOTING GUIDE

4-1 PREVENTIVE MAINTENANCE

DAILY

1. Clean lint screen. Use soft brush if necessary.
2. Check lint screen for tears or holes. Replace if necessary.
3. Clean lint from lint screen compartment.

MONTHLY

1. Remove lint accumulations from end bells of motor.
2. Remove lint from meter compartment and meter mechanism.
3. Oil door hinge with light grade oil.
4. Remove lint and dirt accumulation from top of dryer.
5. Grease bearings and shaft of intermediate pulley. Use alemite gun and grease BRS-2 Molycote.

QUARTERLY

1. Check all belts for looseness, wear or fraying.
2. Inspect gasket of door glass for excessive wear.
3. Check tightness of all fastners holding parts to support channel.
4. Check tightness of all set screws.
5. Inspect impeller for tightness of blades to hub.
6. Check tightness of cylinder shaft retaining nut.
7. Remove lint accumulation from all areas of dryer.
8. Observe pilot flame. Remove and clean burner if necessary.
9. Oil each moving part of coin meter with one drop of light oil.

- Grease pivot pin and tension areas where they contact each other.

SEMI-ANNUALLY

- Remove main burners and clean.
- Remove all orifice and examine for dirt and hold obstruction.
- Remove all lint accumulations. Remove front panels and remove all lint accumulations.

YEARLY

- Check intermediate pulley bearings for wear.
- Oil motor - use 3-4 drops of good No. 20 grade oil.
- Clean lint accumulation from exhaust system.

4-2 TROUBLE SHOOTING GUIDE

PROBLEM	PROBABLE CAUSE	REMEDY
PILOT DOES NOT LIGHT	<ol style="list-style-type: none"> Gas not on Air in pilot line Pilot orifice plugged Incorrect connectors Incorrect spark gap Low gas pressure Defective control Defective pilot oper. Poor lead connection to sensing probe and control terminals 	<ol style="list-style-type: none"> Check main shut off valve. Bleed line. Remove, check and clean. Make sure white wire is to neutral and black to power. Spark gap to be 7/64" Check with gas company. Replace. Replace. Check connection.
PILOT WILL NOT STAY LIT	<ol style="list-style-type: none"> Thermocouple not hot enough Poor connection between thermocouple and valve Defective thermocouple Draft blowing out or deflecting thermocouple 	<ol style="list-style-type: none"> Wait 30 sec. before releasing valve knob. Clean and make sure it is seated properly. Replace. Eliminate drafts. Shield if necessary.

PROBLEM

PROBABLE CAUSE

REMEDY

PILOT LIT, MAIN BURNER
AND TUMBLER NOT ON

- 5. Insufficient gas pressure
- 6. Improper flame at sensing probe

- 5. Check pressure with manometer.
- 6. Flame must surround probe by 1/2".

- 1. Meter switch does not complete circuit
- 2. Door not closed or door switch not operating
- 3. Push to start switch not operating
- 4. Damper switch inoperative or out of adjustment
- 5. High limit thermostat open
- 6. Gas valve solenoid inoperative
- 7. Motor inoperative

- 1. Check and replace necessary part(s).
- 2. Check and replace.
- 3. Check and replace.
- 4. Check, replace or adjust.
- 5. Check and replace.
- 6. Check and replace.
- 7. Check and replace.

PILOT AND MAIN BURNER ON.
— NO TUMBLE

- 1. Broken belt
- 2. Belt slippage
- 3. Motor inoperative

- 1. Check and replace.
- 2. Check and replace.
- 3. Check and replace.

SLOW DRY TIME

- 1. Temp. control of calibration
- 2. Inadequate air supply
- 3. Lint screen clogged
- 4. Exhaust duct clogged or inadequate

- 1. Recalibrate.
- 2. Each dryer requires 1 sq. ft. primary air.
- 3. Clean.
- 4. Clean - check installation instructions for exhaust requirements.

Section 5

PARTS DATA

CABINET GROUP (Fig. 5-1)

Key	Part Number	Description	Model DN3 Series
A1	9989-396-6	Panel Assy., Front - Wh. -----	1
A1	9989-396-9	Panel Assy., Front - Avoc. -----	1
A1	9989-396-10	Panel Assy., Front - H.G. -----	1
*	1W23415FA70	Screw, Front Panel Mtg. -----	9
*	8641-436	Washer, Fiber (For 1W23415FA70) -----	6
A2	9960-248-1	Door Assy., Loading - Wh. -----	1
A2	9960-248-2	Door Assy., Loading - Avoc. -----	1
A2	9960-248-3	Door Assy., Loading - H.G. -----	1
*	9452-254-1	Plate, Strike -----	1
A3	9965-022-3	Handle Assy., Loading Door -----	1
*	9244-049-3	Handle, Door -----	1
*	9054-015	Block, Pole -----	2
*	9384-001-2	Magnet -----	2
*	1W62152FE15	Pin, Magnet and Pole Block Ret. -----	1
*	8639-709	Screw, Door Handle Mtg. -----	2
A4	9212-002-2	Glass, Loading Door -----	1
A5	9206-164-2	Gasket, Door Glass -----	1
*	9548-117	Support, Door Glass -----	1
A6	9206-394-1	Gasket, Outer Door -----	1
*	1W32275FA3	Screw, Loading Door Mtg. -----	6
A7	9108-082-13	Door, Upper Service - Wood Grain -----	1
*	8638-211-1	Rivet, Upper Serv. Door Mtg. -----	2
*	1W52337FA1	Washer (For 8638-211-1) -----	2
A8	9412-063-1	Nameplate - Dexter -----	2
*	8640-326-1	Nut, Upper and Lower Serv. Door -----	1
A9	8650-006-1	Lock, Upper & Lower Serv. Door -----	1
*	6292-006-1	Key (For 8650-006-1) -----	1
A10	8502-011-1	Decal, Push to Start -----	1
A11	9539-452-1	Switch, Push to Start -----	1
A12	9055-045-1	Bezel, Coin Meter -----	1
A13	9578-059-3	Trim, Upper Service Door -----	1
*	9548-243-1	Support, Upper Service Door -----	1
A14	9960-243-7	Door Assy., Lower Service - Wh. -----	1
A14	9960-243-8	Door Assy., Lower Service - Avoc. -----	1

CABINET GROUP (Continued)

Key	Part Number	Description	Model DN3 Series
A14	9960-243-9	Door Assy., Lower Service - H.G. -----	1
*	9108-078-1	Door, Lower Service - Wh. -----	1
*	9108-078-2	Door, Lower Service - Avoc. -----	1
*	9108-078-3	Door, Lower Service - H.G. -----	1
A15	9578-059-2	Trim, Lower Service Door -----	1
*	9985-148-1	Bracket Assy., Lower Service Door -----	1
A16	9578-068-1	Trim, Kick Plate -----	1
*	9083-106-1	Clip, Kick Plate Mtg. -----	3
*	8639-424	Screw, Kick Plate and Brkt. Mtg. -----	3
*	8640-300-8	Nut, Kick Plate and Brkt. Mtg. -----	3
A17	8544-005	Leg, Leveling -----	4

* NOT ILLUSTRATED

**MISCELLANEOUS CABINET PARTS
(Not Illustrated)**

9074-236-1	Cover, Cabinet Top -----	1
9208-039-1	Guard, Drive -----	1
9454-595-2	Panel, Drive Guard - L.H. -----	1
9454-596-2	Panel, Drive Guard - R.H. -----	1
9550-141-1	Shield, Motor -----	1
1W31252FA2	Screw, (For 9074-236-1) -----	8
1W62985FA1	Screw, (For 9208-039-1; 9454-595-2; 9454-596-2; and 9550-141-1) -----	21

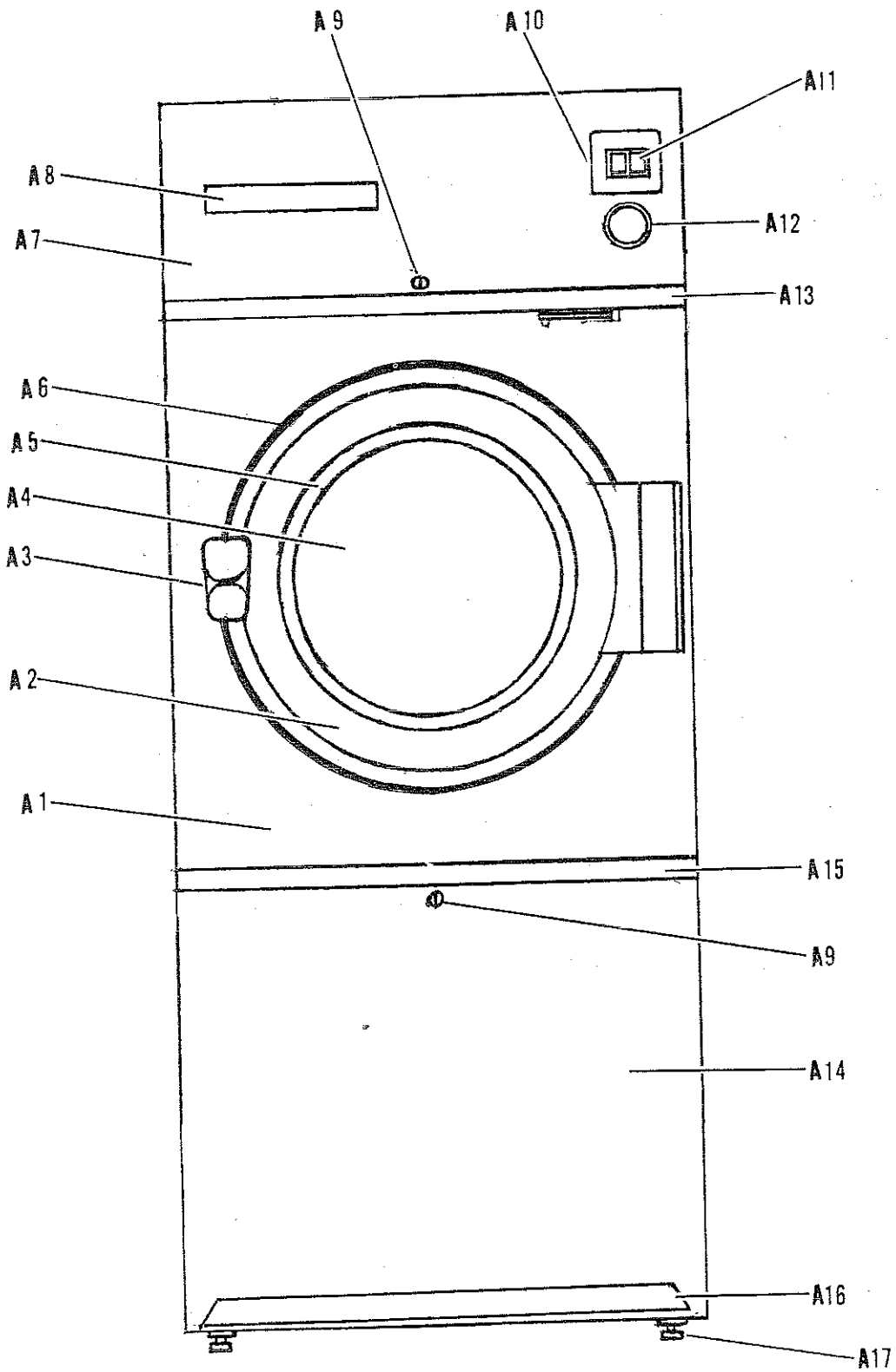


Fig. 5-1. Cabinet Group

COIN METER & TIMER GROUP (Fig. 5-2)

Key	Part Number	Description	Model DN3 Series
B1	9944-038-11	Meter Assy., Coin - 7½ Min. Cam (10¢ Models Only) -----	1
B1	9944-038-6	Meter Assy., Coin - 10 Min. Cam (25¢ Models Only) -----	1
B1	9944-041-3	Meter Assy., Coin - 7½ Min Cam (Dual Meter Models) -----	1
B1	9944-038-7	Meter Assy., Coin - 220V - 50Cy. - 5 Pence (10 Min. Cam) -----	1
B1	9944-038-10	Meter Assy., Coin - 220V - 50Cy. - 10¢ Aust. (10 Min. Cam)	
B2	9376-212-1	Motor, Coin Meter - 115V - 60Cy. - 1 Hr. -----	1
B3	9539-444-2	Switch, Cool Down -----	1
B4	9539-444-1	Switch, Coin Meter Start -----	1
*	9095-032-1	Cam, Timing - (7½ Min.) -----	
*	9095-032-2	Cam, Timing - (10 Min.) -----	
*	9095-032-3	Cam, Timing - (6 2/3 Min.) -----	
*	9095-032-4	Cam, Timing - (6 Min.) -----	
*	9095-032-5	Cam, Timing - (5 Min.) -----	
*	9095-032-6	Cam, Timing - (15 Min.) -----	
B5	9982-271-3	Plate Assy., Meter Mtg. (Dual Coin Meter Models) -----	1
B5	9982-273-2	Plate Assy., Meter Mtg. (All Mod. except Dual Mtr.) -----	1
B6	1W52405FA2	Washer, Meter and Timer Mtg. -----	2
B7	1W19991FA2	Nut, Meter and Timing Mtg. -----	2
B8	9539-452-1	Switch, Push to Start -----	1
B9	9897-022-1	Block, Terminal -----	1
B10	1W23379FA1	Screw, Term. Block Mtg. -----	2
B11	9807-070-2	Box Assy., Coin (Except "H" Models) -----	1
*	8640-359-1	Nut, Coin Box Lock Ret. (Except "H" Models) -----	1
B12	9571-332-1	Timer - 60 Min. ("H" Models Only) -----	1
B12	9571-332-2	Timer - 15 Min. ("H" Models Only) -----	1
B13	9452-505-1	Plate, Timer Mtg. ("H" Models Only) -----	1
B14	9307-163-1	Knob, Timer ("H" Models Only) -----	1
B15	9107-062-2	Dial, Timer (For item B12 Only) -----	1
*	8650-006-2	Lock, Meter Plate (Optional) -----	1
*	6292-006-2	Key (For 8650-006-2) -----	1
*	9039-981-1	Bracket, Meter Mtg. Plate Ret. -----	1
*	1W19828FA1	Screw (For 9039-981-1) -----	3

* NOT ILLUSTRATED

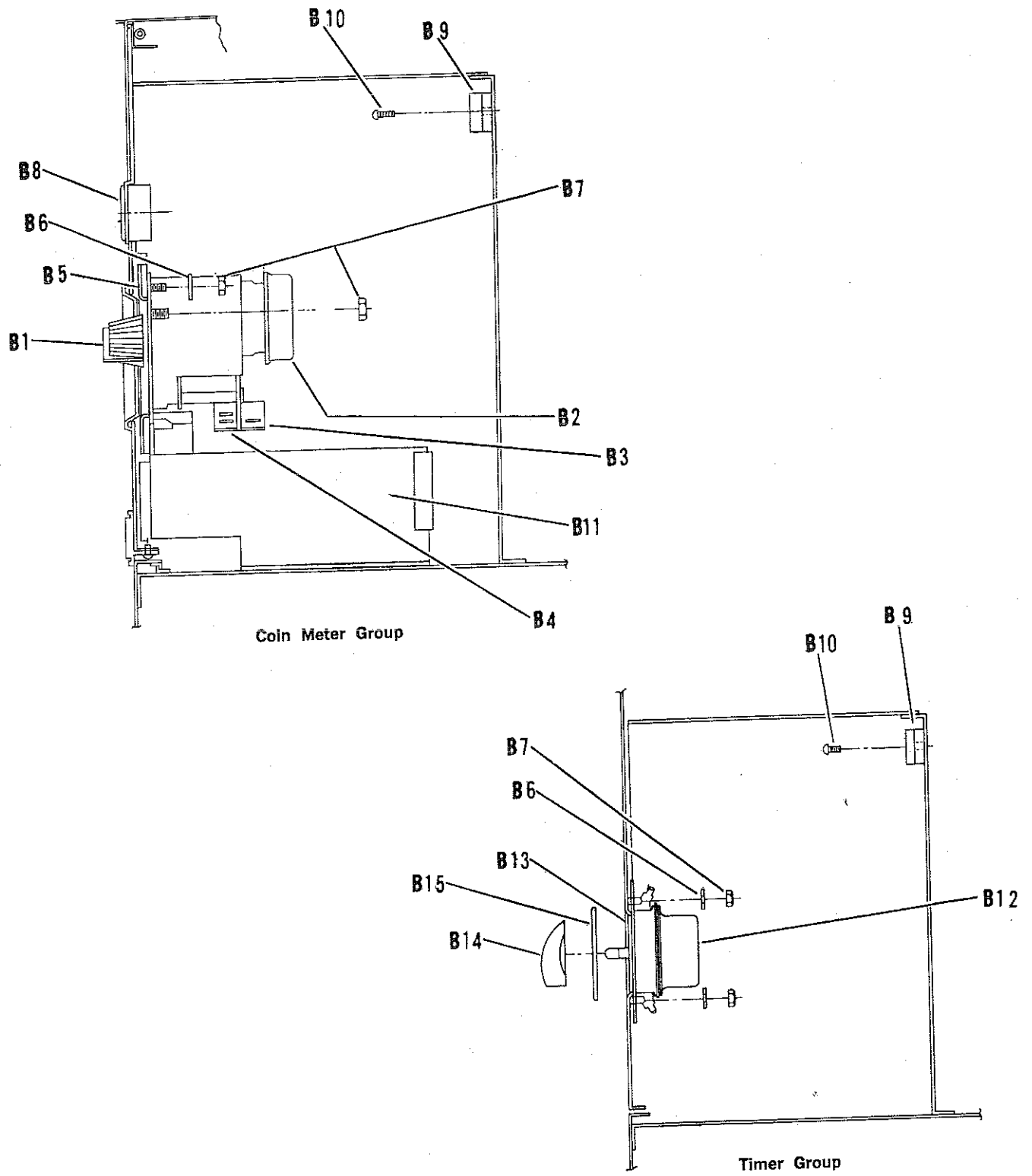


Fig. 5-2. Coin Meter and Timer Group

ELECTRICAL CONTROL GROUP (Fig. 5-3)

Key	Part Number	Description	Model DN3 Series
C1	9376-259-4	Motor - 115V - 60Cy. -----	1
C1	9376-259-5	Motor - 220V - 50/60Cy. (Odd Volt. Models Only) -----	1
C2	9539-432-1	Switch, Damper -----	1
C3	6068-037-6	Conduit, Damper Sw. to Junct. Box -----	1
C4	6068-037-11	Conduit, Motor to Junct. Box -----	1
C5	8658-012	Box, Junction -----	1
*	8643-005	Cover, Junct. Box -----	1
*	1W31252FA2	Screw, Junct. Box Mtg. -----	2
C6	6068-037-10	Conduit, Junct. Box to Contr. Hsg. -----	1
C7	9539-402-1	Switch, Door -----	1
*	1W12771FA3	Screw, Door Sw. Mtg. -----	2
*	1W56951FJ1	Nut, Door Sw. Mtg. (Tandem Speed Nut) -----	1
*	9452-530-1	Plate, Door Switch -----	1
*	1W62985FA1	Screw, Door Sw. Plate Mtg. -----	2
C8	9897-022-1	Block, Terminal -----	1
C9		Coin Meter or Timer (See Fig. 5-2) -----	
C10	9539-452-1	Switch, Push to Start -----	1
C11	6068-037-9	Conduit, Gas Contr. to Contr. Hsg. (Std. Pilot Only) -----	1
C11	6068-037-14	Conduit, Gas Contr. to Contr. Hsg. (Elec. Ign. Only) -----	1
C12		Gas Control Assy. (See Fig. 5-5 and 5-5A) -----	1
C13	9576-196-1	Thermostat, Temp. Contr. -----	1
C14	9576-203-1	Thermostat, Hi-Limit -----	1
C14	9576-203-2	Thermostat, Hi-Limit (Heat Reclaimed Mod. Only) -----	1
C15	6068-037-7	Conduit, Hi-Limit Thermo. to Junct. Box -----	1
*	2114-008	Bushing, Anti-Short (For Conduit) -----	10
*	8653-068-3	Connector, Conduit -----	10
*	8654-061	Clip, Conduit Ret. -----	3
*	1W31252FA2	Screw, Conduit Clip Mtg. -----	3

TEMPERATURE CONTROL THERMOSTAT (Fig. 5-4)

C16	9307-162-1	Knob, Temp. Contr. Lever -----	1
C17	9348-056-3	Lever, Temp. Contr. -----	1
C18	1W13965FA3	Screw, Temp. Contr. Lever Knob Mtg. -----	1
C19	9039-968-1	Bracket, Temp. Contr. Thermo. Mtg. -----	1
C20	1W19828FA2	Screw, Temp. Contr. Thermo. Brkt. Mtg. -----	2
C21	9539-432-1	Switch, Cool Down By-Pass (120V Models Only) -----	1
C22	1W12771FA3	Screw, Cool Down By-Pass Switch Mtg. -----	2
C23	1W56951FJ1	Nut, Cool Down By-Pass Sw. Mtg. -----	1
C24	1W50012FA2	Screw, Temp. Contr. Thermo. Mtg. -----	2
*	9892-012-1	Actuator, Door Switch -----	1
*	8023-139	Clip, Capillary Tube -----	3
*	8003-058-3	Clip, Door Sw. Actuator Mtg. -----	2
*	1W31247FA3	Screw, Door Sw. Actuator Mtg. -----	2
*	9209-037-1	Grommet, Thermo. Capillary Tube -----	4

* NOT ILLUSTRATED

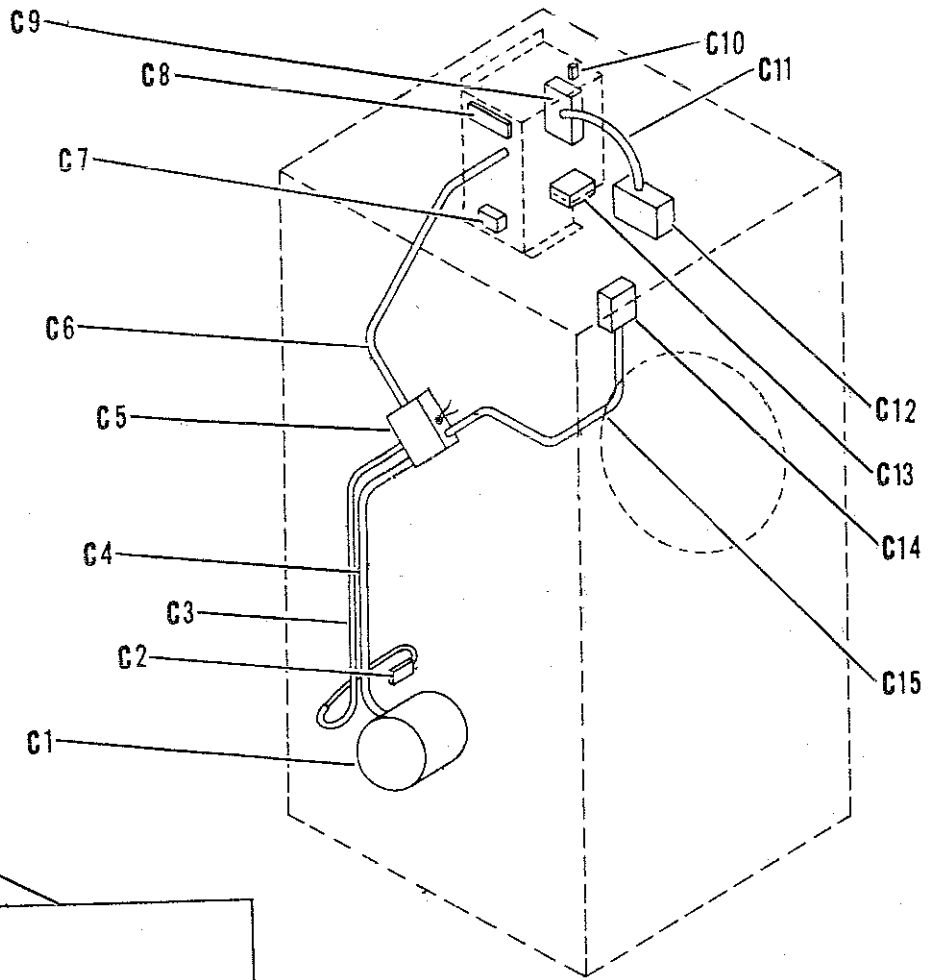


Fig. 5-3. Electrical Components

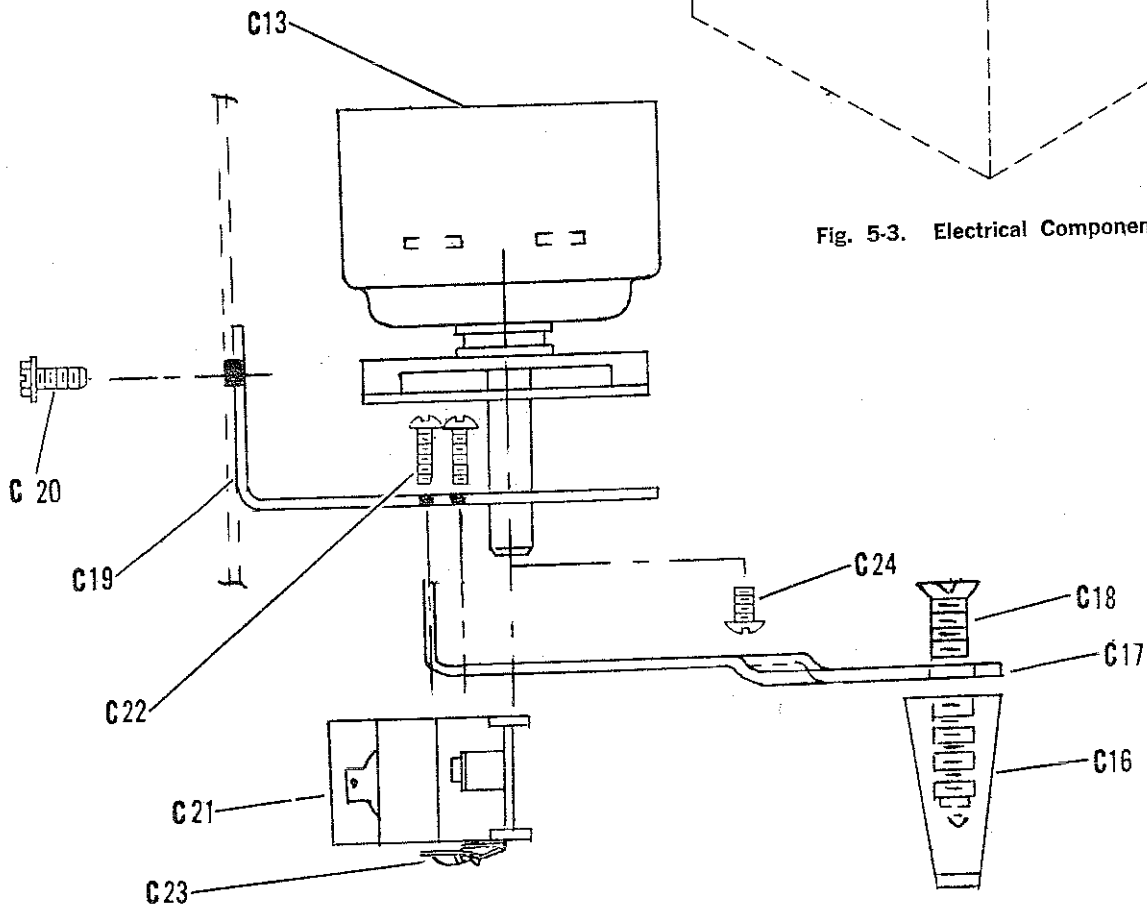


Fig. 5-4. Operating Control Thermostat

BURNER HOUSING & GAS CONTROL GROUP

STANDING PILOT MODELS (Fig. 5-5)

ELECTRONIC IGNITION MODELS (Fig. 5-5A)

Key	Part Number	Description	Model DN3 Series	
			Standing Pilot Fig. 5-5	Elect. Ign. Fig. 5-5A
D1	9048-015-1	Burner, Main -----	2	2
D2	8711-001-1	Transformer - 24V -----		1
D3	1W19196FA3	Screw, Main Burner Ret. -----	2	2
D4	9550-140-2	Shield, Pilot Burner -----	1	1
D5	9048-013-1	Burner, Pilot - Nat. Gas -----	1	
D5	9048-016-1	Burner, Pilot - Nat. Gas -----		1
D6	9501-002-1	Sensor, Flame -----		1
D7	9631-391-1	Lead, Sensor -----		1
D8	9898-006-2	Thermocouple -----	1	
D9	1W11879FA3	Screw, Pilot Burner and Shield Ret. -----	2	2
*	9550-155-1	Shield, Pilot -----	1	
D10	9425-068-2	Orifice, Pilot Burner - Nat. Gas -----	1	1
D10	9425-068-1	Orifice, Pilot Burner - L.P. Gas -----	1	1
D11	9991-042-2	Support Assy., Burner Hsg. - Front -----	1	1
D12	1W19196FA3	Screw, Burner Supp. Mtg. -----	1	1
D13	9381-008-1	Manifold, Main Burner -----	1	
D13	9381-008-3	Manifold, Main Burner -----		1
*	9039-970-1	Bracket, Manifold Ret. -----	1	1
*	1W19828FA2	Screw, Manifold Ret. Brkt. Mtg. -----	1	1
D14	9425-065-1	Orifice, Main Burner - Nat. Gas-90,000 B.T.U. -----	2	2
D14	9425-065-2	Orifice, Main Burner - But. Gas-90,000 B.T.U. -----	2	2
D14	9425-065-3	Orifice, Main Burner - L.P. Gas-90,000 B.T.U. -----	2	2
D14	9425-065-4	Orifice, Main Burner - Nat. Gas-110,000 B.T.U. -----	2	2
D14	9425-065-6	Orifice, Main Burner - L.P. Gas-110,000 B.T.U. -----	2	2
D14	9425-065-7	Orifice, Main Burner - But. Gas-110,000 B.T.U. -----	2	2
D15	9857-109-1	Gas Control Assy. - 115V - 60Cy. - Nat. Gas -----	1	
D15	9857-109-2	Gas Control Assy. - 220V - 50Cy. - Nat. Gas -----	1	
D16	9998-033-1	Magnetic Operator - 115V - 60Cy. -----	1	
D16	9998-003-2	Magnetic Operator - 220V - 50Cy. -----	1	
D17	9998-034-1	Power Unit -----	1	
D15	9857-113-1	Gas Control Assy. - 24V - 60Cy. - Nat. Gas -----		1
D16	9857-114-1	Control Assy. -----		1
D17	9998-036-2	Pilot Operator -----		1
D18	9998-036-1	Main Operator -----		1
D19	9039-915-1	Bracket, Manifold Mtg. -----	1	1
D20	1W62985FA1	Screw, Manifold Brkt. Mtg. -----	2	2
D21	9574-226-1	Tube, Pilot Gas -----	1	
D21	9574-233-1	Tube, Pilot Gas -----		1
D22	9183-028-1	Filter, Pilot -----		1
D23	9379-164-1	Valve, Gas Shut-Off -----	1	1
*	9458-020-1	Pipe, Gas Inlet -----	1	1
D24	9074-234-1	Cover, Hi-Limit Thermo. -----	1	1
D25	1W31252FA2	Screw, Hi-Limit Thermo. Cover Mtg. -----	1	1
D26	9576-203-1	Thermostat, Hi-Limit -----	1	1
D26	9576-203-2	Thermostat, Hi-Limit (Heat Reclaimer Mod. Only) -----		1
D27	9538-142-1	Spacer, Hi-Limit Thermo. -----	2	2
D28	1W31247FA2	Screw, Hi-Limit Thermo. Mtg. -----	2	2
D29	9803-163-2	Housing Assy., Burner -----	1	1
*	9732-023-1	L.P. Gas Conversion Kit-90,000 B.T.U. -----		1
*	9732-010-1	L.P. Gas Conversion Kit-90,000 B.T.U. -----	1	
*	9732-010-2	L.P. Gas Conversion Kit-110,000 B.T.U. -----	1	
*	8640-397-1	Nut, Transformer Mtg. -----		1

* NOT ILLUSTRATED

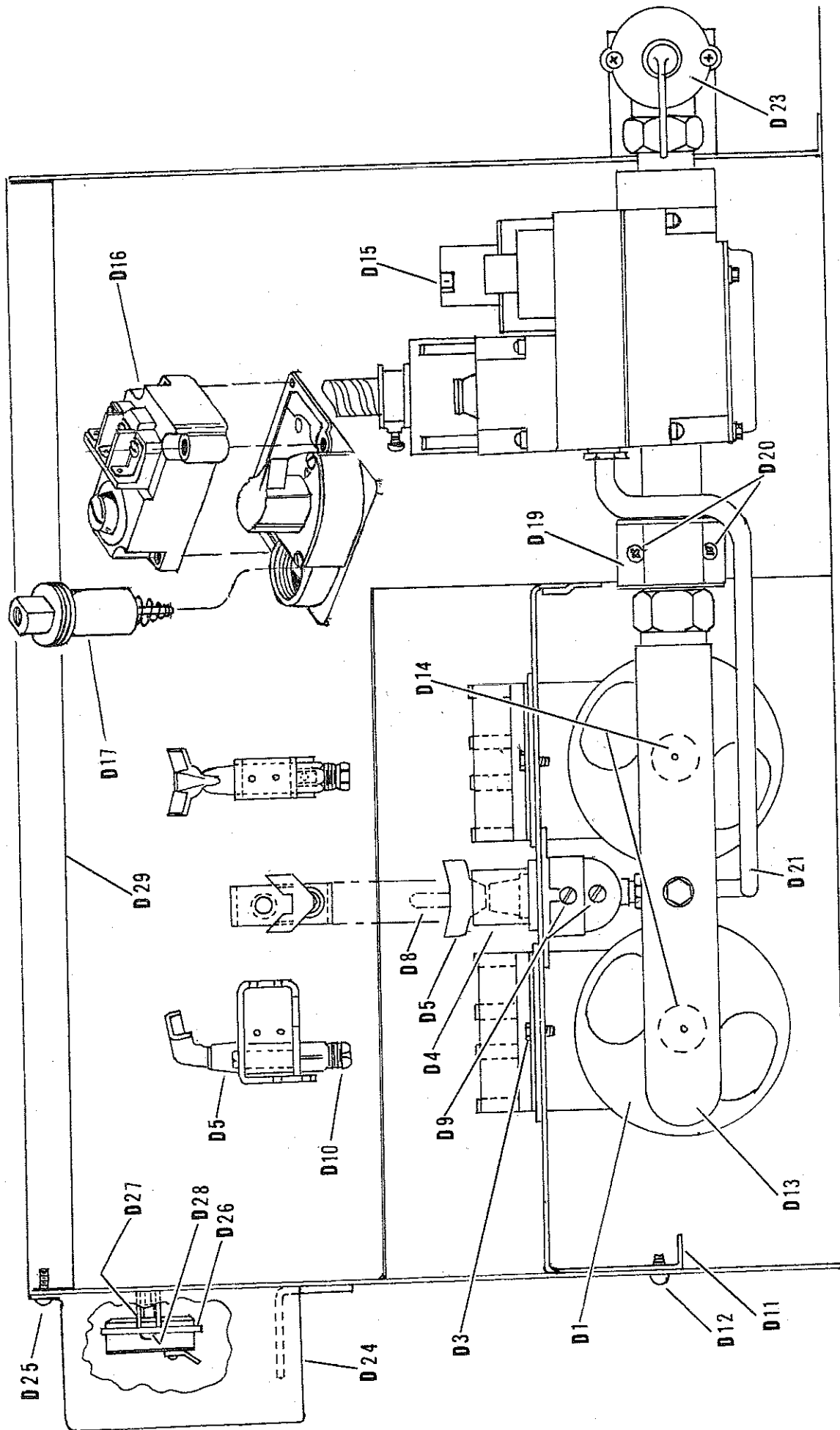


Fig. 5-5. Burner Housing Assembly and Gas Control Group
Standing Pilot Models

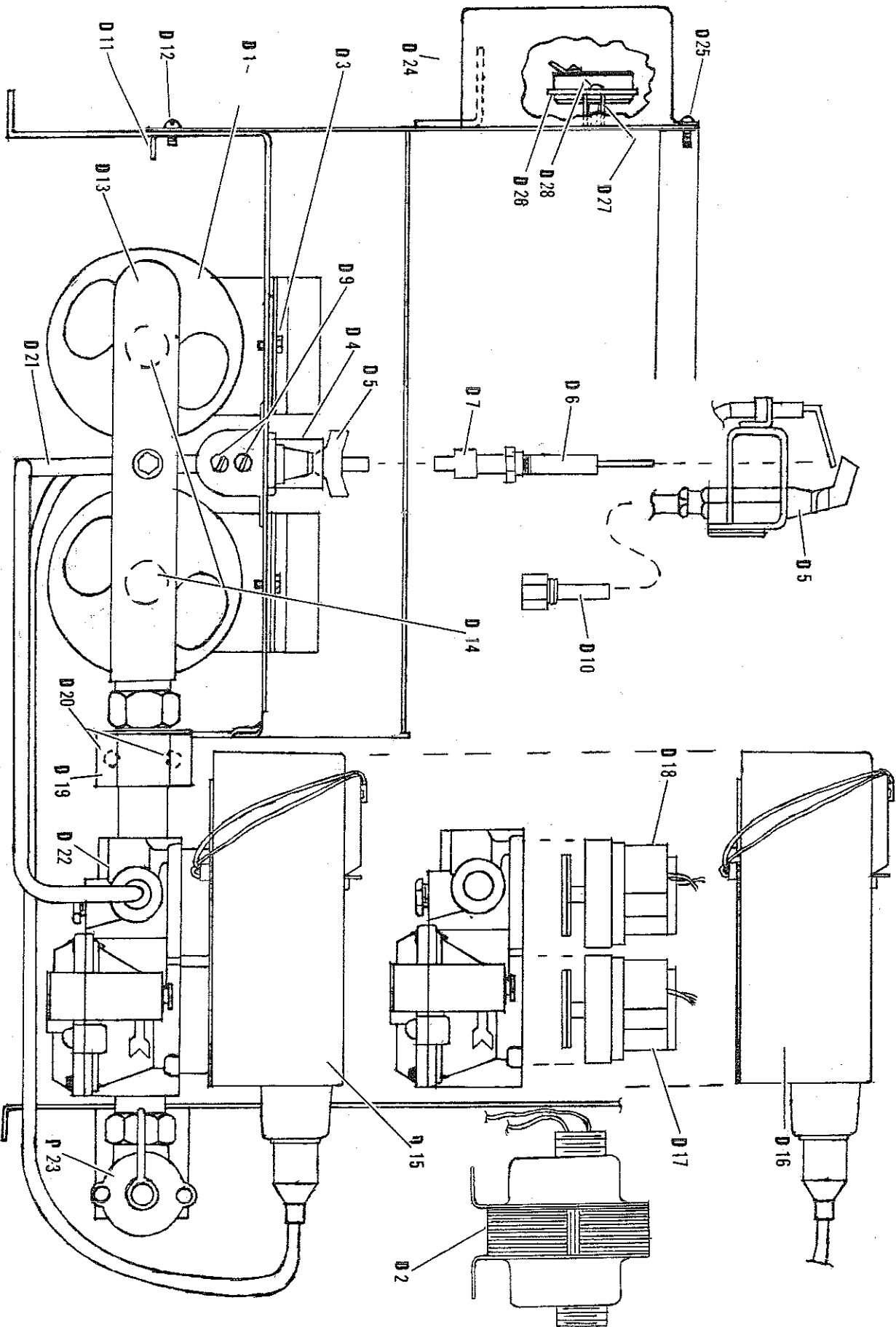


Fig. 5-5A Burner Housing Assembly and Gas Control Group
ELECTRONIC IGNITION MODELS

DAMPER & DAMPER SWITCH ASSEMBLY

(Figure 5-6)

Key	Part Number	Description	Model DN3 Series
E1	9539-432-1	Switch, Damper -----	1
E2	1W12771FA3	Screw, Damper Sw. Mtg. and Adj. -----	3
E3	1W20517FA2	Nut, Damper Sw. Locking -----	2
E4	1W56951FJ1	Nut, Damper Sw. Mtg. (Tandem Speed Nut) -----	1
E5	9125-001-1	Damper -----	1
E6	9451-146-1	Pin, Damper Hinge -----	1
*	9074-242-1	Cover, Damper Sw. -----	1

LINT HOOD & SCREEN ASSEMBLY

(Figure 5-7)

F1	9822-027-2	Hood Assy., Lint -----	1
*	9822-026-1	Screen Assy., Lint -----	1
F2	8640-300-11	Nut, Lint Hood Mtg. -----	6

TUMBLER ASSEMBLY GROUP

(Figure 5-8)

G1	9848-101-1	Tumbler Assy. -----	1
G2	9568-009-2	Spider and Shaft Assy. -----	1
G3	9497-019-1	Rod, Tumbler -----	3
G4	1W20759FA1	Nut, Tumbler Rod -----	3
G5	9552-013	Shim, Tumbler ----- (As Required)	3
G6	1W35078FA2	Lockwasher -----	3
G7	8641-554-1	Washer, Flat -----	3

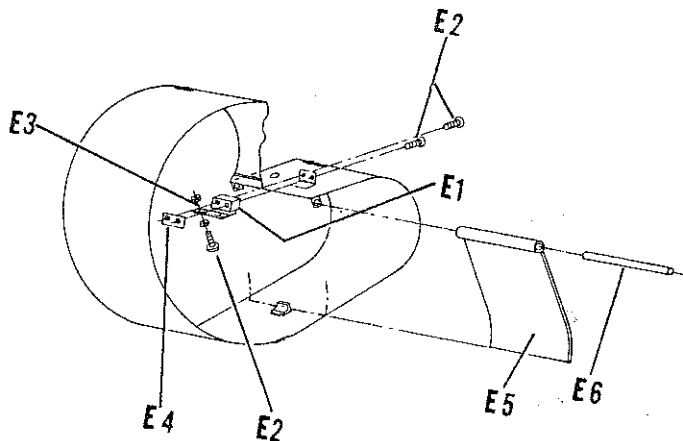


Fig. 5-6. Damper and
Damper Switch Group

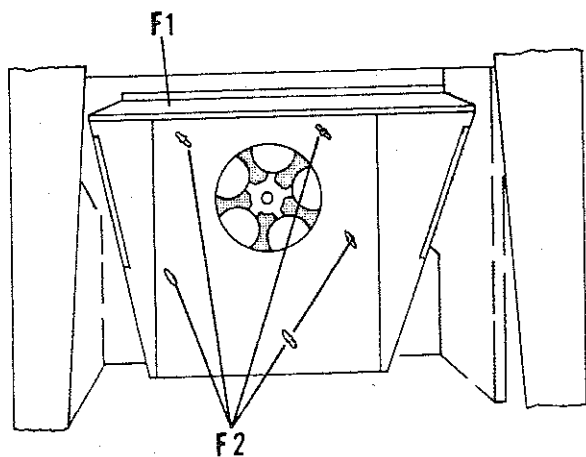


Fig. 5-7. Lint Hood and Screen Group

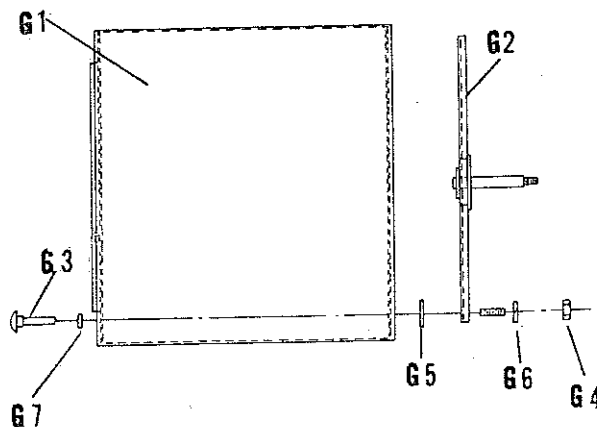


Fig. 5-8. Tumbler Assembly Group

PULLEY, BELT, & MOTOR GROUP
(Figure 5-9)

Key	Part Number	Description	Model DN3 Series
H1	9278-034-1	Impeller, Blower -----	1
H2	8639-963-1	Screw, Impeller Set -----	2
H3	9376-259-4	Motor - 115V - 60Cy. -----	1
H3	9376-259-5	Motor - 220V - 50/60Cy. -----	1
H4	1W59482FA1	Bolt, Motor Mtg. -----	4
H4	1W35050FA1	Lockwasher -----	4
H4	1W52695FA2	Washer -----	4
H4	1W21017FA2	Nut, Hex -----	4
H5	9453-157-1	Pulley, Motor - 60Cy. -----	1
H5	9453-033	Pulley, Motor - 50Cy. -----	1
H5	1W41814FA3	Screw, Motor Pulley Set -----	2
H6	9040-073-4	Belt, Intermed. Pulley -----	1
H7	9040-073-3	Belt, Tumbler Drive -----	1
*	9534-319-2	Spring, Belt Tension -----	1
H8	9861-015-1	Arm Assy., Tension - Short -----	1
H9	9182-015-1	Fitting, Grease -----	1
H10	9001-049-1	Arm, Tension -----	1
H11	9908-038-1	Pulley Assy., Intermed. -----	1
*	9036-145-2	Bearing -----	2
*	9487-200-3	Ring, Retaining -----	4
H12	9453-159-1	Pulley, Tumbler -----	1
H13	9985-151-1	Bracket Assy., Pivot -----	1
H14	1W59482FA3	Bolt, Pivot Brkt. Assy., Mtg. -----	3
H14	1W21017FA2	Nut, Pivot Brkt. Assy. Mtg. -----	3
*	9074-180-1	Cover, Impeller -----	1
*	1W31252FA2	Screw, Impeller Cover Mtg. -----	4
*	9452-253	Plate, Inspection -----	1
*	8639-993-1	Screw, Inspection Plate Mtg. -----	2
*	9451-141-1	Pin, Pivot -----	1

BEARING HOUSING ASSEMBLY GROUP
(Figure 5-10)

J1	9803-160-1	Housing Assy., Bearing-Compl. -----	1
*	9036-130-1	Bearing, Ball -----	2
*	9538-139-1	Spacer, Bearing -----	1
J2	1W52792FA2	Washer -----	4
J3	1W35078FA2	Lockwasher -----	4
J4	1W16221FA3	Bolt - $\frac{3}{8}$ -24x1 -----	6
J5	1W21020FA2	Nut, Hex - $\frac{3}{8}$ -24 -----	2
J6	1W21017FA2	Nut, Hex - $\frac{1}{4}$ -18 -----	4
J7	9307-006	Key, Tumbler Shaft -----	1
J8	8640-222	Nut, Tumbler Pulley Ret. -----	1

* NOT ILLUSTRATED

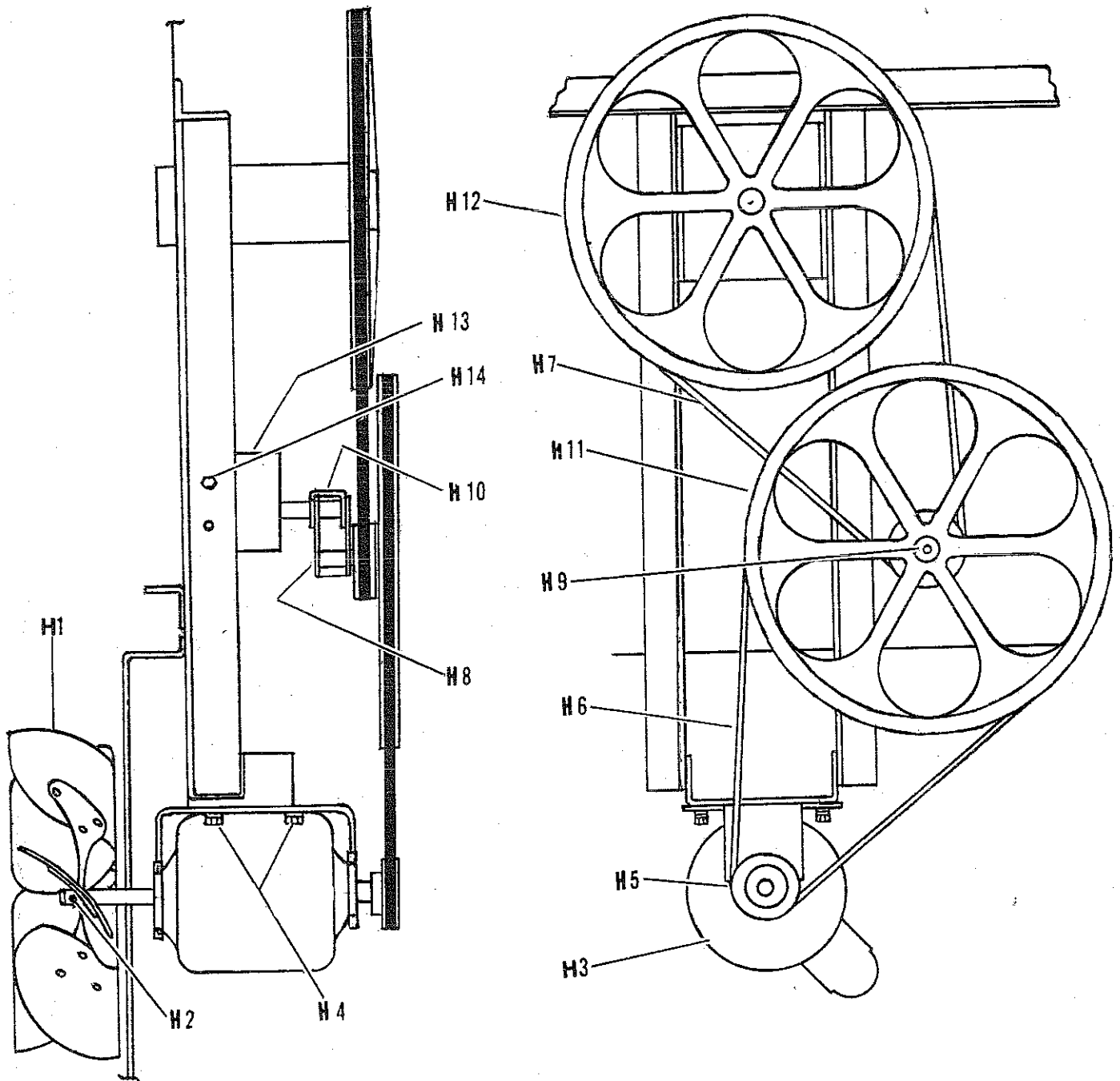


Fig. 5-9. Pulley, Belt and Motor Group

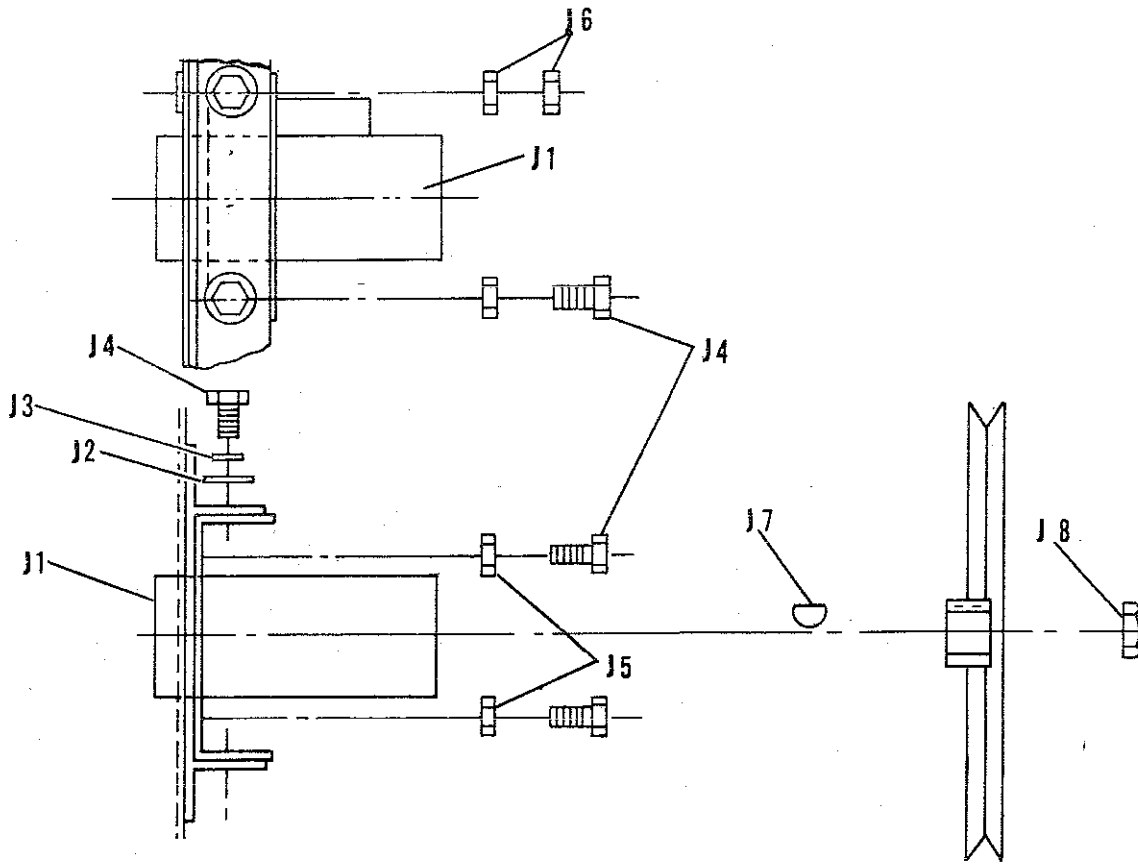


Fig. 5-10. Bearing Housing Assembly Group

WIRING GROUP
(Not Illustrated)

Key	Part Number	Description	Model DN3 Series
	22W62607	Clamp, Nylon Wire Ret. -----	1
	8640-243	Nut, Wire -----	2
	8640-276	Nut, Wire -----	3
	1W62985FA1	Screw, Ret. (For 22W62607) -----	1
	8220-001-198	Wire, Term. Blk. To Junct. Box - Wh. -----	1
	8220-001-199	Wire, Motor To Junct. Box - Wh. -----	1
	8220-001-200	Wire, Motor To Junct. Box - Red -----	1
	8220-001-201	Wire, Term. Blk. To Junct. Box - Bl. -----	1
	8220-001-202	Wire, Term. Blk. To Junct. Box - Red and Hi-Limit to Junct. Box -----	2
	8220-001-205	Wire, Junct. Box To Cust. Conn. - Wh. (110V Only) -----	1
	8220-001-206	Wire, Hi-Limit Stat To Junct. Box - Br. -----	1
	8220-001-208	Wire, Damper Sw. To Junct. Box - Gy. -----	1
	8220-034-1	Wire, Damper Sw. To Junct. Box - Br. -----	1
	8220-034-2	Wire, Term. Blk. To Junct. Box - Bu. -----	1
	9631-381-11	Wire, Meter To Term. Blk-Bl. -----	1
	9631-381-1	Wire, St. Switch To Term. Blk-Red -----	1
	9631-381-2	Wire, St. Switch To Door Sw. - Bu. -----	1
	9631-381-3	Wire, Contr. Thermo. To Meter - Red -----	1
	9631-381-4	Wire, Term. Blk To Meter Gray -----	1
	9631-381-5	Wire, Term. Blk. To Door Sw. - Bu. -----	1
	9631-381-11	Wire, Term. Blk. To On Light - Bl. and Door Sw. To On Light -----	1
	9631-381-13	Wire, Cool Down Sw. To By-Pas Sw. - Or. (110V Only) -----	2
	9631-382-1	Wire, Motor To Junct. Box - Bu. -----	1
	9631-383-3	Wire, Term. Blk. To Junct. Box - Gy. -----	1
	9631-383-1	Wire, Meter Motor To Meter Sw. - Bl. -----	1

