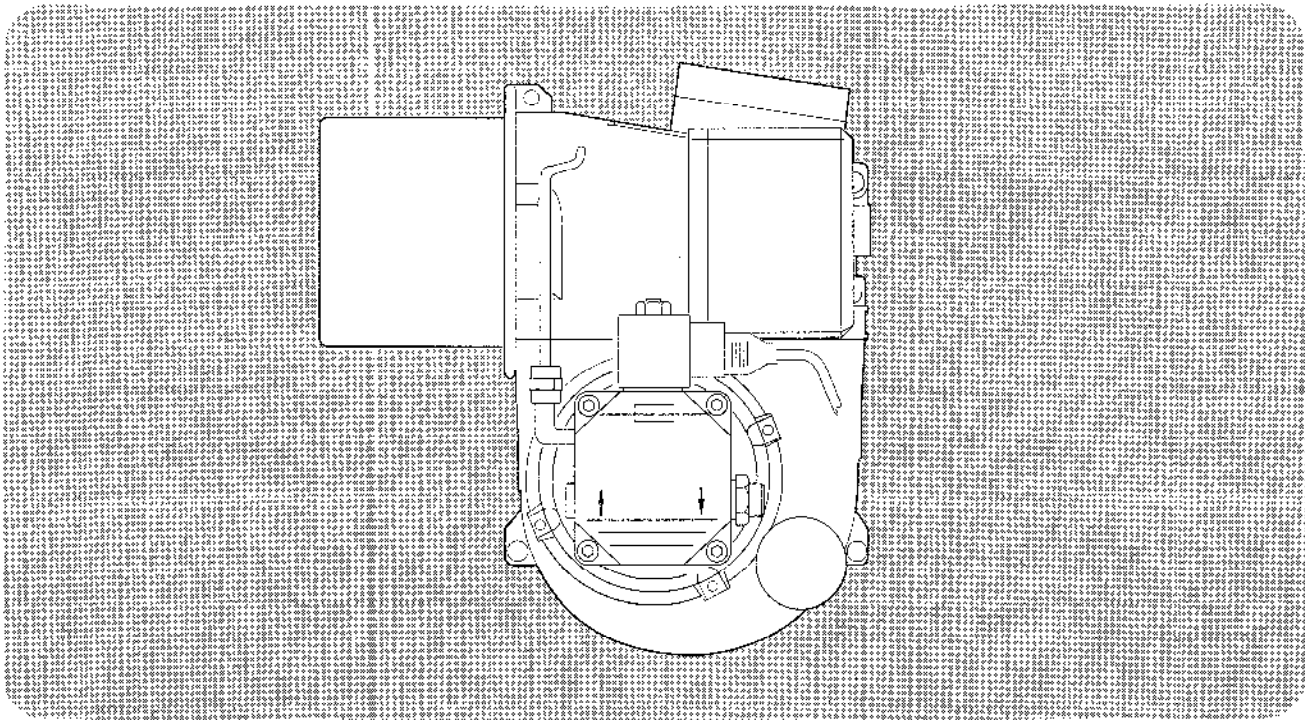


TRIANCO

Oil

TRIANCO - OIL BURNER

BURNER DETAILS



EuroStar Range

To be retained by householder

TECHNICAL DATA

MODELS		MINOR 1	MINOR 4	MINOR 8 130/150	MINOR 8 160/180	MINOR 12 190/240
Voltage single phase 50Hz	V	240	240	240	240	240
Motor	W	70	90	90	130	130
Rpm	No	2800	2800	2800	2800	2800
Capacitor	uF	3	3	3	6.3	6.3
Ignition transformer	kV/mA	8/20	8/20	8/20	8/20	8/20
Control box	SATRONIC	TF 830.3	TF 830.3	TF 830.3	TF 830.3	TF 830.3
Fuel: Kerosene	Mj/kg			43.3		

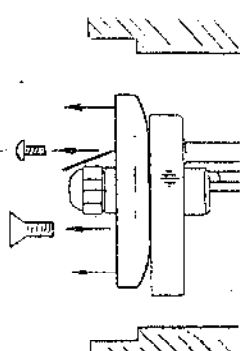
NOZZLE OUTPUT

MODEL	Output	Burner Model	Nozzle	Pump pressure	CO ₂ (%)
EUROSTAR UTILITY	50/65	Minor 1	0.6 x 80°EH	7.5 bar (110 p.s.i.)	10.5
	70/90	Minor 4	0.85 x 80°EH	7.5 bar (110 p.s.i.)	11.5
	100/125	Minor 4	1.1 x 80°EH	8 bar (115 p.s.i.)	11.5
	130/150	Minor 8	1.25 x 60°S	9.5 bar (140 p.s.i.)	12.0
	160/180	Minor 8	1.5 x 60°S	9.5 bar (140 p.s.i.)	12.0
	190/240	Minor 12	2.25 x 60°S	6.8 bar (100 p.s.i.)	12.0
EUROSTAR TRADER	50/90*	Minor 4	0.85 x 80°EH	7.5 bar (110 p.s.i.)	11.5
	100/125	Minor 4	1.1 x 80°EH	8 bar (110 p.s.i.)	11.5
EUROSTAR EXTERNAL	50/90*	Minor 4	0.85 x 80°EH	7.5 bar (110 p.s.i.)	11.5
	95/115	Minor 4	1.1 x 80°EH	6.8 bar (100 p.s.i.)	11.5
EUROSTAR WM T.T.W	50/70	Minor 1	0.6 x 80°EH	7.5 bar (110 p.s.i.)	11.0
	50/65	Minor 4	0.6 x 80°EH	7.5 bar (110 p.s.i.)	11.0
E-STAR COMBI	50	Minor 1	0.5 x 80°EH	8.8 bar (130 p.s.i.)	10.5
	50/65	Minor 1	0.6 x 80°EH	7.5 bar (110 p.s.i.)	10.5
	70/90	Minor 4	0.85 x 80°EH	7.5 bar (110 p.s.i.)	11.5
E-STAR SYSTEM	50/90	Minor 4	0.85 x 80°EH	7.5 bar (110 p.s.i.)	11.5

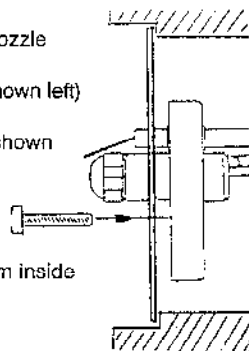
* To convert to lower outputs follow instructions shown below

Instructions for converting burners to lower outputs *

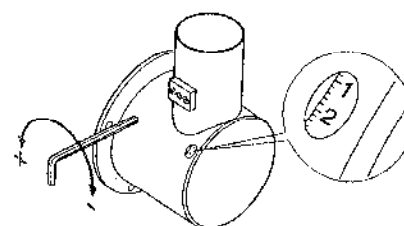
To convert burners to lower outputs the nozzle and pump pressure must be changed. For output 50000 Btu's the burner head and backplate must also be changed, in addition the top baffle **must** be removed (see below). Burner head and backplate conversion kit available from TRIANCO REDFYRE Conversion kit No. SP 221457.



1. Remove existing flame tube & nozzle
2. Remove existing backplate (as shown left)
3. Fit the low output backplate (as shown right) & the nozzle.
4. Fit the low output flame tube.
5. Finally remove the top baffle from inside the boiler

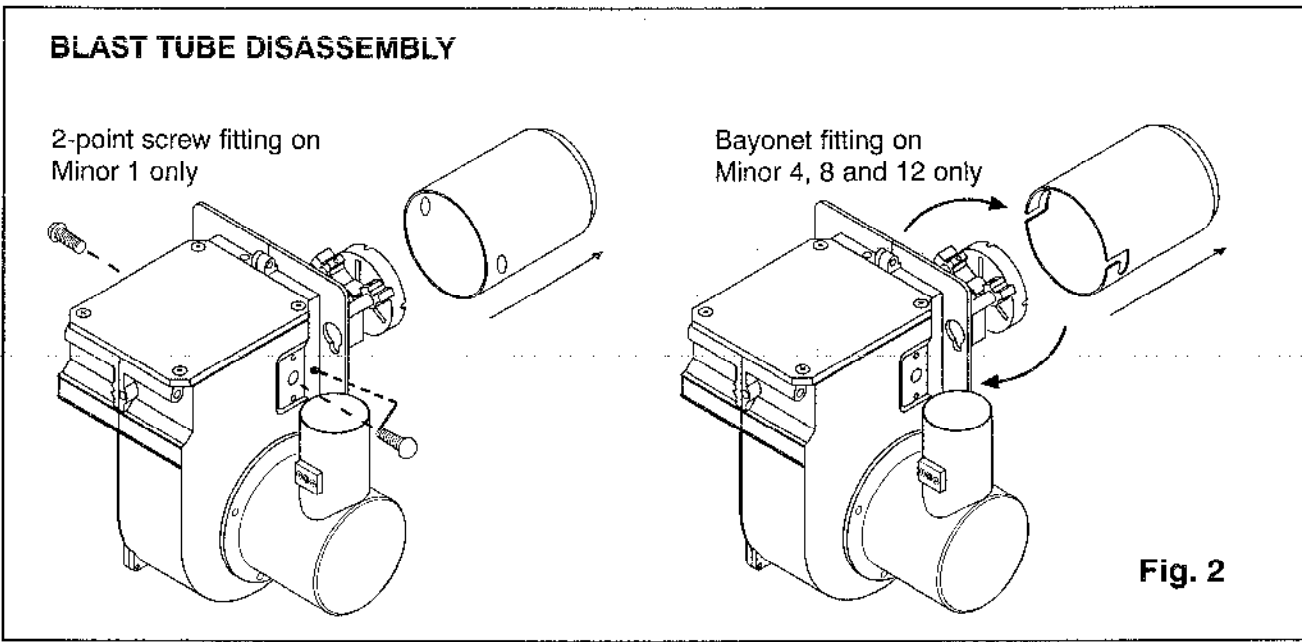
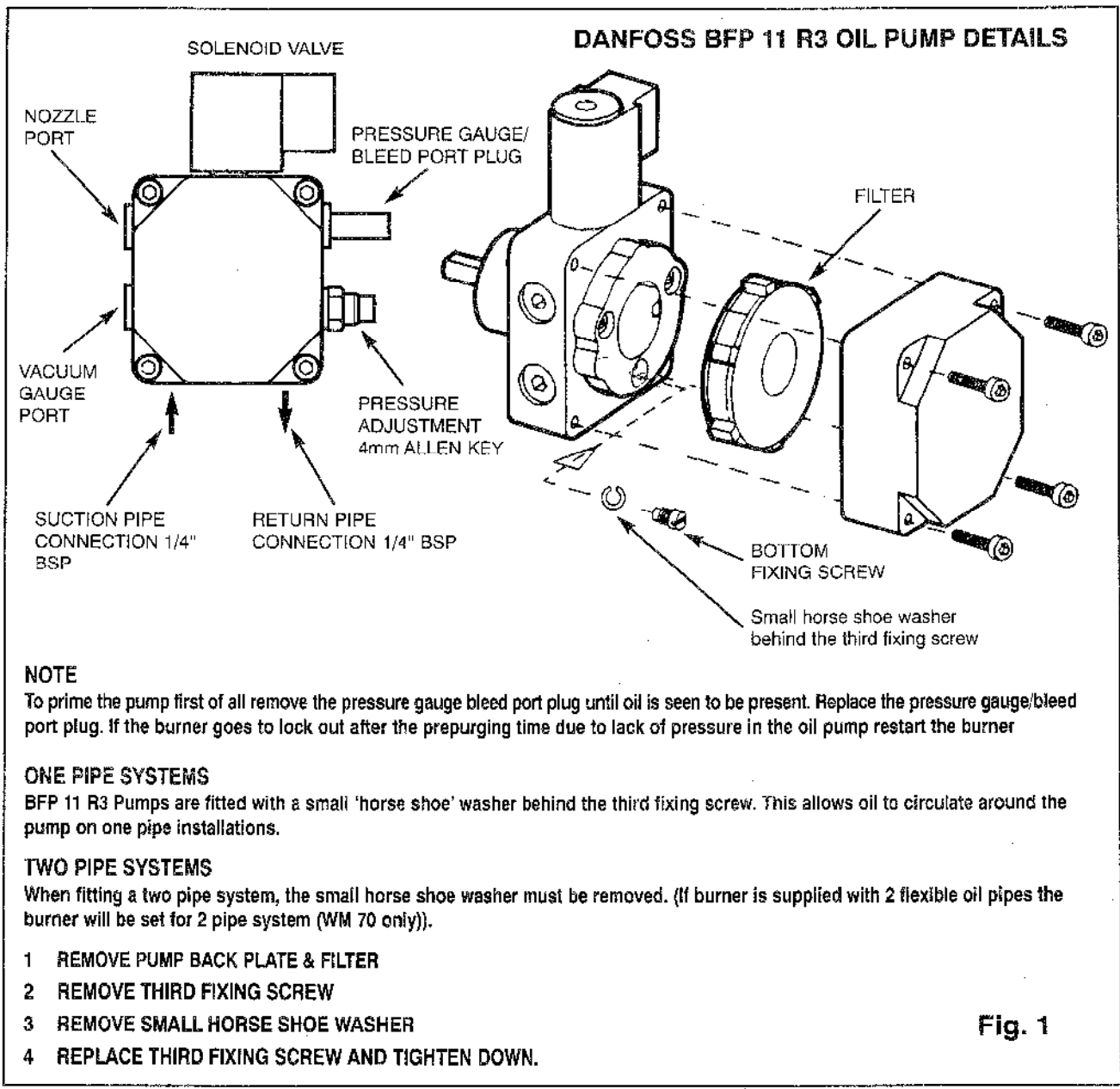


AIR REGULATION

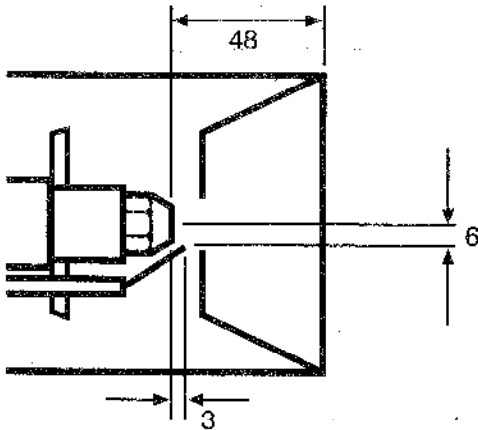


The air regulator may have to be adjusted to obtain the correct combustion figures.

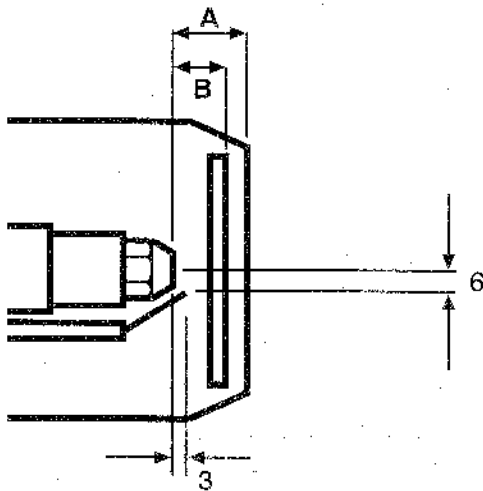
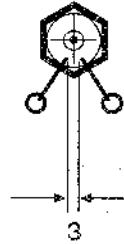
PRIMING AND ADJUSTMENT OF THE PUMP



COMBUSTION HEAD SETTINGS

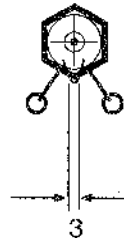


Eurostar 50/65, 70/90, 100/125, WM 70,
Ext 115 & TTW 50/65, Trader 50/90 &
External 50/90, System 50/90



Eurostar 130/150, 160/180 and 190/240

Boiler Type	Dim A	Dim B
130/150	19	10
160/180	23	10
190/240	34	10



NOZZLE REPLACEMENT

- 1 Switch off electrical supply to boiler and turn off oil
- 2 Remove burner plug from control box.
- 3 Burner can now be removed from boiler
- 4 Remove blast tube from burner exposing nozzle holder assembly.
- 5 The nozzle can now be carefully removed taking great care not to damage the electrodes. (see Fig. 3)
- 6 Fit a new nozzle of the same specification taking the same care.
- 7 Check the position of the electrodes after replacing the nozzle to ensure they have not moved.
- 8 Refit the blast tube to the burner.

IMPORTANT - BURNER NOZZLES ARE EXCLUDED FROM THE MANUFACTURERS GUARANTEE!

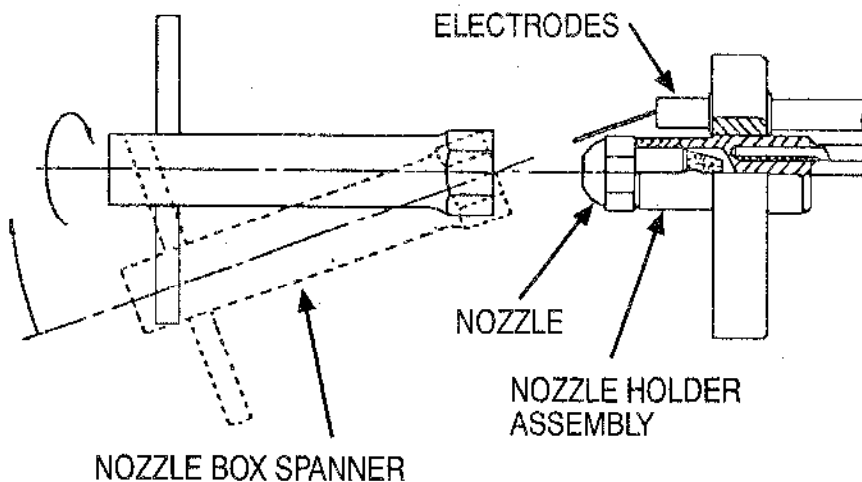


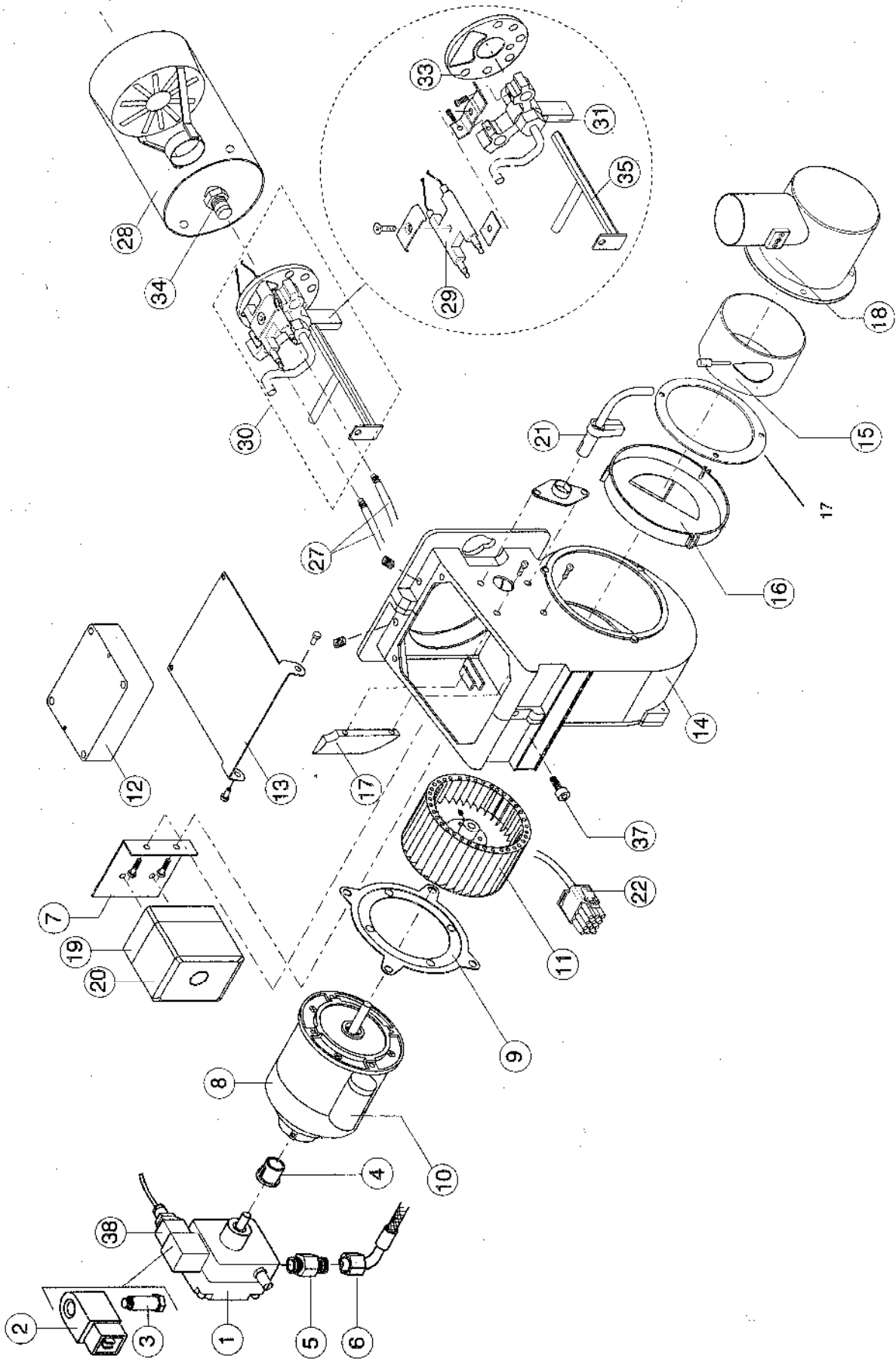
Fig. 3 NOZZLE BOX SPANNER

FAULT FINDING

ELECTRICITY SAFETY - Before making any electrical checks, switch off mains supply to boiler.

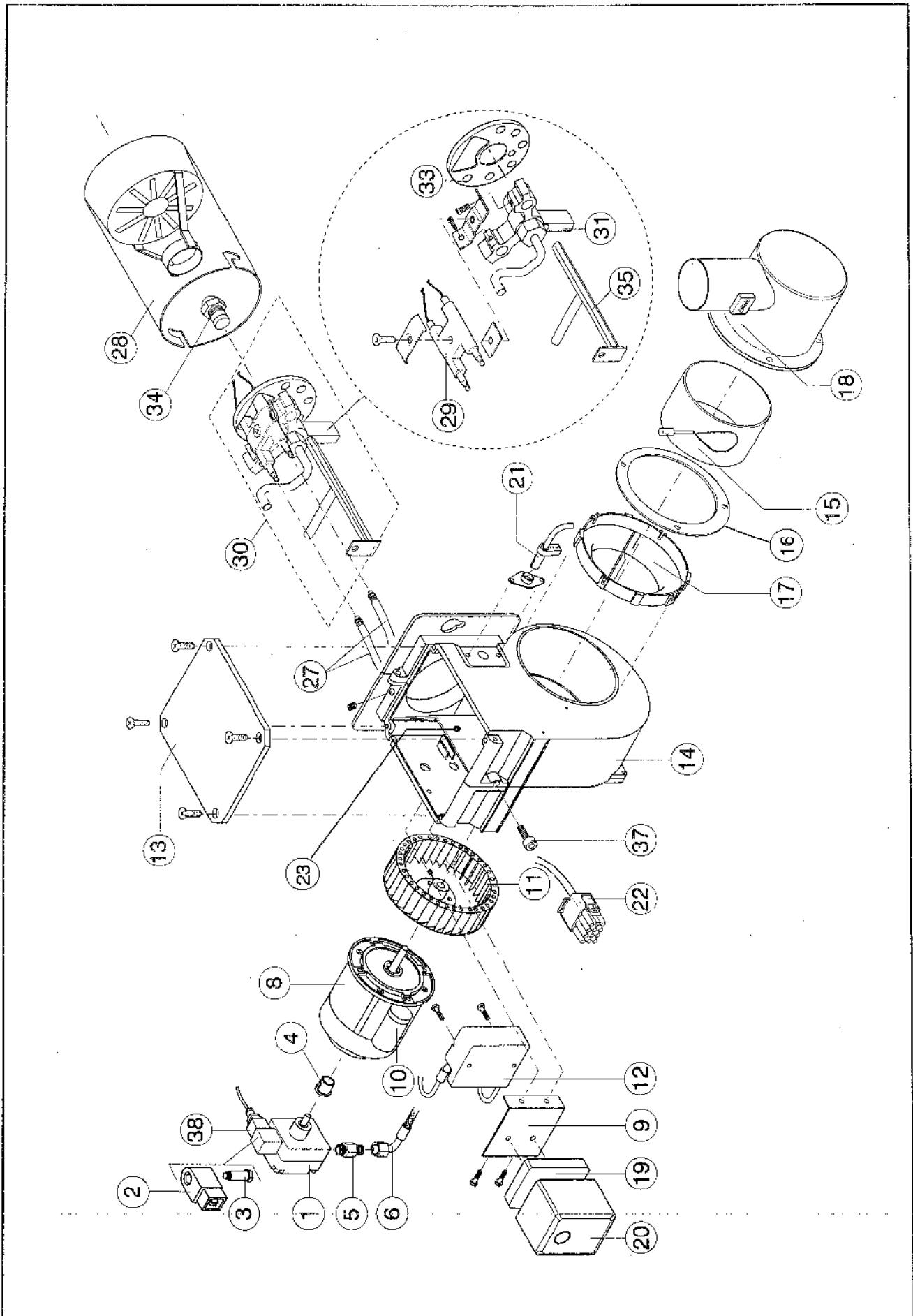
FAULT	POSSIBLE CAUSE	ACTION
BURNER WILL NOT START	Control box locked out - Light on	Press reset button on front of burner. N.B. ONLY TRY TWICE
	Boiler thermostat or other system controls satisfied	Ensure all controls are calling for heat.
	Fuse blown	Fit new 5 amp fuse, if it blows again, check for short circuit in wiring.
	Check for live supply continuity up to burner	If live supply confirmed, change control box
	Motor or pump seized	Check for rotation and replace as necessary.
BURNER STARTS BUT FLAME NOT ESTABLISHED	No oil supply	Check oil level in tank and feed to burner.
	Photo-cell not seeing flame	Clean photo-cell and ensure it is fully plugged in.
	Air trapped in pump	Bleed off air through pressure gauge tapping.
	Solenoid valve faulty	Check coil for continuity and replace if faulty.
	Nozzle blocked	Replace nozzle with one of same specification.
	Electrodes incorrectly set	Reset gap and position electrodes as shown in Burner diagram.
	Electrode insulator cracked	Check and replace if insulator cracked or crazed.
	Ignition transformer and H.T. contacts	Check for spark and condition of HT contacts. Replace as necessary.
	Low oil pressure	Check pump pressure and adjust to correct setting.
FLAME ESTABLISHED BUT BURNER LOCKS OUT AFTER FEW SECONDS	Oil contaminated with water	Run off oil at burner until free of water and drain condensation from tank
	Oil filter partially blocked	Wash filter clean with kerosene.
	Photo-cell fault	Clean photo-cell and ensure it is fully plugged in. Replace if faulty.
	Oil pressure low	Check pump pressure and adjust to correct setting.

FAULT	POSSIBLE CAUSE	ACTION
MORNING START LOCK-OUT	Faulty non-return valve or air leak in two pipe system	Replace non-return valve and cure leak.
	Low voltage	Check with local Electricity Board.
	Combustion readings incorrect	Check combustion under normal running conditions and compare readings with those given under 'Burner Settings'.
	Oil level in tank falling below burner	Raise tank or fit a 2-pipe system.
DELAYED IGNITION - BURNER PULSATES ON START UP	Nozzle partially blocked	Replace nozzle
	Oil pressure too low	Check and recommission
	Flue blocked or damaged	Check and rectify
	Fan slipping on shaft	Check and retighten
	Pump coupling loose or worn	Check and replace
BURNER STARTS VIOLENTLY	Delayed ignition	Check electrode setting and adjust to correct gap Check electrodes for damage Check H.T. leads for damage and positive connection



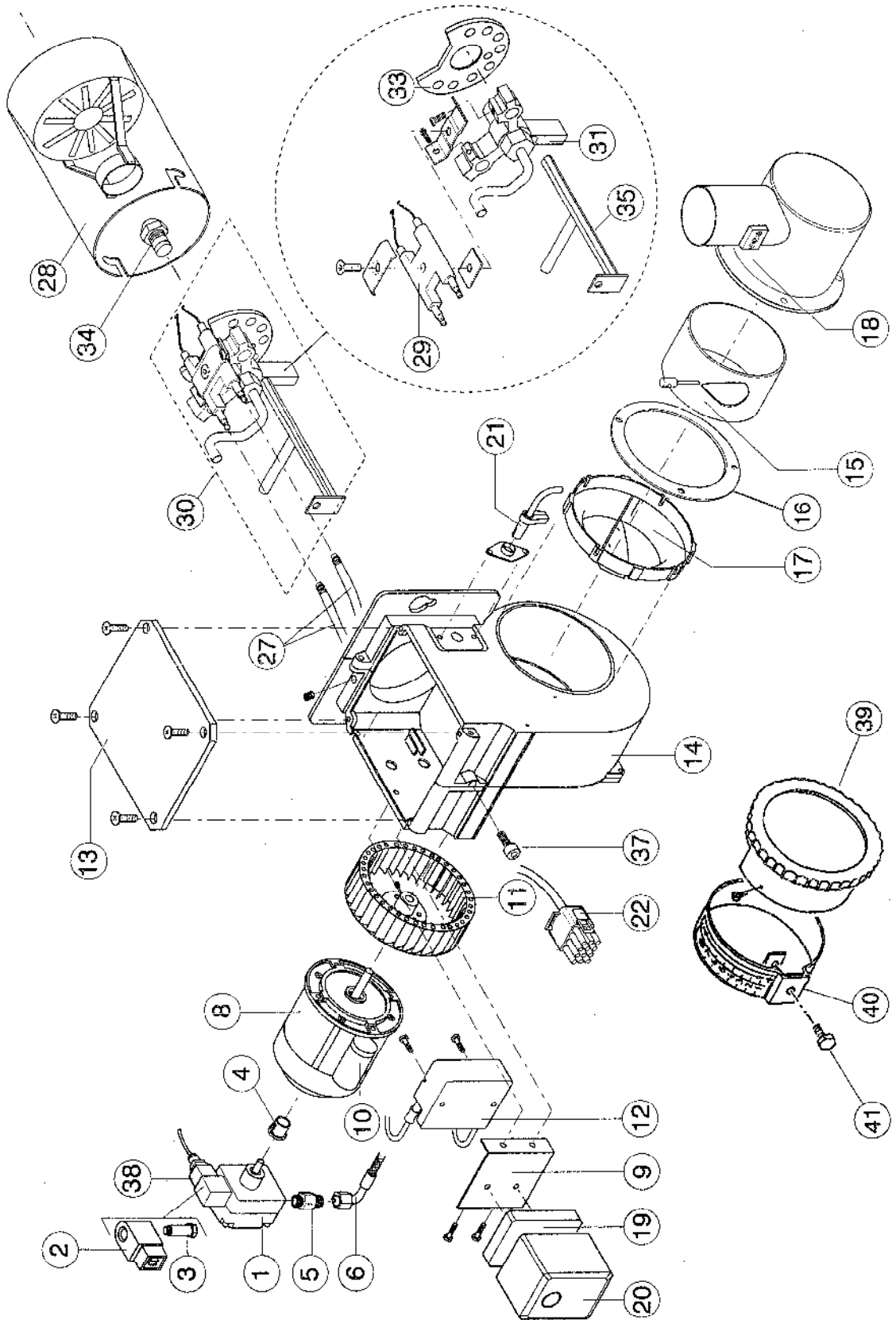
MINOR 1 EuroStar 50/65 (One Pipe System)
MINOR 1 EuroStar 50/70 Wall Mounted (Two Pipe System)

No.	DESCRIPTION	MINOR 1 EuroStar 50/65 Code 221300	MINOR 1 EuroStar 50/70 Wall Code 221320
1 -	OIL PUMP DANFOSS BFP11 R3	221301	221329
2 -	COIL DANFOSS	203082	203082
3 -	OIL VALVE DANFOSS	221303	221303
4 -	COUPLING	221304	221304
5 -	NIPPLE	221305	221305
6 -	HOSES	207019	207019
7 -	SUPPORT	221306	221306
8 -	MOTOR 70W SIMEL	221307	221307
9 -	SUPPORT (Recessed Flange)	221308	221308
10 -	CAPACITOR 3.5uF	221309	221309
11 -	FAN ø 99x43mm	221311	221311
12 -	IGNITION TRANSFORMER DANFOSS	221312	221312
13 -	COVER	221310	221310
14 -	FAN HOUSING	221313	221313
15 -	AIR DAMPER	221314	221314
16 -	AIR CONVEYOR	221315	221315
17 -	GASKET	221316	221316
18 -	COVER AIR INLET	221317	221317
19 -	CONTROL BOX BASE SATRONIC TF 830.3	207628	207628
20 -	CONTROL BOX SATRONIC TF 830.3	29064	29064
21 -	PHOTORESISTOR SATRONIC	221318	221318
22 -	PLUG and LEAD	207625	207625
23 -	SOCKET		
24 -	GASKET		
25 -	FLANGE		
26 -	O-RING		
27 -	IGNITOR LEADS TC	221319	221319
28 -	BLAST TUBE TC	221321	221321
29 -	ELECTRODES	221322	221322
30 -	FIRING HEAD ASS/Y TC	221323	221323
31 -	NOZZLE HOLDER TC	221324	221324
32 -			
33 -	REAR DISC	221325	221325
34 -	NOZZLE	26213	26213
35 -	ROD TC	221326	221326
37 -	SCREW	221327	221327
38 -	CABLE DANFOSS	321328	221328

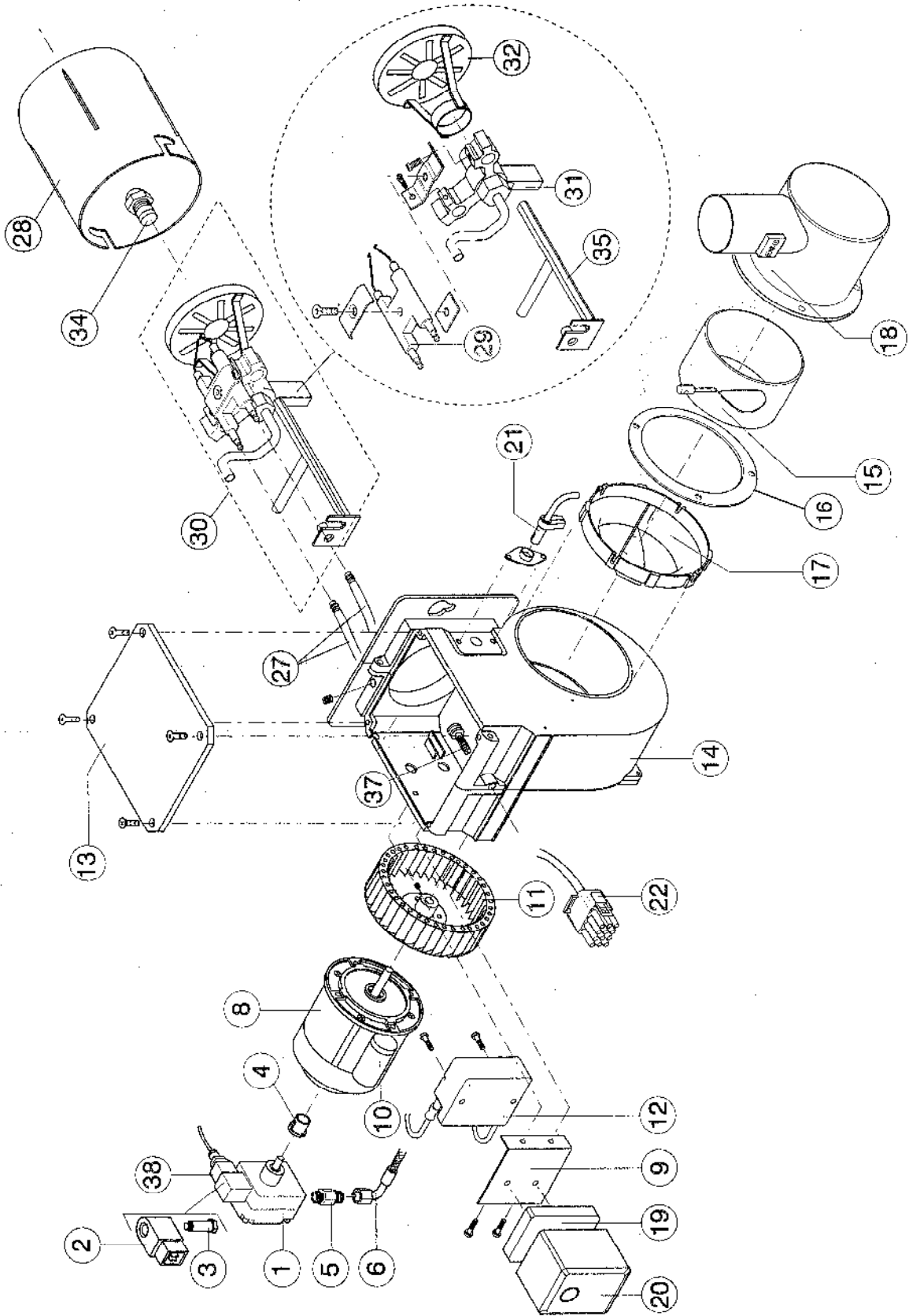


MINOR 4 EuroStar 50/90 & 70/90

No. DESCRIPTION		EuroStar 50/90 & 70/90 MINOR 4 221330	T.T.W MINOR 4 221360	EuroStar 100/125 MINOR 4 221350	External 95/115 MINOR 4 221370
1 - OIL PUMP	DANFOSS BFP11 R3	221301	221301	221301	221301
2 - COIL	DANFOSS	203082	203082	203082	203082
3 - OIL VALVE	DANFOSS	221303	221303	221303	221303
4 - COUPLING		221304	221304	221304	221304
5 - NIPPLE		221305	221305	221305	221305
6 - HOSES		207019	207019	207019	207019
8 - MOTOR	90W AEG	221340	221340	221340	221340
9 - SUPPORT		221341	221341	221341	221341
10 - CAPACITOR	3uF AEG	221342	221342	221342	221342
11 - FAN	ø 120x50mm	221343	221343	-	-
	ø 124x60mm	-	-	221344	221344
12 - IGNITION TRANSFORMER	DANFOSS	221312	221312	221312	221312
13 - COVER		221345	221345	221345	221345
14 - FAN HOUSING		221346		221346	221346
15 - AIR DAMPER		221347		221347	221347
16 - GASKET		221348	221348	221348	221348
17 - AIR CONVEYOR		221364	221349	221349	221349
18 - COVER AIR INLET		221351	221351	221351	221351
19 - CONTROL BOX BASE	SATRONIC TF 830.3	207628	207628	207628	207628
20 - CONTROL BOX	SATRONIC TF 830.3	29064	29064	29064	29064
21 - PHOTORESISTOR	SATRONIC	221318	221318	221318	221318
22 - PLUG and LEAD		207625	207625	207625	207625
23 - INSULATED DIVIDER		221390	-	-	-
24 - GASKET		-	-	-	-
25 - FLANGE		-	-	-	-
26 - O-RING		-	-	-	-
27 - IGNITOR LEADS TC		221319	221319	221319	221319
28 - BLAST TUBE TC		221352	221321	221361	221352
29 - ELECTRODES		221322	221322	221322	221322
30 - FIRING HEAD ASS/Y TC		221358	-	221358	221358
31 - NOZZLE HOLDER TC		221354	221354	221354	221354
		-	-	-	-
33 - REAR DISC		221325	221325	221355	221355
34 - NOZZLE		221356	26213	221357	221357
35 - ROD TC		221390	221390	221390	221390
37 - SCREW		221327	221327	221327	221327
38 - CABLE	DANFOSS	221328	221328	221328	221328
39 - AIR INLET PLASTIC		-	221393	-	-
40 - AIR INLET METAL		-	221394	-	-
41 SCREW		-	221395	-	-

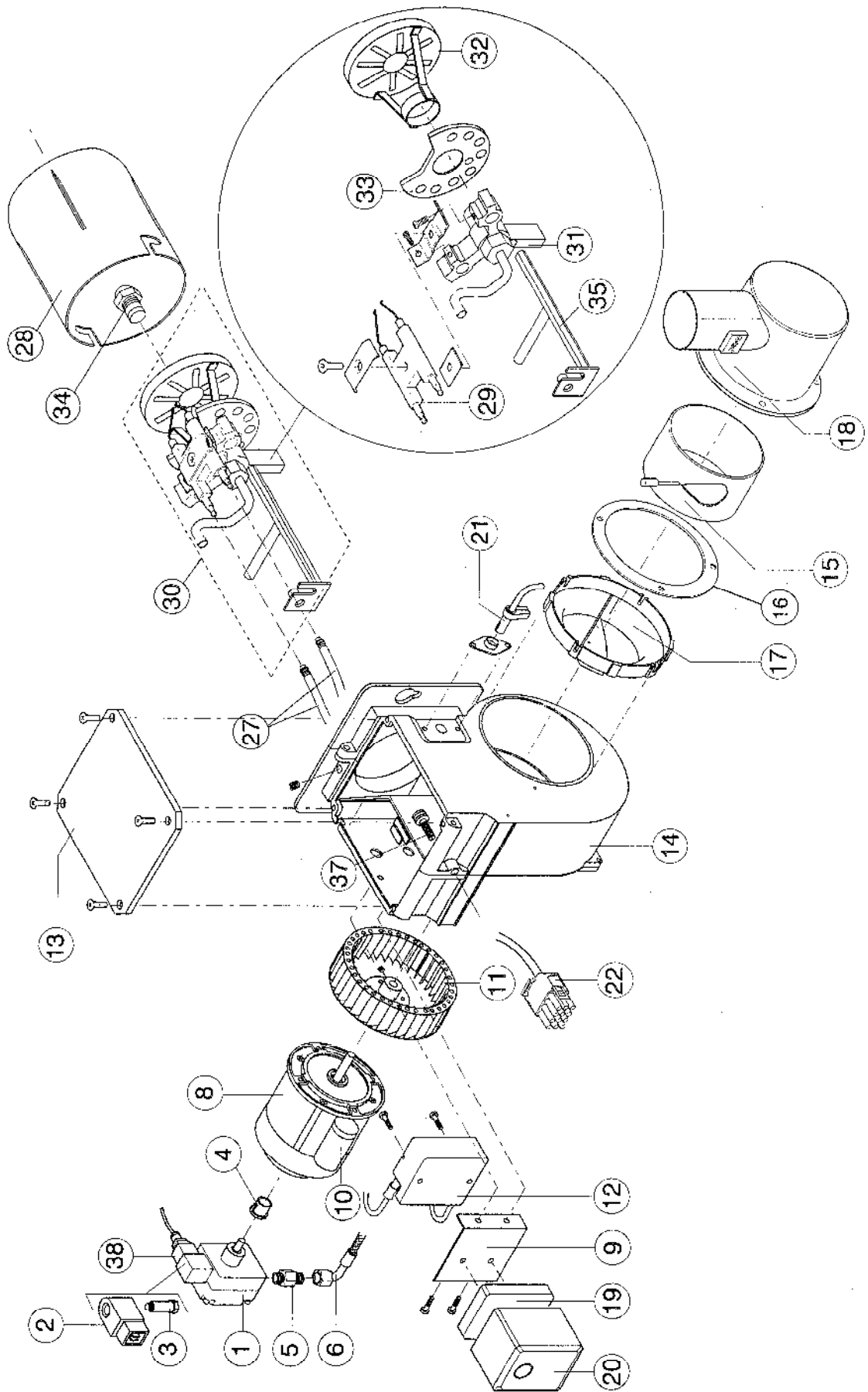


MINOR 4 EuroStar TTW, 100/125 and Ext. 115



MINOR 8 EuroStar 130/180

No. DESCRIPTION	MINOR 8 EuroStar 130/180 Code 221400
1 - OIL PUMP DANFOSS BFP11 R3	221301
2 - COIL DANFOSS	203082
3 - OIL VALVE DANFOSS	221303
4 - COUPLING	221304
5 -NIPPLE	221305
6 - HOSES	207019
7-FILTER	-
8 - MOTOR 90W AEG	-
130W AEG	221381
9 - SUPPORT	221341
10 -CAPACITOR 3uF AEG	-
6.3uFx130W	221382
11 - FAN 124x60mm	-
133x61mm	221383
12 -IGNITION TRANSFORMER DANFOSS	221312
13 -COVER	221345
14 - FAN HOUSING	221346
15 - AIR DAMPER	221415
16 - GASKET	221348
17 -AIR CONVEYOR	221349
18 -COVER AIR INLET	221351
19 - CONTROL BOX BASE SATRONIC TF 830.3	207628
20 -CONTROL BOX SATRONIC TF 830.3	29064
21 - PHOTORESISTOR SATRONIC	221318
22 - PLUG and LEAD	207625
23 -SOCKET	-
24 - GASKET	-
25 - FLANGE	-
26 -O-RING	-
27 - IGNITOR LEADS TC	221319
28 - BLAST TUBE TC	221352
29 - ELECTRODES	221322
30 - FIRING HEAD ASS/Y TC	221387
31 -NOZZLE HOLDER TC	221354
32 -DIFFUSER	221391
33 - REAR DISC	221355
34 - NOZZLE	208694
35 - ROD TC	221390
37 - SCREW 221389	
38 - CABLE DANFOSS	221328



MINOR 12 EuroStar 190/240

No. DESCRIPTION	MINOR 12 EuroStar 190/240 (221410)
1 - OIL PUMP DANFOSS BFP11 R3	221301
2 - COIL DANFOSS	203082
3 - OIL VALVE DANFOSS	221303
4 - COUPLING	221304
5 - NIPPLE	221305
6 - HOSES	207019
7 - FILTER	-
8 - MOTOR 130W AEG	221381
9 - SUPPORT	221341
10 - CAPACITOR 6.3uF x 130W	221382
11 - FAN 136 x 50mm	221411
12 - IGNITION TRANSFORMER DANFOSS	221312
13 - COVER	221345
14 - FAN HOUSING	221346
15 - AIR DAMPER	221415
16 - GASKET	221348
17 - AIR CONVEYOR	221349
18 - COVER AIR INLET	221351
19 - CONTROL BOX BASE SATRONIC TF 830.3	207628
20 - CONTROL BOX SATRONIC TF 830.3	29064
21 - PHOTORESISTOR SATRONIC	221318
22 - PLUG	207625
23 - SOCKET	-
24 - GASKET	-
25 - FLANGE	-
26 - O-RING	-
27 - CABLES TC	221319
28 - BLAST TUBE TC	221412
29 - ELECTRODES	221322
30 - FIRING HEAD TC	221413
31 - NOZZLE HOLDER TC	221354
32 - DIFFUSER	221391
33 - REAR DISC	-
34 - NOZZLE	221414
35 - ROD TC	221390
36 - INDEX	-
37 - SCREW	221389
38 - CABLE DANFOSS	221328



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