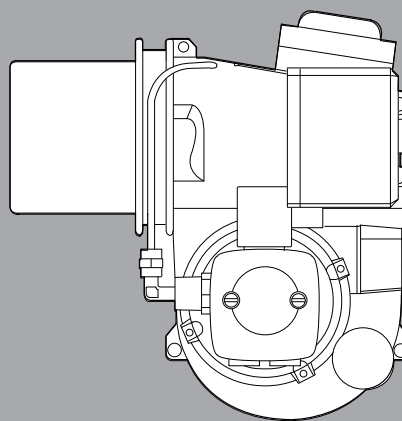


OIL BURNERS

# Ecoflam

MODEL



**MINOR 1 LOW OUTPUT**

240 Volt 50 Hz



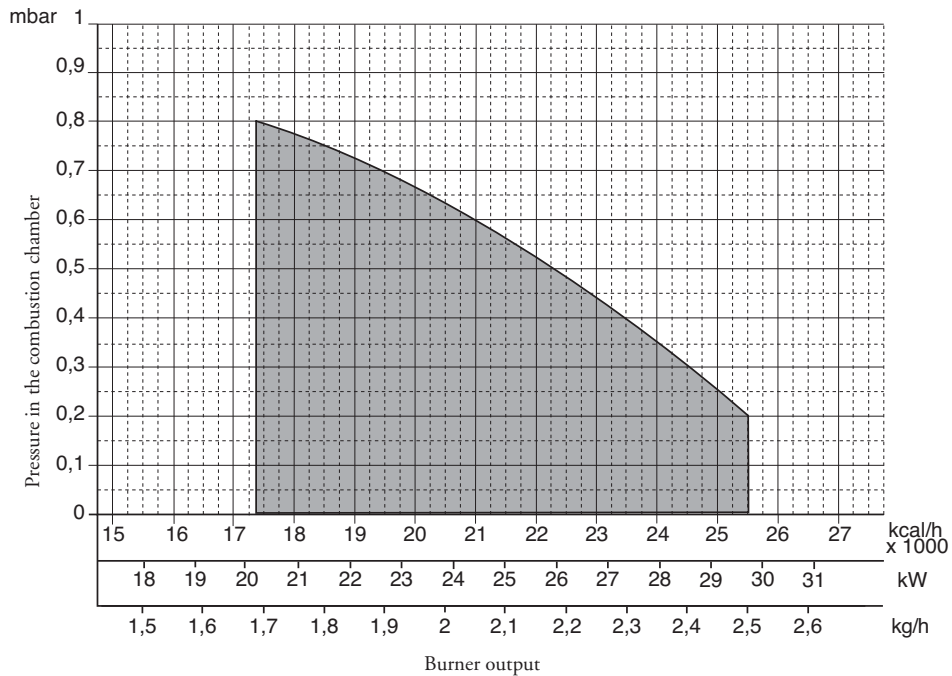
**420010529500**

**30.04.2013**

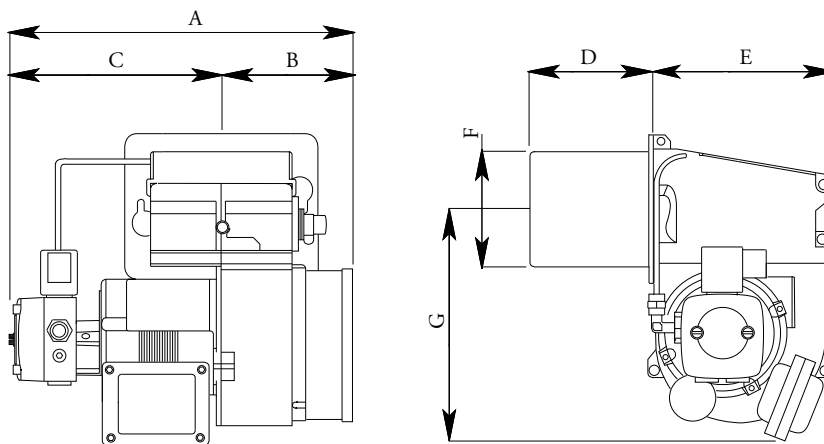
## TECHNICAL DATA

MODEL		MINOR 1
Thermal power max	kcal/h	25500
	kW	29,6
Thermal power min	kcal/h	17300
	kW	20
Max capacity light oil	kg/h	2,5
Min capacity light oil	kg/h	1,7
Voltage single phase 50 Hz	Volt	240
Motor	W	75
Capacitor	μF	3,5
Rpm	N°	2800
Inition transformer	kV/mA	8/20
Control box	LANDIS	LOA 24
Fuel :	Light oil	kcal/kg 10.200 Visc.max.1,5°E at 20°C

## WORKING FIELD



## OVERALL DIMENSIONS

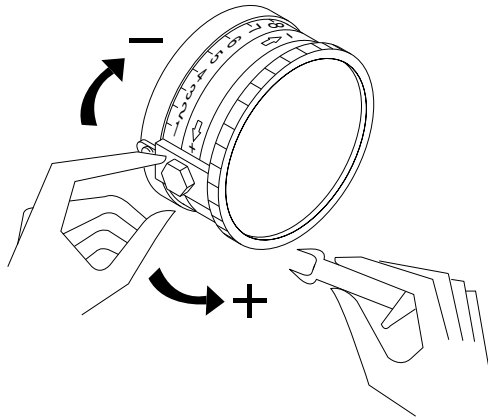


MODEL	A	B	C	D	E	F	G	H	M
MINOR 1	273	113	160	54	165	89	160	125	M8

## BURNER START - UP

Make sure there are no leaks on flexible oil line connections. Bleed air from the pump (see page 5). The correct nozzle is already fitted on the burner. Turn the thermostat to the required setting. The burner will purge for approximately 13 seconds. At this point the oil valve opens and oil is ignited. Regulate the pump pressure (see page 5). Regulate the air. In case of no ignition the burner goes to lock-out in 10 seconds.

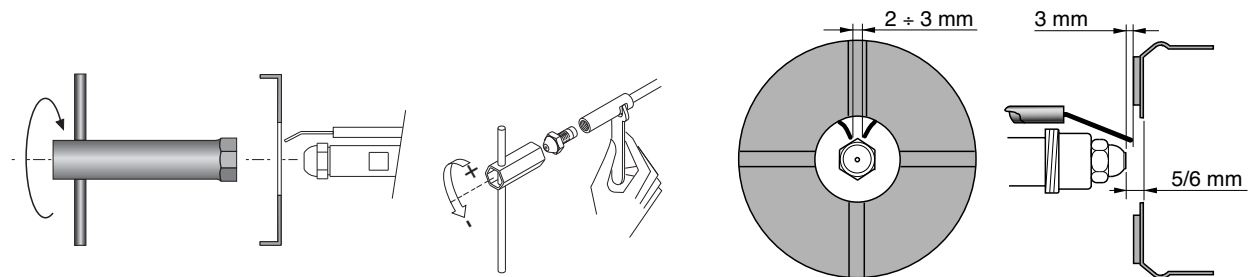
### AIR REGULATION



### NOZZLE REPLACEMENT

- Refit electrodes in position.
- Remove electrodes.
- Remove and refit the nozzle using the special spanner supplied with the burner (use a 19 mm spanner to hold brass hexagon at rear).

**Notice :** Always check the position of the electrodes after replacing the nozzle (see plan).



Ignition electrodes setting on firing head

NOZZLE GPH	SPRAY ANGLE	SPRAY PATTERN	PUMP PRESSURE
0,40	80°	Danfoss H LE	7,6 bar (110 p.s.i.)

**WARNING : OIL LEAKAGE CHECK.**

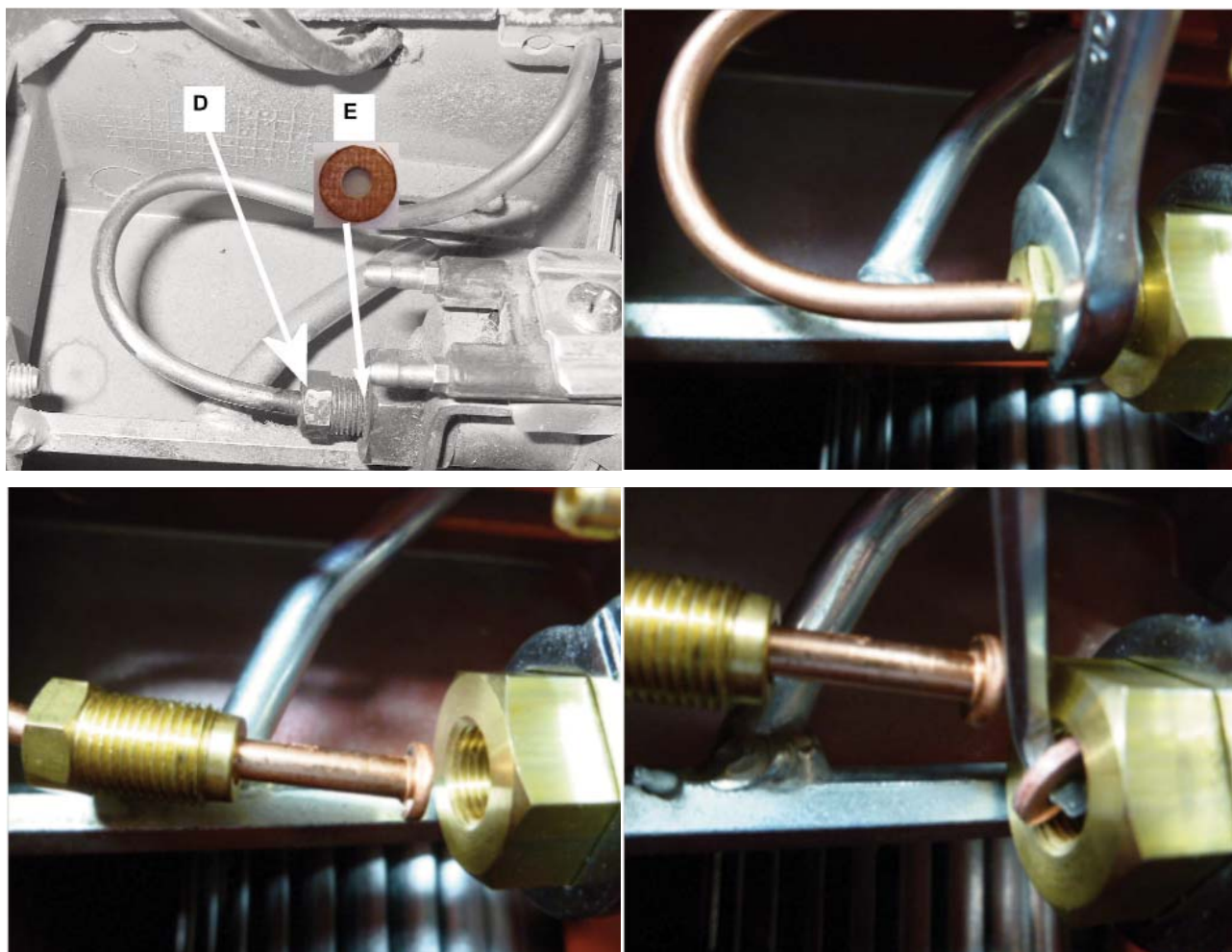
! Every time oil nozzle is changed or the connection between nozzle holder and oil copper pipe is opened, oil tightness check procedure has to be carried out as described here following. Check the joint as a precautionary measure on service or the replacement of parts.

**OIL CIRCUIT TIGHTNESS CHECK**

Proceed as follows:

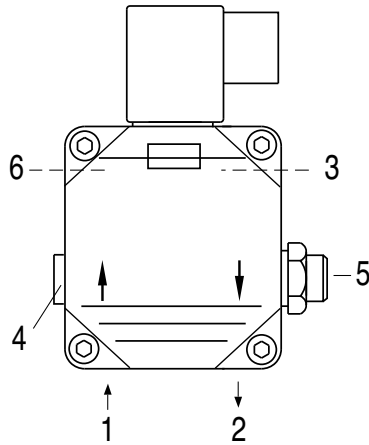
- Fire the burner for 5 minutes.
- Stop the burner and open top cover (n°13 at exploded view at page 7).
- Wipe around the joint with a tissue in order verify no oil leakage occurred.
- Should there be a leak, the joint may be tightened 1/4 turn and the above test repeated.
- Should it still fail, the sealing gasket "E" will require replacement.

As a reminder, it is a requirement of the product commissioning procedure for any oil-fired appliance, that all pipe-work and joints be checked for oil leaks, including flexible hoses and the tightness of the nozzle. This should also be carried out at any subsequent service.



## PRIMING AND ADJUSTMENT OF THE PUMP

DANFOSS BFP 11 R3

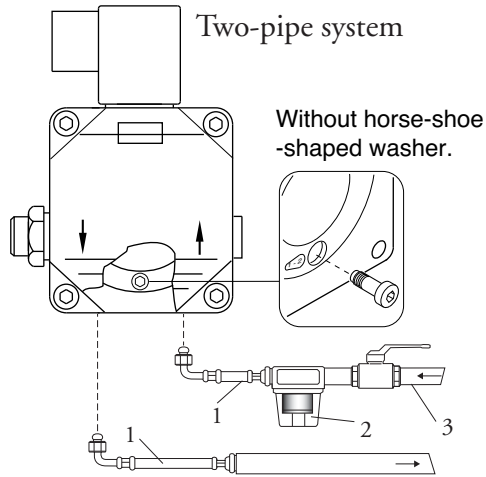


- 1 - INLET
- 2 - RETURN
- 3 - BLEED AND PRESSURE GAUGE PORT
- 4 - VACUUM GAUGE PORT
- 5 - PRESSURE ADJUSTMENT
- 6 - NOZZLE OUTLET

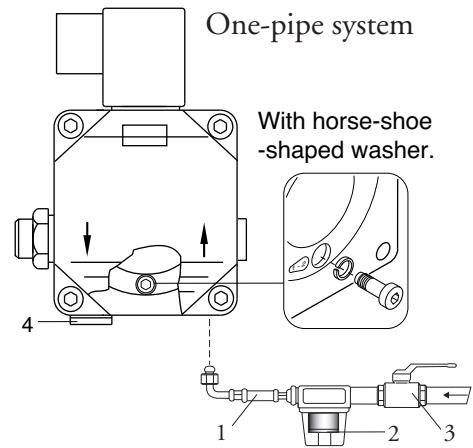
The pump setting indicated by client is carried out in the factory during testing. To prime the pump first of all start the burner and bleed air from the pump through the gauge port. If the burner goes to lock-out after the prepurging time due to lack of pressure in the oil pump, restart the burner.

NOTE : before starting up the burner, make sure that the return pipe is clear. Check that the pipes do not leak. It is advisable to use copper pipes. Do not exceed the depression limit of 4 mt.(0,45 bar) to keep

low noise levels. The return pipe must reach the same level as the check valve at the bottom of the oil tank..



- 1 - HOSE
- 2 - OIL FILTER
- 3 - OIL COCK
- 4 - PLUG



## FAULT FINDING

### Burner does not start up

- Mains switch not on.
- Blown fuse.
- Boiler thermostats not made.
- Fault in control box.

### Burner pre-purges and stops

- Fault in control box.

### Burner does not ignite during cycle and stops

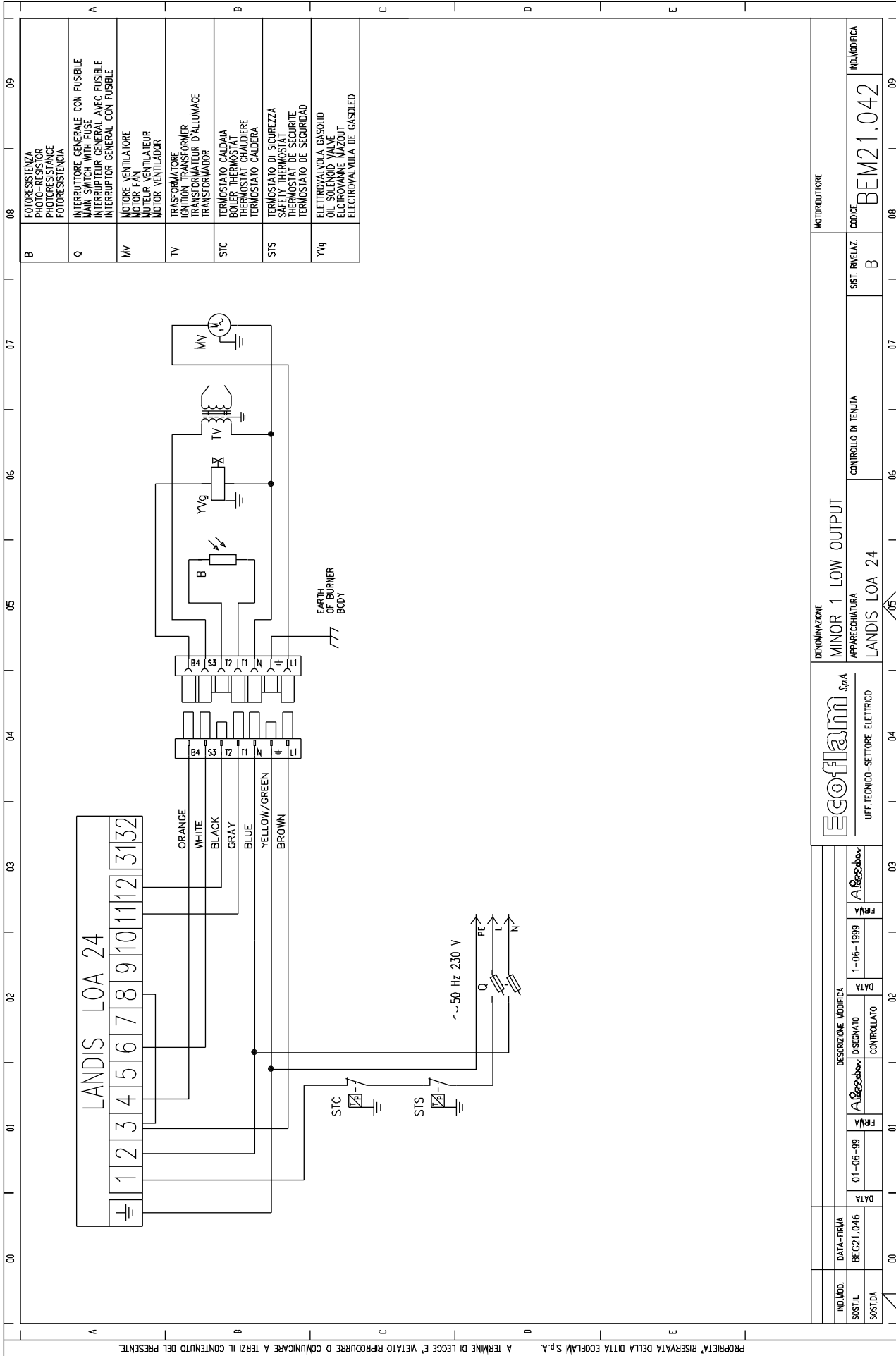
- Fault in control box.
- Fault in photo-resistor.

### Burner does not ignite

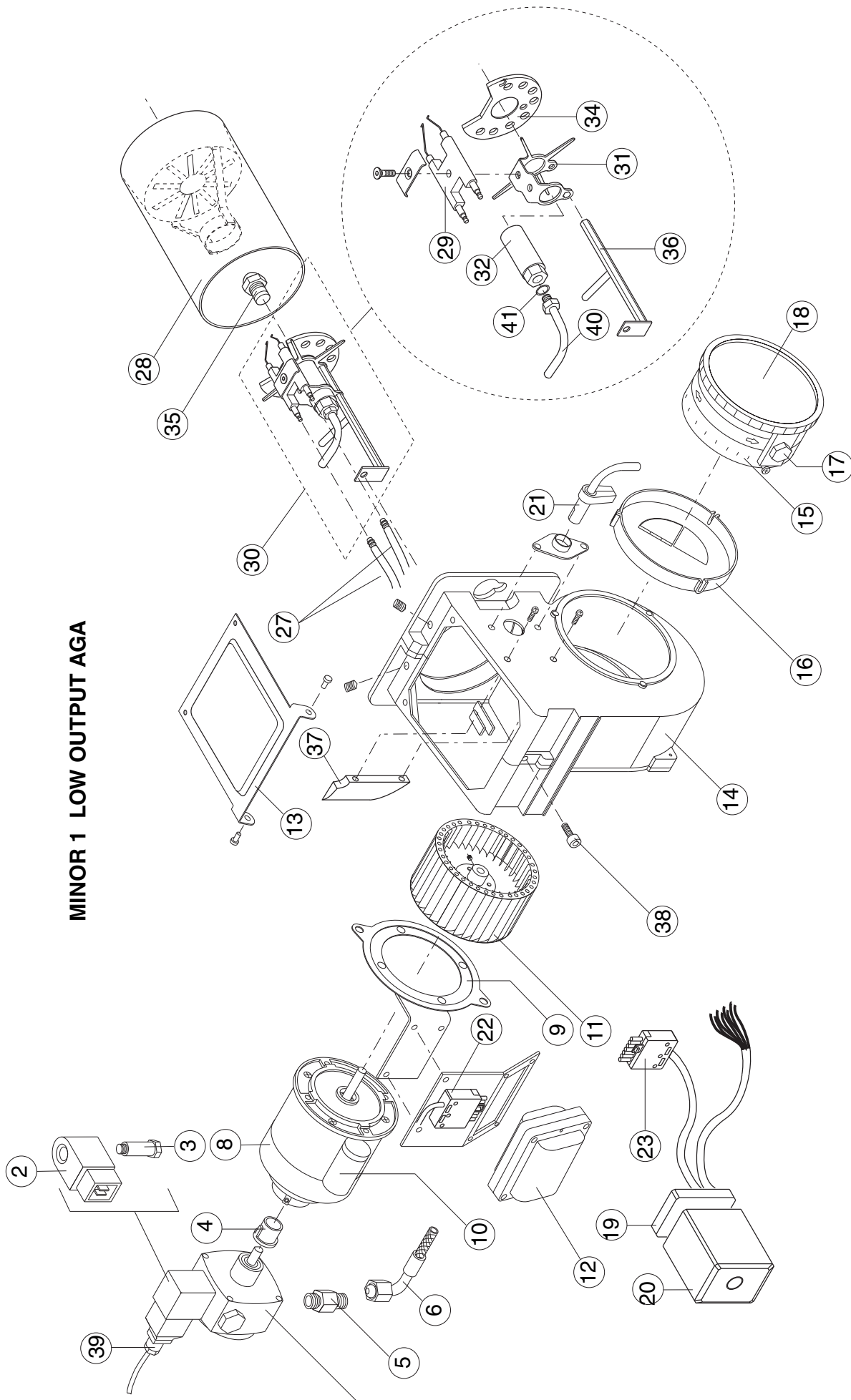
- Dirty ignition electrodes.
- Fault at electrodes.
- Electrodes installed wrongly.
- Faulty ignition transformer.
- Blocked nozzle.
- Nozzle needs replacing.
- Oil pressure too low.
- Blocked oil filter.
- Excessive combustion air for nozzle capacity.
- Fault in control box.

### Burner ignites and then stops

- Faulty nozzle.
- Photo-resistor does not "see" flame.
- Excessive combustion air for nozzle capacity.
- Fault in control box.
- Oil pressure too low.
- Blocked oil filter.



**MINOR 1 LOW OUTPUT AGA**



N°	DESCRIPTION	AGA	MINOR 1 LOW OUTPUT code
1	- OIL PUMP	DANFOSS BFP 11 R3	65322967
2	- COIL	DANFOSS	65323773
3	- OIL VALVE	DANFOSS	65323751
4	- COUPLING		65322920
5	- NIPPLE		65321179
6	- HOSES	NW 4X700	65323198
7	- SUPPORT		65321297
8	- MOTOR	75 W	65322784
9	- SUPPORT		65320988
10	- CAPACITOR	3,5 µF	65321856
11	- FAN	99 x 34	65321762
12	- IGNITION TRANSFORMER	COFI or FIDA	65323251
13	- COVER		65325859
14	- FAN HOUSING		65321001
15	- AIR DAMPER		65320542
16	- AIR CONVEYOR		65320628
17	- AIR DAMPER SCREW		65321313
18	- COVER AIR INLET		65320535
19	- CONTROL BOX BASE	LANDIS	65320092
20	- CONTROL BOX	LANDIS LOA 24	65320028
21	- PHOTORESISTOR	LANDIS	65320078
22	- PLUG WIELAND	7 pin	65322069
23	- SOCKET WIELAND	7 pin	65322071
24	- GASKET		-
25	- FLANGE		-
26	- O-RING		-
27	- CABLES	TC	65322263
28	- BLAST TUBE	TC	65320260
29	- ELECTRODES		65320921
30	- FIRING HEAD	TC	
31	- NOZZLE HOLDER SUPPORT		65320687
32	- NOZZLE HOLDER	TC	65320707
33	- DIFFUSER		-
34	- REAR DISC		65320723
35	- NOZZLE ANTI DRIP	DANFOSS 0.40/80H LE	65323275
36	- ROD	TC	65320147
37	- FAN SCOOP		65320502
38	- SCREW		65325860
39	- CABLE	DANFOSS	65322009
40	- OIL PIPE		65321501
41	- OIL PIPE GASKET		65321065

TC = SHORT HEAD TL = LONG HEAD









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