

Coolant Heater

## **DBW 2020 for MCI**

Spare Parts Listing

Covering the DBW 2020 Coolant Heater  
Installed in MCI Model D Motorcoaches  
Built Prior to November 1999.

## **1. Introduction**

### **1.1 Scope and Purpose**

This Service Part Listing is intended to support authorized Webasto trained distributors, dealers and personnel in the servicing of the model DBW 2020 coolant heater

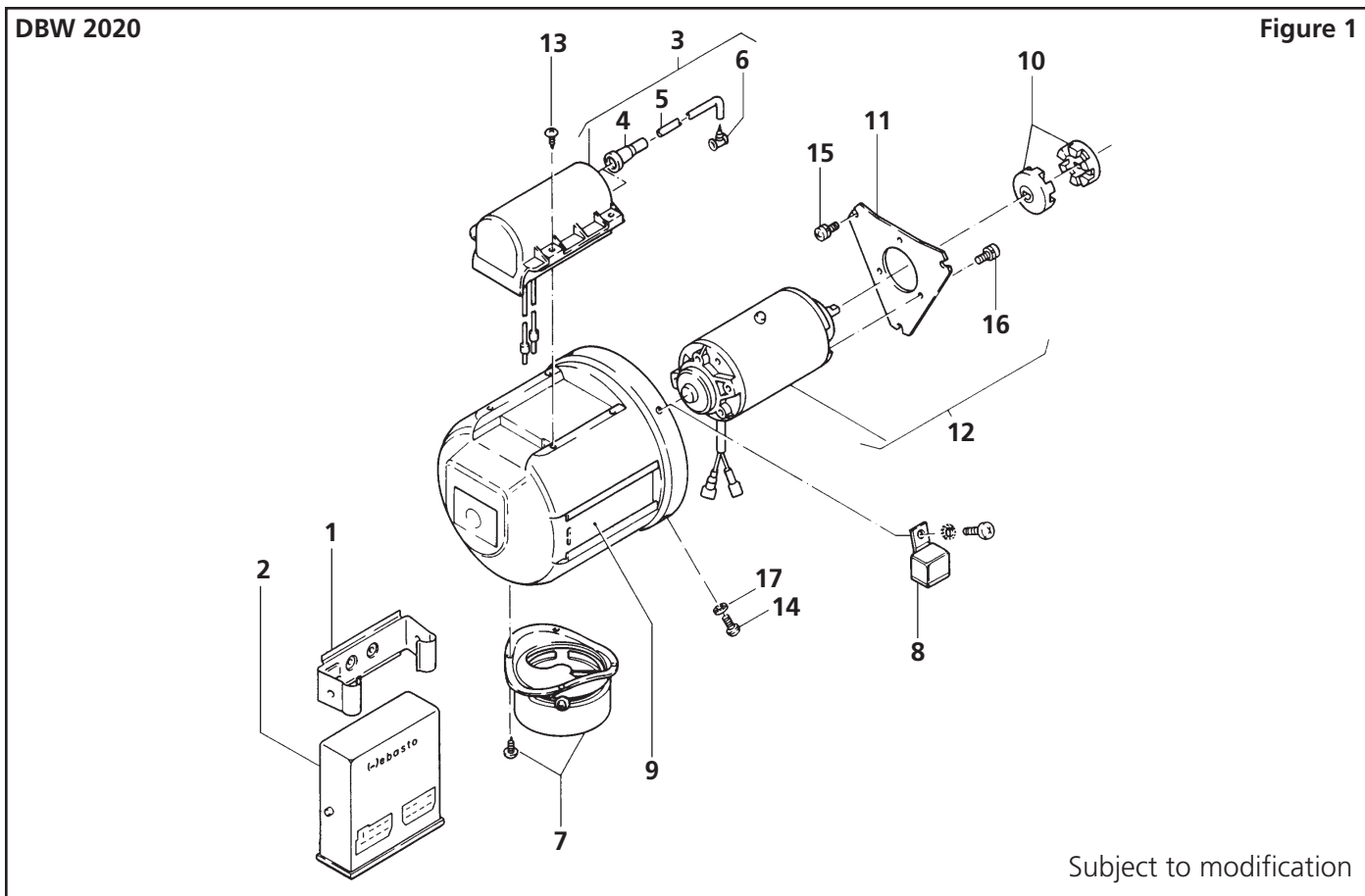
This parts listing is limited to heaters installed on MCI D-Model coaches built prior to November 1999 with Vehicle Identification Numbers before 52644.

Webasto Thermosystems does not recommend the installation and servicing of Webasto products by untrained, unauthorized personnel or end-users.

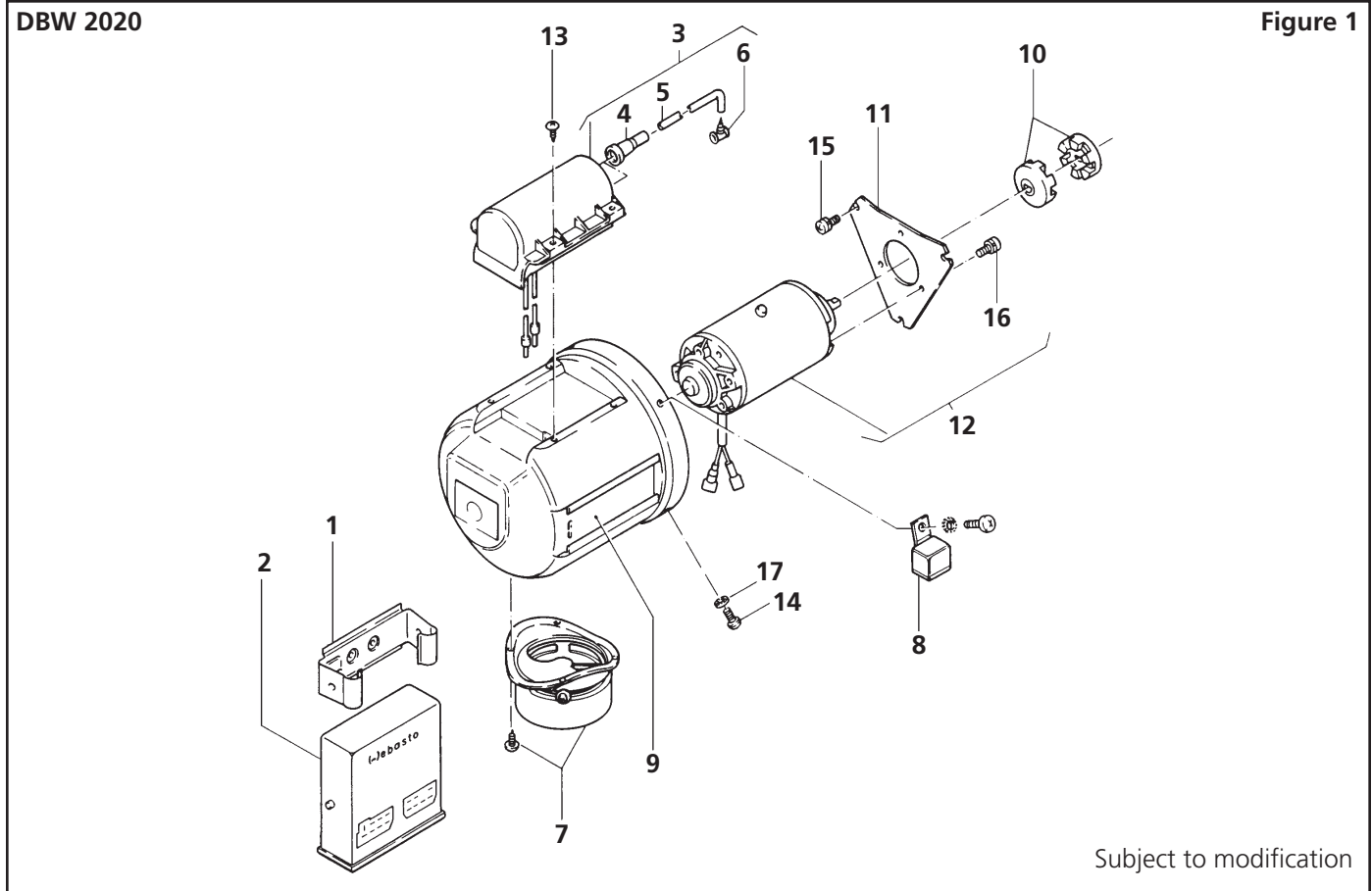
Servicing of Webasto products by untrained, unauthorized personnel and end-users will release Webasto Thermosystems, Inc. and Webasto authorized distributors, dealers and personnel from responsibility for damage to Webasto product or collateral property and personal injury.

Any use, operation, installation, modification or application of the product not described in Webasto manuals, or subjecting the product to extreme or unusual conditions beyond the limits of specified performance characteristics is misuse of the product.

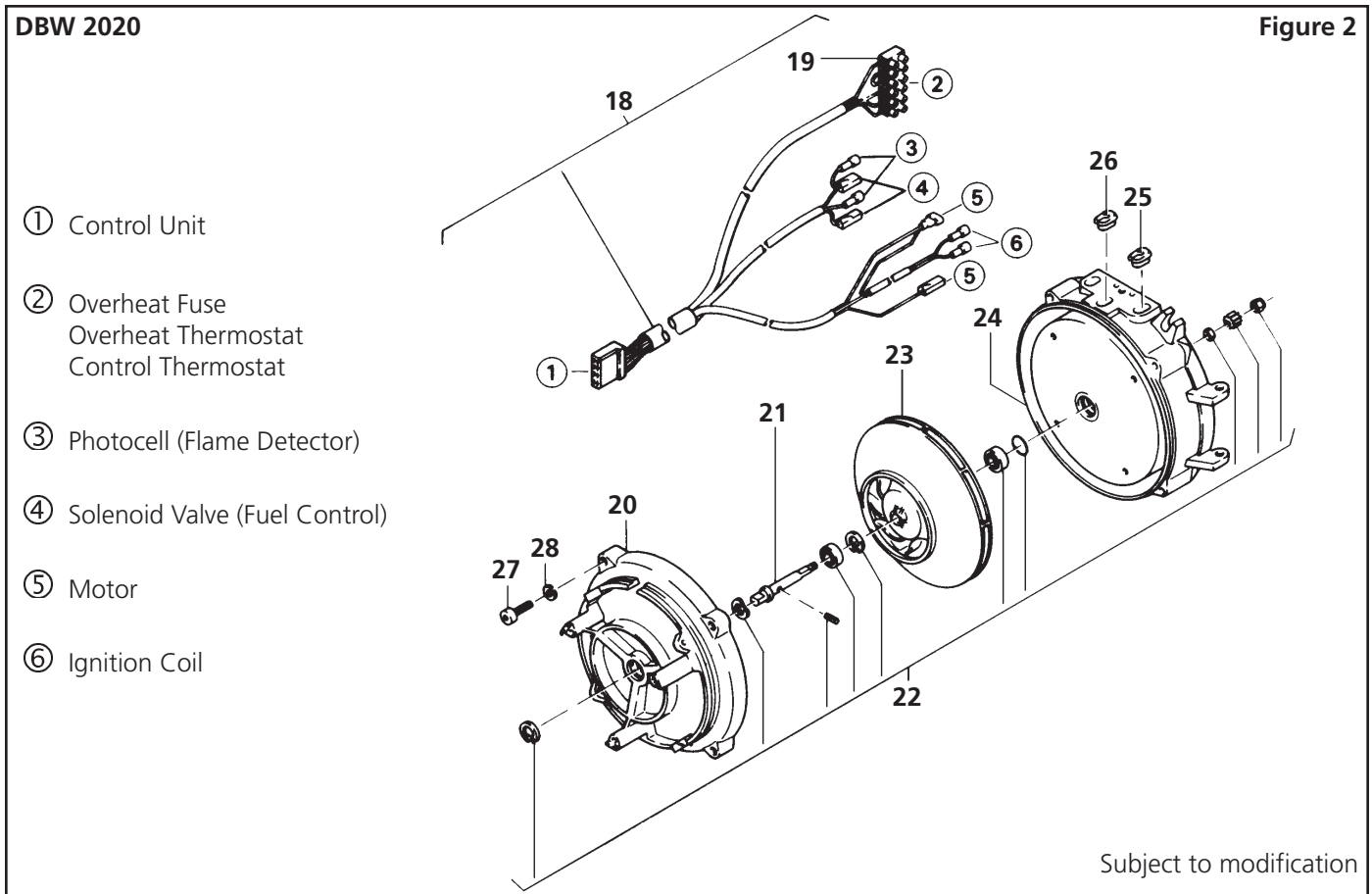
Failure to comply with all installation instructions is a misuse of Webasto product. This applies for repairs without using genuine Webasto service parts. This will void the coolant heaters "Official Marks of Conformity."



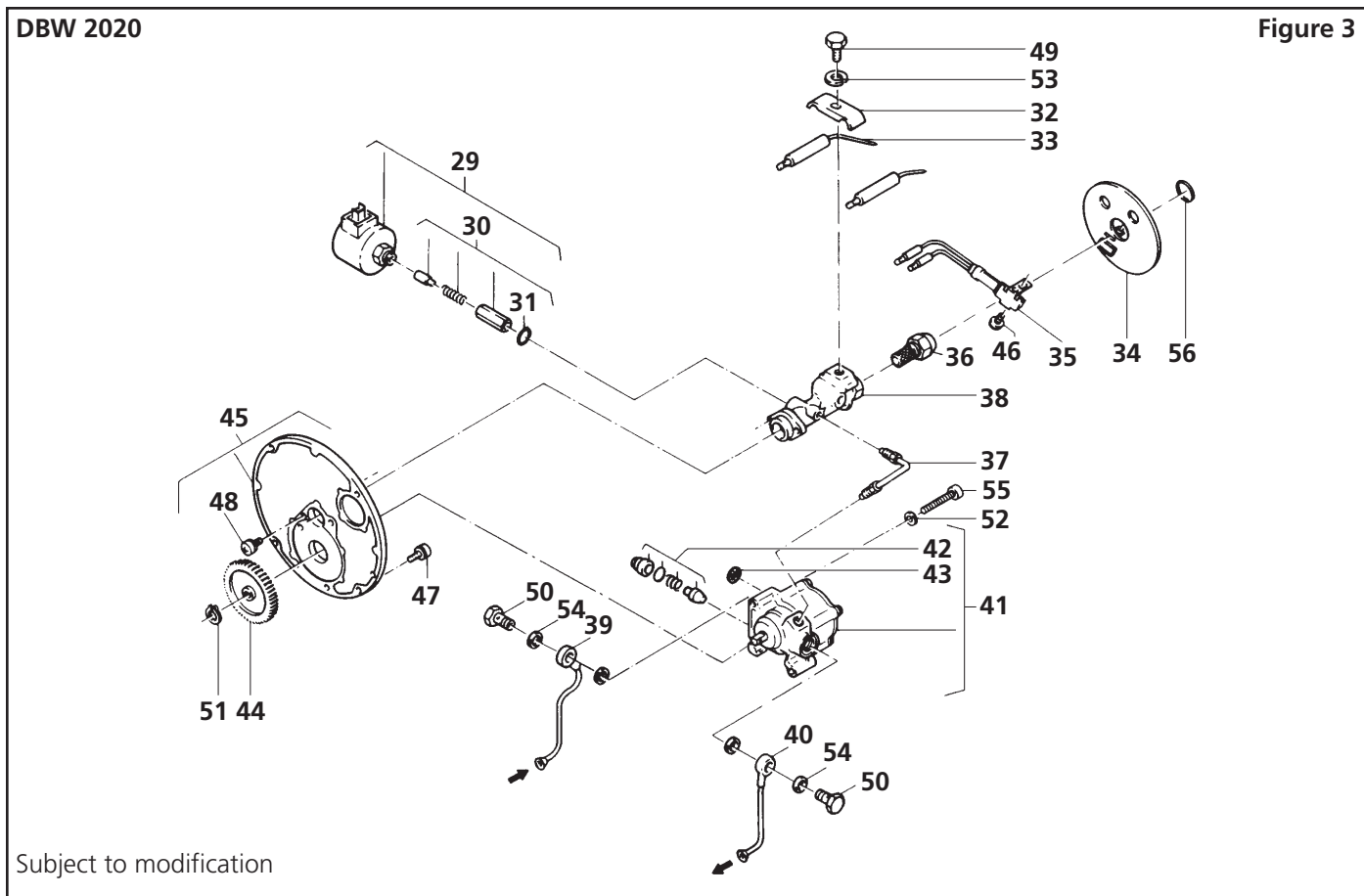
ITEM	QUANTITY	PART NO.	DESCRIPTION	REMARKS
No Fig.	1	920696	DBW 2020 Kit MCI	Replacement heater kit for MCI D-model coaches. Includes water pump.
No Fig.	1	920684	DBW 2020 Heater	Replacement heater for MCI D-model coaches.
No Fig.	1	5000173A	Burner Head - DBW 2020	Complete burner head for MCI D-model coaches equipped with model DBW 2020 heater.
No Fig.	1	905675	Harness	Heater to junction box.
1	1	362107	Clip for Control Unit	
2	1	30607B	Control Unit - 24 Volt	
3	1	388815	Ignition Coil - 24 Volt	
4	2	404918	Rubber Boot	
5	1	178624	Ignition Wire	Sold per meter.
6	2	326666	Electrode Plug	
7	1	350427	Combustion Air Intake Shutter	
8	1	248401	Relay - 24 Volt	
9	1	436410	Protection Cap	
10	2	397563	Coupling	Replace in pairs.
11	1	35068A	Motor Flange	
12	1	106082	Motor - 24 Volt	



ITEM	QUANTITY	PART NO.	DESCRIPTION	REMARKS
13	4	470562	Self-tapping Screw	
14	4	147729	Screw M4x12	
15	7	22428A	Screw M5x16	
16	5	488631	Screw M5x12	
17	5	152269	Lockwasher	

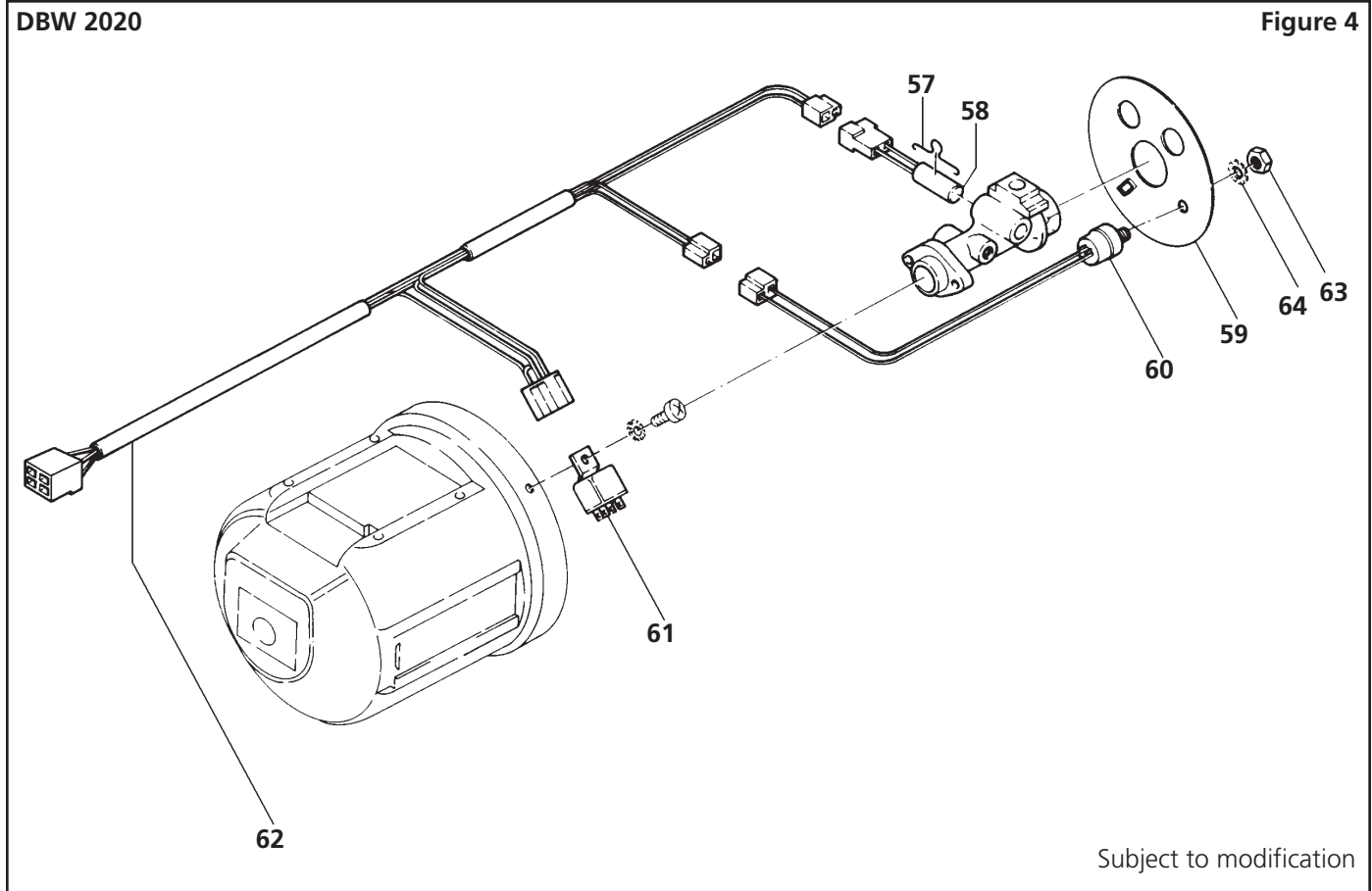


ITEM	QUANTITY	PART NO.	DESCRIPTION	REMARKS
No Fig.	1	901004	Fuse Holder - Inline	For interface with P/N 412147 and vehicle harness.
No Fig.	1	905610	Fuse - 10 Amp	For inline fuse holder P/N 901004.
18	1	412147	Harness	Requires inline fuse holder P/N 901004 and fuse P/N 905610.
19	1	352969	Terminal Block	
20	1	286354	Rear Fan Housing / Motor Support	
21	1	398144	Impeller Shaft	
22	1	378321	Bearing Set	Parts for mounting the fan shaft assembly.
23	1	275611	Fan (Impeller)	
24	1	286303	Front Fan Housing	
25	2	270903	Rubber Grommet	
26	1	288993	Rubber Grommet	For center hole.
27	4	148245	Screw M6x20	
28	5	152560	Lockwasher	



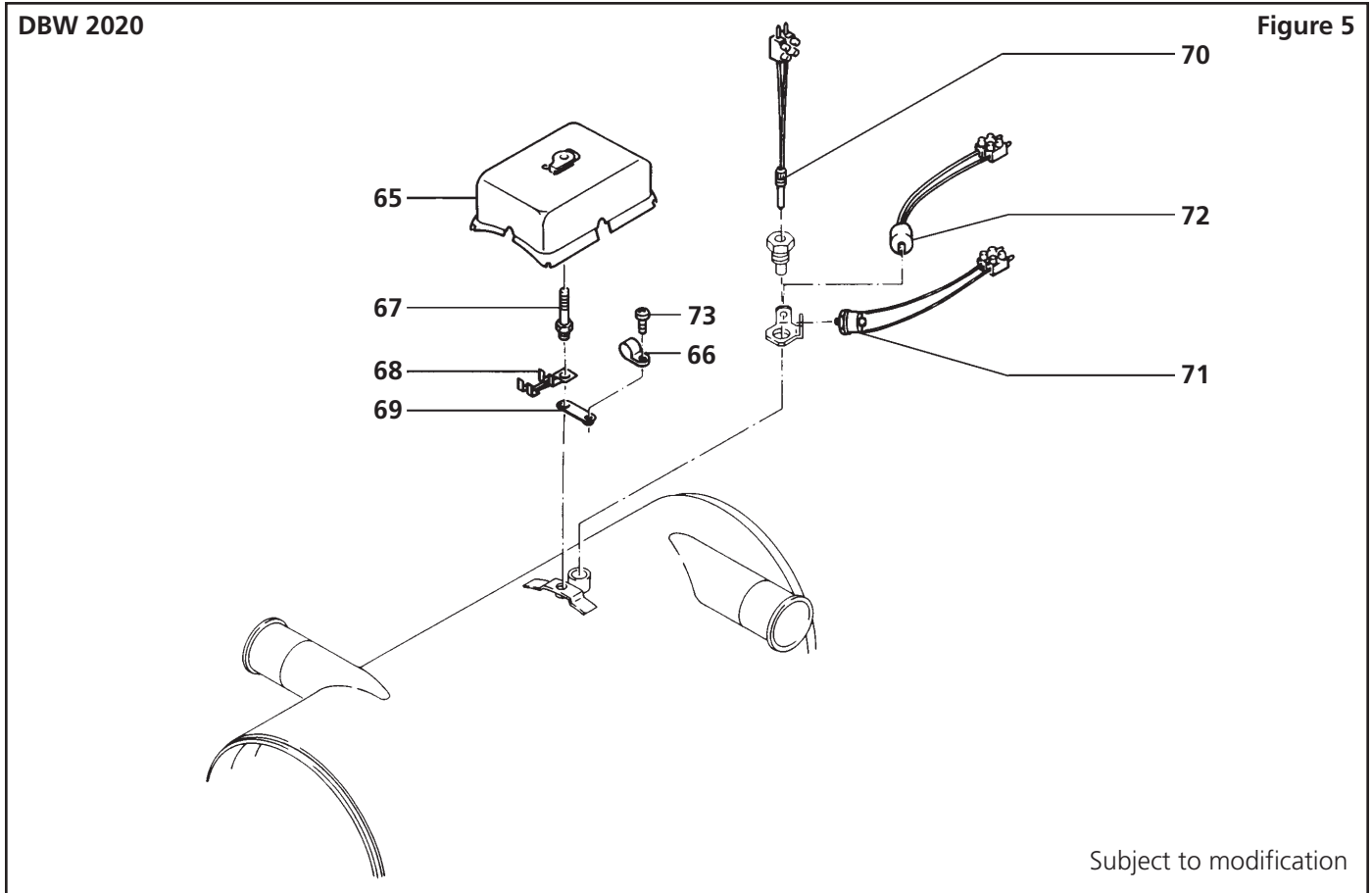
ITEM	QUANTITY	PART NO.	DESCRIPTION	REMARKS
29	1	322091	Solenoid Valve - 24 Volt	
30	1	386650	Solenoid Valve Rebuild Kit	
31	1	260487	O-ring	
32	1	66650A	Electrode Clamp	
33	2	274313	Ignition Electrode	
34	1	109530	Photo Disc	
35	1	215171	Photo Cell (Flame Detector)	
36	1	470716	Fuel Nozzle	
37	1	275476	High-pressure Fuel Pipe	
38	1	412198	Nozzle Holder	
39	1	903018A	Fuel Line - Suction	#5 37° Flare (JIC) threads.
40	1	903019A	Fuel Line - Return	#5 37° Flare (JIC) threads.
41	1	5000117A	Fuel Pump	
42	1	355836	Pressure Control Valve	
43	1	310344	Inlet Screen	
44	1	371289	Gear	
45	1	103512	Nozzle Holder Plate	
46	1	147699	Screw M4x6	
47	7	22428A	Screw M5x16	
48	5	488631	Screw M5x12	

<b>ITEM</b>	<b>QUANTITY</b>	<b>PART NO.</b>	<b>DESCRIPTION</b>	<b>REMARKS</b>
49	1	267279	Hex Head Screw M6x16	
50	2	150754	Banjo Bolt	
51	1	152390	Spring Clip	
52	2	152544	Lockwasher	
53	1	152560	Lockwasher	
54	4	151157	Copper Gasket	
55	2	277282	Hex Head Screw M4x30	
56	1	453048	Spring Clip	
No Fig.	X	143820	ISOFLEX LDS 18	Special Hi-temp Grease In 100g tube. Use on fuel pump drive gears.
No Fig.	X	50000043	Dielectric Grease	For use on electrical connections.

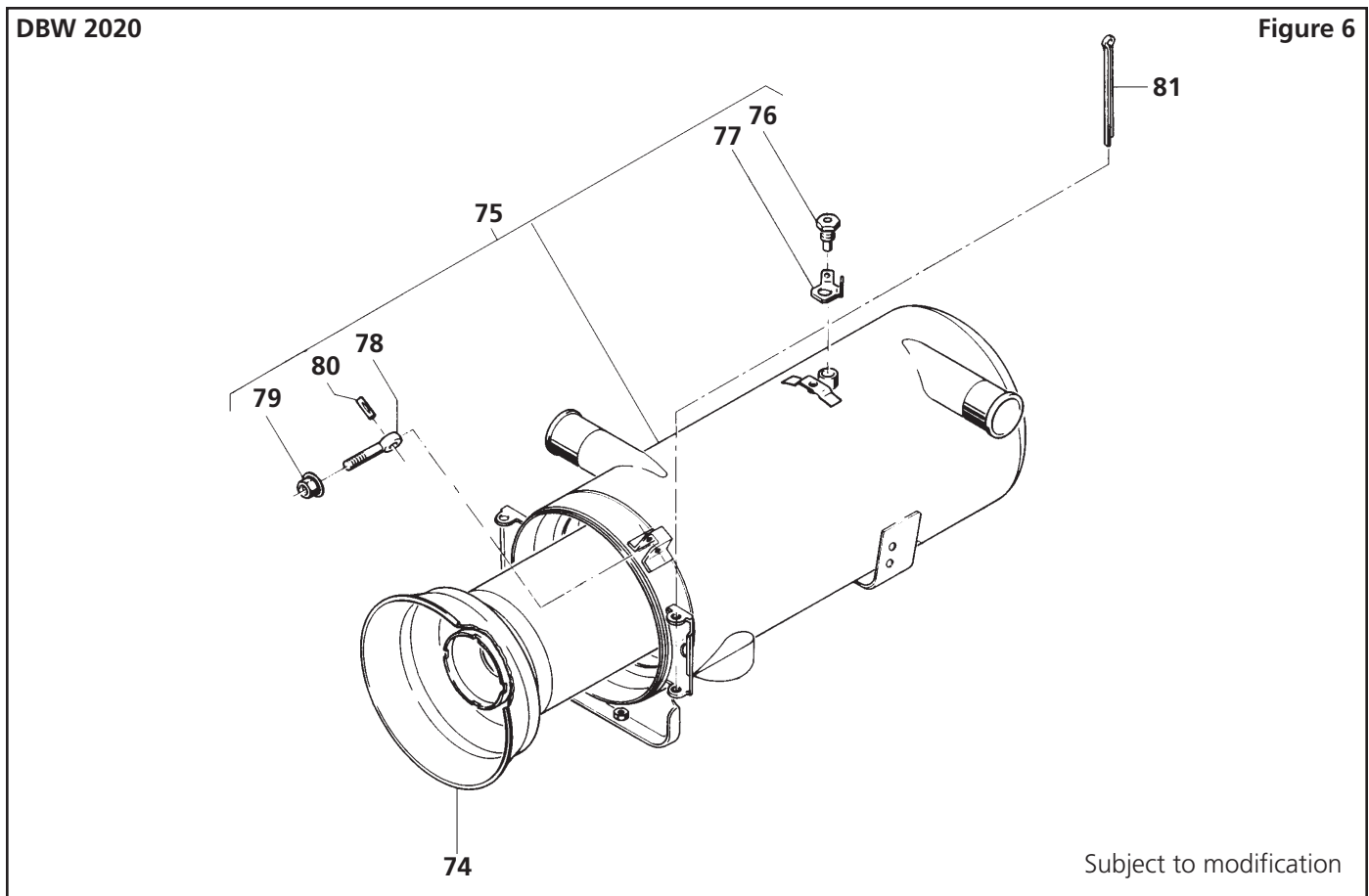


ITEM	QUANTITY	PART NO.	DESCRIPTION	REMARKS
57	1	19723B	Clip	
58	1	420042	Preheat Cartridge - 24 Volt	
59	1	109530	Photo Disc	
60	1	1316682A	Preheat Thermostat	
61	1	248401	Relay - 24 Volt	
62	1	905633	Preheat Harness	
63	1	147044	Nut M4	
64	1	152269	Lockwasher	

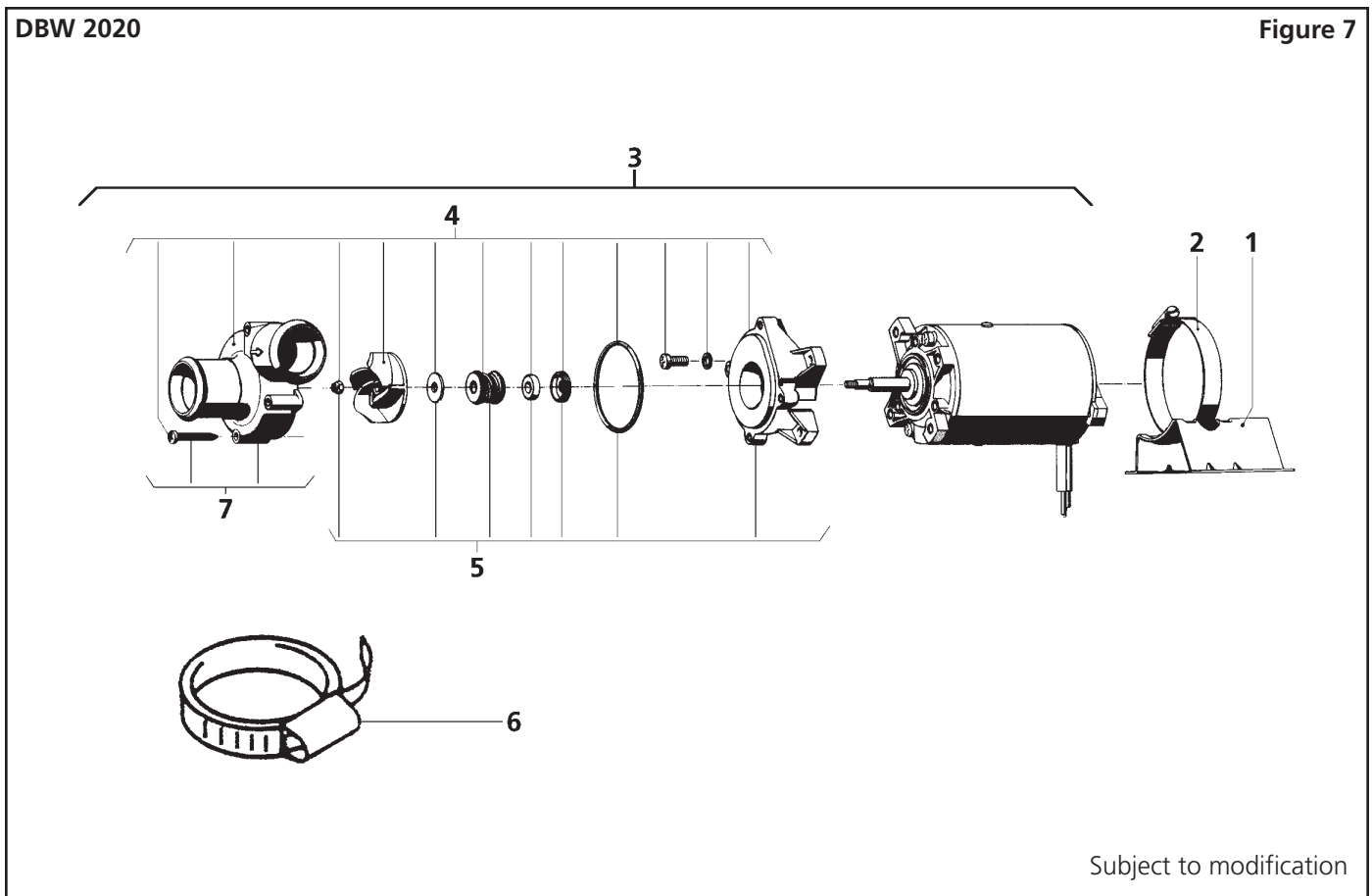




ITEM	QUANTITY	PART NO.	DESCRIPTION	REMARKS
65	1	487627	Protection Cap	
66	1	288640	P-clip	
67	1	273481	Bolt	
68	1	273473	Bracket	
69	1	298816	Bracket	
70	1	406287	Overheat Fuse	White wires.
71	1	608719A	Overheat Thermostat	Green wires.
72	1	354902	Control Thermostat	Red and Green wires.
73	1	147702	Screw M4x8	



ITEM	QUANTITY	PART NO.	DESCRIPTION	REMARKS
74	1	464333	Burner Tube	
75	1	469084	Heat Exchanger Assembly	
76	1	279110	Fitting (Well Plug)	
77	1	289329	Angle Bracket	
78	2	4588201	Eyebolt	
79	2	461563	Nut with Washer M8	
80	2	348449	Retaining Pin	
81	1	352500	Cotter Pin	



ITEM	QUANTITY	PART NO.	DESCRIPTION	REMARKS
1	1	900133	Pump Mounting Bracket	
2	1	901288	Clamp	For mounting coolant pump to mounting bracket P/N 900133.
3	1	901300	Coolant Pump Model U-4814 - 24 Volt	
4	1	5000153A	Coolant Pump Rebuild Kit	Includes P/N 50906084 and P/N 97664A in kit.
5	1	50906084	Coolant Pump Seal Kit	
6	1	901312	Mounting Clamp	To clamp mounting bracket P/N 900133 to the heater.
7	1	97664A	Coolant Pump Front Housing	

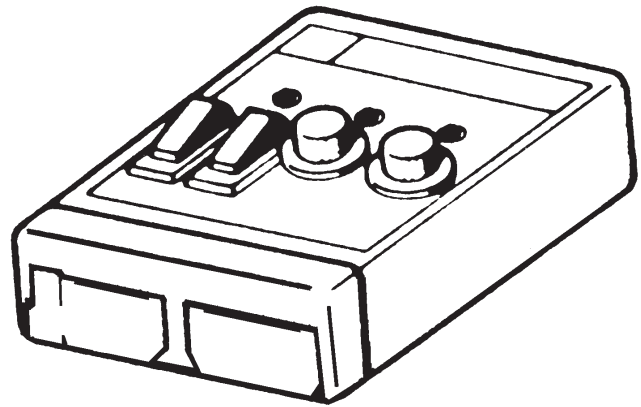
DBW 2020

Figure 8



1 7-Day Electronic Timer

2 Component Tester / Analyzer



Subject to modification

ITEM	QUANTITY	PART NO.	DESCRIPTION	REMARKS
1	1	600590	7-Day Electronic Timer	Model CDN 1224 for MCI.
1	1	440280	Tester / Analyzer	

**Service / Maintenance / Rebuild Kits**

<b>PART NUMBER</b>	<b>DESCRIPTION</b>	<b>CONTENTS</b>
50000025	Fuel Nozzles - 12 Pack	12 Fuel nozzles P/N 470716
50000044	Basic Service Kit	2 Fuel nozzles P/N 470716 2 Overheat fuses P/N 406287 1 Tube of dielectric grease P/N 50000043
50000045	Partial Rebuild Kit Stage 1	1 Motor P/N 106082 2 Couplings P/N 397563 1 Fan shaft P/N 398144 1 Bearing set P/N 378321 2 Fuel nozzles P/N 470716 2 Overheat Fuses P/N 406287 1 Tube of dielectric grease P/N 50000043
50000027	Partial Rebuild Kit Stage 2	1 Control Unit P/N 30607B 1 Electronic Ignition Coil P/N 388815 1 Harness P/N 444170 2 Ignition Electrodes P/N 274313 1 Fuel solenoid valve P/N 322091
699745	Servicing Literature	1 DBW Series Service and Repair Manual

**Malfunction Identification - DBW Series Heaters**

This table is intended to assist the swift diagnosis of simple malfunctions, which have obvious symptoms. It cannot replace the detailed knowledge of an expert workshop.  
 For assistance, please contact one of the workshops recommended in the list of service centers (Directory P/N 907992).

PROBLEM		CHECK, REPAIR OR REPLACE IF NECESSARY																			
		Check Voltage Supply	Electrical Fuse	Electrical Harness and Connection	Switch	Overheat Fuse or Temperature Limiter	Control Thermostat	Flame detector	Control Unit	Ignition Electrodes	Ignition Coil — Coil Wire	Electric Motor	Fuel Supply	Fuel Pump	Fuel Solenoid Valve	High Pressure Nozzle	Coolant Circulating Pump	Combustion Air Intake	Exhaust System	Heating System	
Switch On	No Function	●	●	●	●	●															
Control Light	OFF after 30 Seconds					●		●	●	●	●	●	●	●							
Blower Motor in Unit	Does Not Run	●	●	●		●		●		●											
Blower Motor in Unit	No Prime Cycle	●						●													
Blower Motor in Unit	No After Run							●													
Coolant Circulation Pump	Does Not Run	●	●	●				●		●											
Ignition Spark	Absent		●	●				●		●											
Combustion	Does Not Take Place				●			●	●	●		●	●	●	●						
Combustion	Stops after 30 Seconds	●		●				●	●												
Combustion	Cannot Be Stopped			●				●					●								
During Combustion	Light Color Smoke											●	●		●						
During Combustion	Dark Color Smoke	●		●							●	●					●	●			
Heating Unit	Overheating		●			●		●								●				●	

Quick Check Matrix