



# SERVICE MANUAL

# COMPACT 3000

Mod. 3000 92X  
Mod. 3000 93X  
Mod. 3000 94X



# Part 2



## Forward

This Service Handbook is intended to assist with servicing and fault-finding in Caravans and Motor Caravans equipped with the Alde Compact 3000 92x-94x. This Handbook may also be of assistance in ordering spare parts. It also provides general information on how Alde central heating systems are designed and how they operate.

When servicing components designed for LPG and 230 Volts, national safety regulations must be adhered to. After the boiler has been serviced, the service record must always be completed.

### Alde International Systems AB Service Department

*NB! We reserve the right to make changes after this handbook has been printed.*

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## 1:0 Replacing Components

Always switch off the 12V DC and 230V ~ power supply and turn the main gas cock to the "off" position before starting any servicing.

The seals (marked in red) must **not** be broken unless special permission has been obtained from Alde.

### 1:1 Replacing the Burner

**When a fault occurs in a burner, it should be replaced with a new model (Art. No. 3000 516).**

1. Remove the cover and end-plate from the boiler.
2. Remove the spark electrode and sensor cable from the electronic ignition unit.
3. Slacken the screw (use two spanners) on the gas pipe (fig. 1A) by the burner and by the solenoid valve (fig. 1B).
4. Dismantle the end-plate by the burner, by slackening the screws (fig. 1C) on the burner housing.
5. Pull the end-plate with burner straight out from the burner housing (fig. 2).
6. Check the spark gap on the new burner as shown in fig. 4
7. Install the new burner (insert it straight in) and screw it down via the end-plate in the burner housing (fig. 1C).
8. Screw down the gas pipe in the solenoid valve (fig. 1B) and in the burner (fig. 1A). Make sure that the cones are correctly installed. Tighten the nuts on the gas pipe (use two spanners) to 7-9 Nm (fig. 1).
9. Fit the spark electrode and flame sensor cables to the electronics.

**NB! Ignore points 10-14 on boilers with the designation 3000 9xx B.**

10. Adjust the screw on the pressure switch  $\frac{3}{4}$  of a turn anti-clockwise.
11. Unscrew the 4 plate screws securing the fan in the fan housing.
12. Tilt the fan towards the boiler body, lift it upwards out of the fan housing.
13. Remove the inlet plate under the impeller by slackening the 2 screws.
14. First assemble the new inlet plate, then replace the old one, 2 screws.
15. Re-assemble the fan in reverse order. **NB!** Take care not to damage the impeller during assembly. Check that the fan does not make a noise.
16. Pressurise the system to check it, check connections for any leaks using a leak detector spray, with the boiler operating. Once this is done, fit the end-plate and cover.

Fig 1.

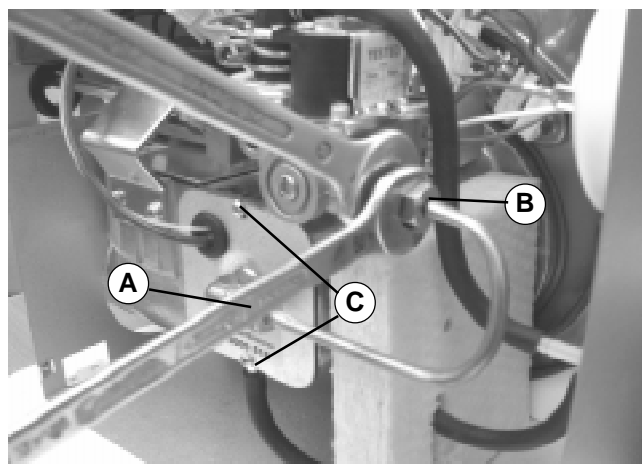
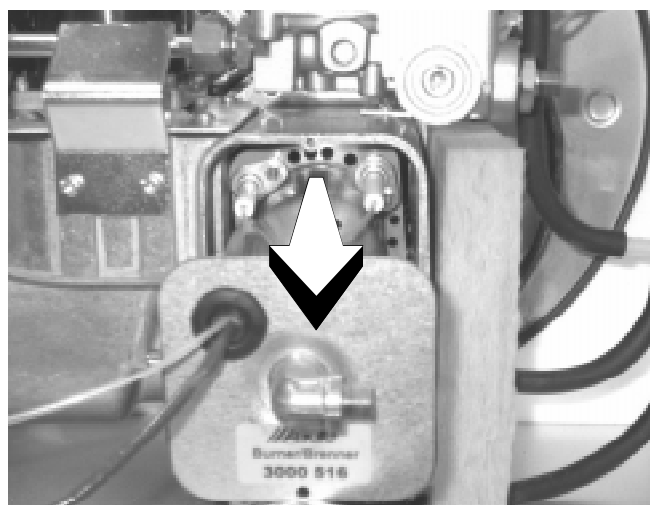


Fig 2.



## 1:2 Replacing the Spark Electrode

When replacing the spark electrode, also replace the flame sensor

1. Detach the burner as per instructions in 1:1.
2. Remove the nut (fig. 3A) and pull the spark electrode (fig. 3B) straight backwards.
3. Fit the new spark electrode and secure it. Check that the distance between the tip of the spark electrode and the mesh cover of the burner is 2.5 - 3.5 mm, and that they are correctly positioned (see fig. 4).
4. Fit the burner in accordance with instructions and test-start the boiler.

## 1:3 Replacing the Flame Sensor

When replacing the flame sensor, also replace the spark electrode

1. Detach the burner as per instructions in 1:1.
2. Remove the nut (fig. 3C) and then pull straight backwards (fig.3D).
3. Fit the new flame sensor, ensuring that the tip of the flame sensor is positioned above the burner in accordance with fig. 4B, and screw down
4. Fit the burner in accordance with instructions and test-start the boiler.

Fig 3.

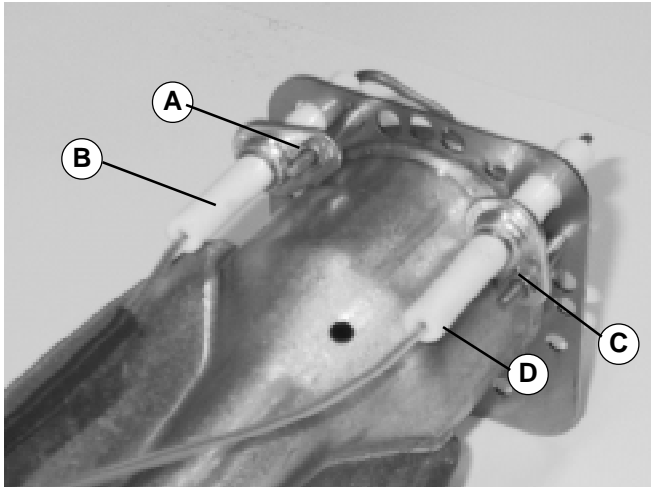


Fig 4.

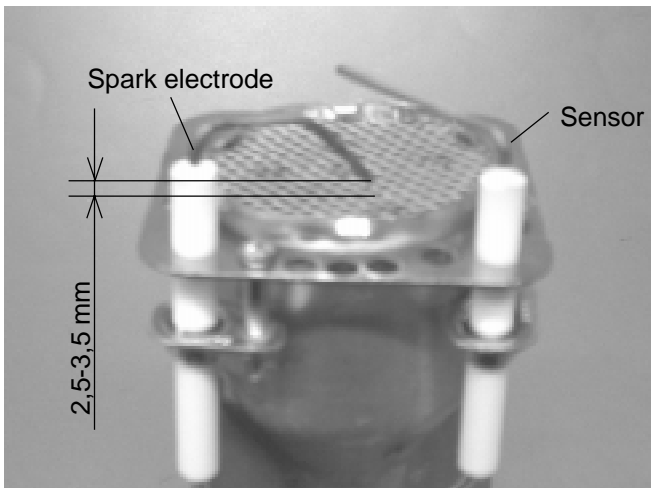
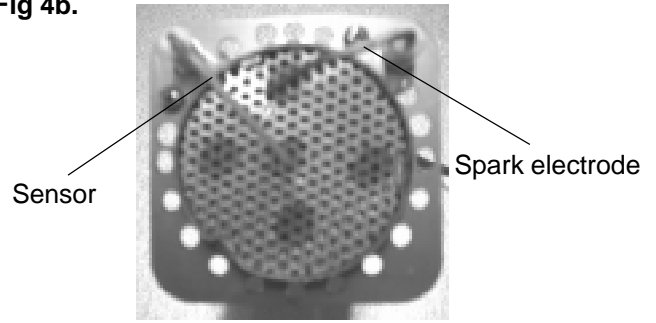


Fig 4b.



## 1:4 Replacing the Pressure Switch

1. Remove the cover and end-plate from the boiler.
2. Detach the blue, white and red cables from the pressure switch.
3. Push back the metal securing plate and pull out the pressure switch (fig. 5A).
4. Detach the rubber hoses (fig. 5B) from the pressure switch (do not pull the hoses straight out, unscrew them).
5. Refit the hoses to the new pressure switch before pushing it into place as shown in fig. 6.
6. Fasten the pressure switch and fit the cables to the flat-pin contacts in accordance with fig. 5.
7. Fit the cover and end-plate to the boiler. Then test-start the boiler.

Fig 5.

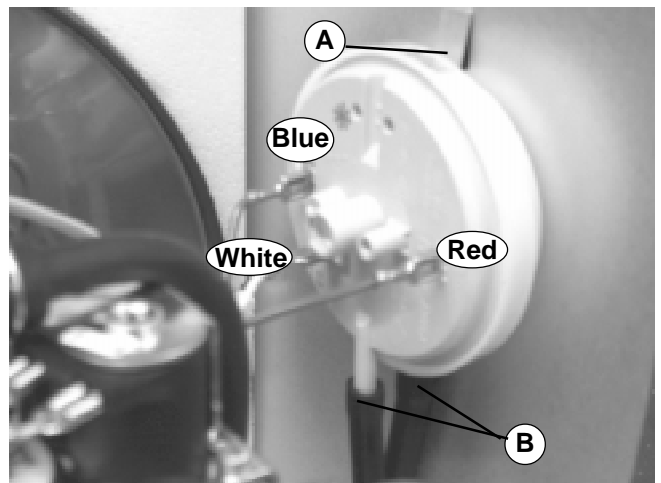
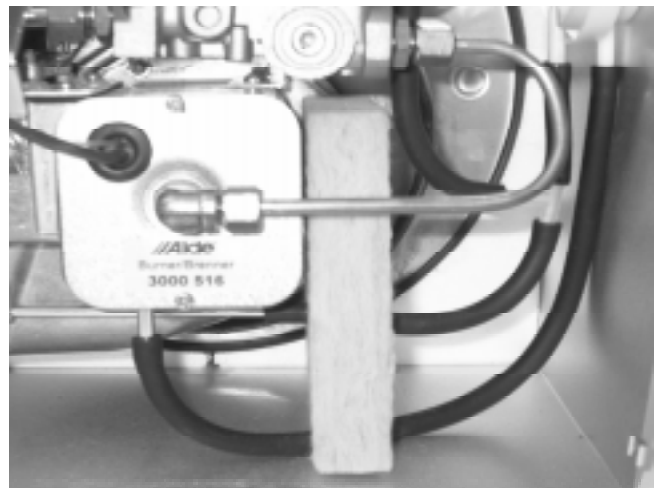


Fig 6.



## 2:0 Other Technical Information

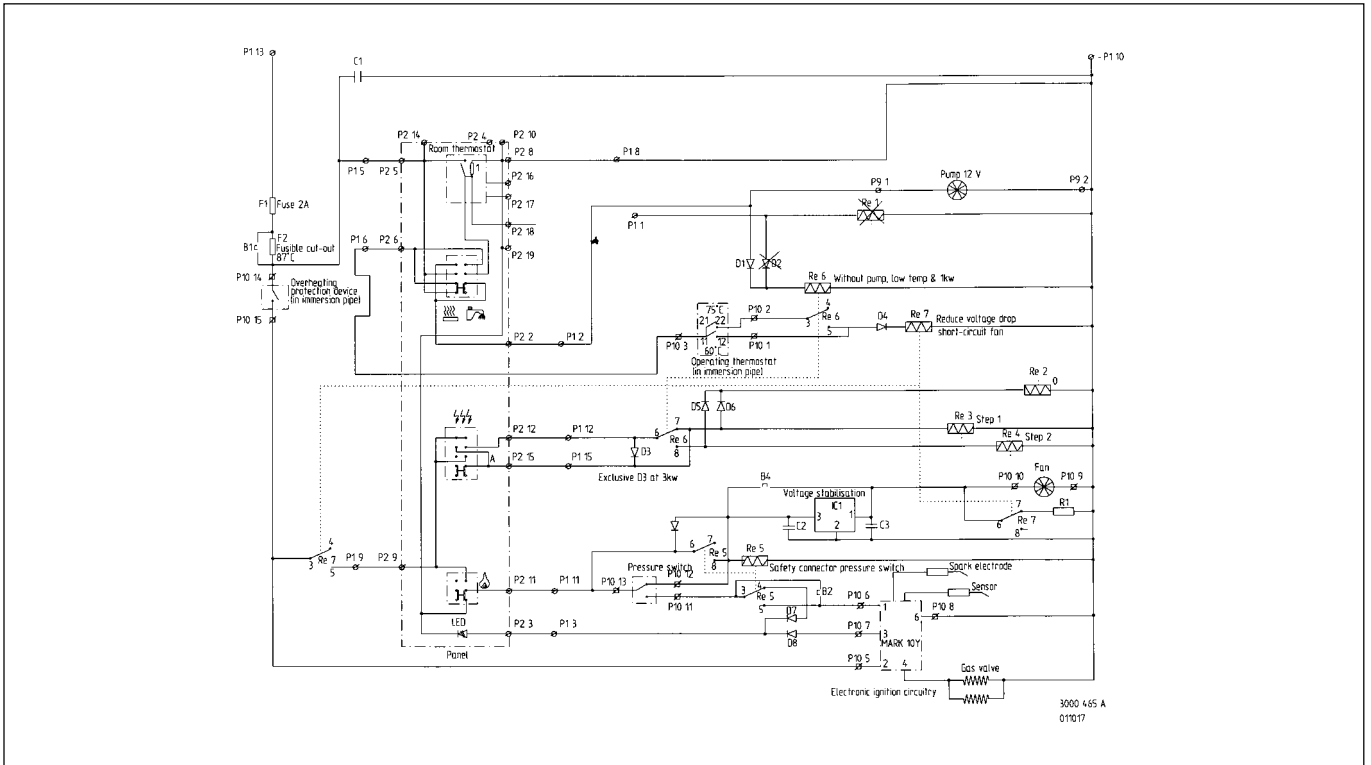
- The electronic ignition unit may emit a slight high frequency sound (during operation).
- Boiler models 3000 92x and 3000 93x are intended only for roof flues.
- Boiler model 3000 94x is intended only for wall flues.
- Boilers with manuf. no. 10921 and higher, have circuit-board rev C, which means that the fan does not start if the pressure switch is "on" and there is a new voltage stabilisation which handles lower voltages (10V).
- Boilers 3000 94x, manuf. no. 7536 and lower, may have a fault in the fan which causes a whistling sound.
- If there is a resonant noise on boiler model 3000 94x, insulate the exhaust hose with insulation hose art. no. 1900 233.
- If the fuse (F2) has blown, the boiler should not be repaired but should be replaced.
- In order to make running and maintenance easier, it is recommended that an automatic air vent be installed on the installation.

## 3:0 Safety check

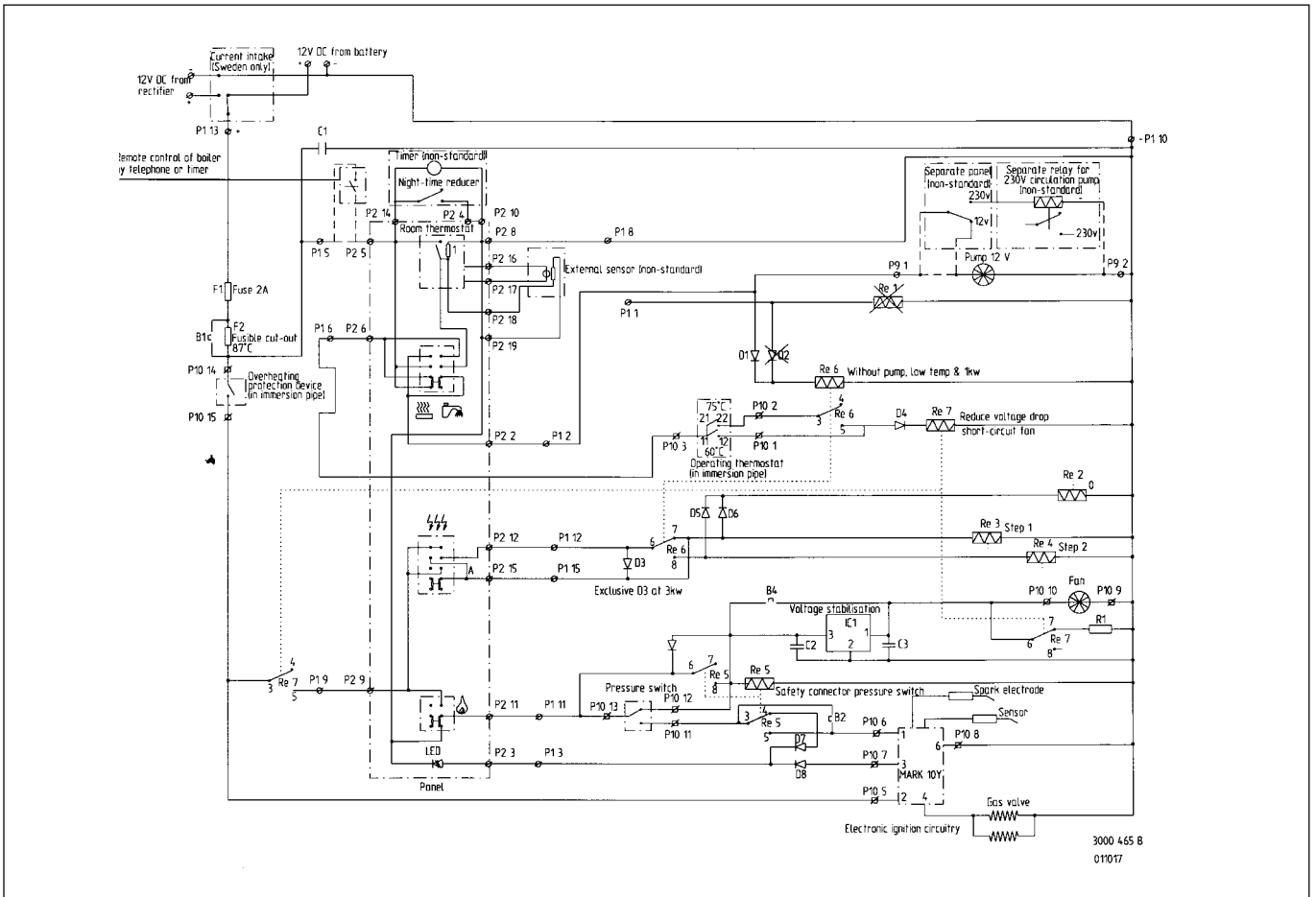
The safety check must be carried out after every service. Check:

- That the intake/exhaust hoses and flue are tight and undamaged.
- That the LPG pipes are tight. Pressure-test the system.
- That the 230V ~ earth cable is connected.
- That the safety valve on the water heater is not blocked.
- That the heating system is filled with glycol mixture up to the mark on the expansion vessel.

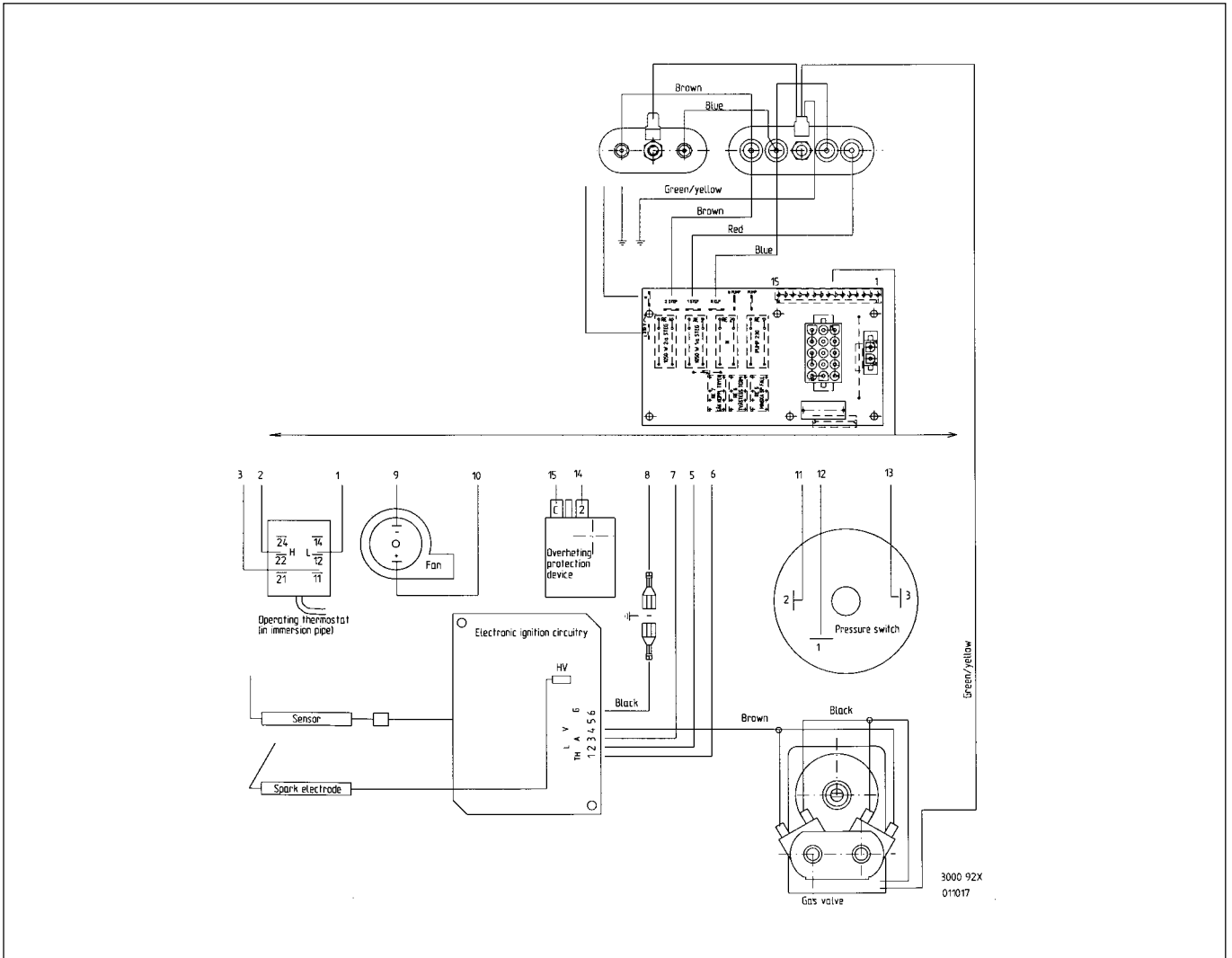
**4:0 Wiring Diagram for 3000 465, 565**



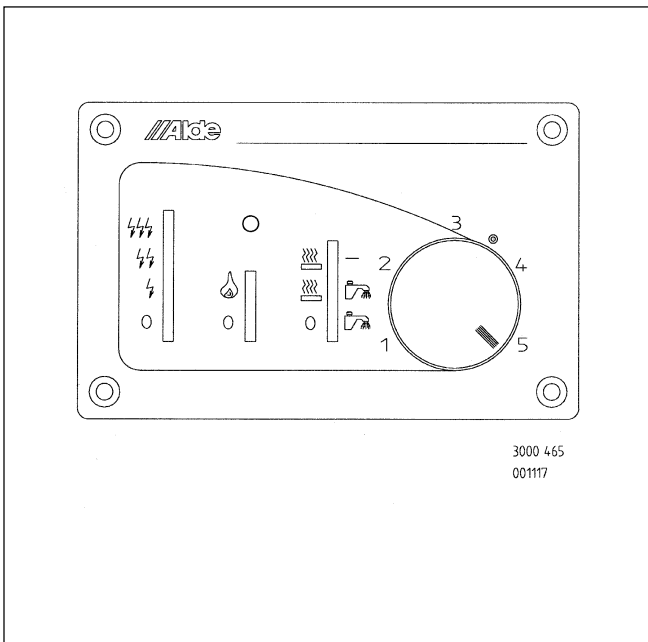
**4:1 Wiring Diagram for 3000 465, 565 (with auxiliary functions)**



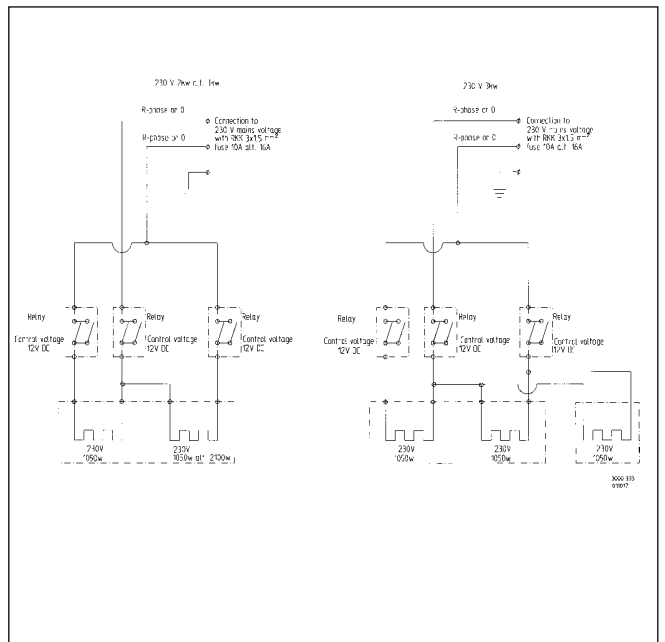
### 4:2 Circuit Diagram 12V and 230V ~



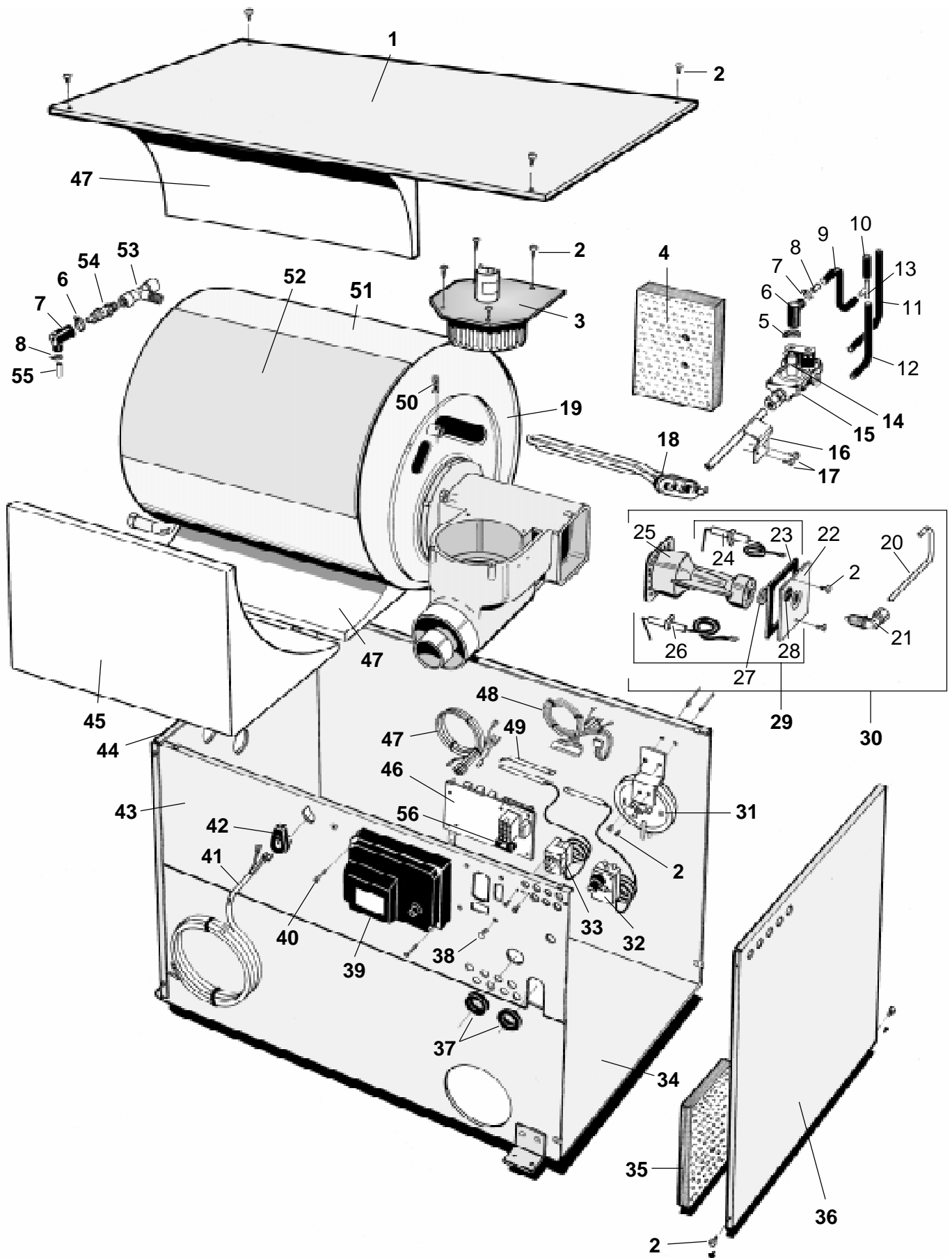
### 4:3 Control Panel 3000 465



### 4:4 Flow Chart 230V ~



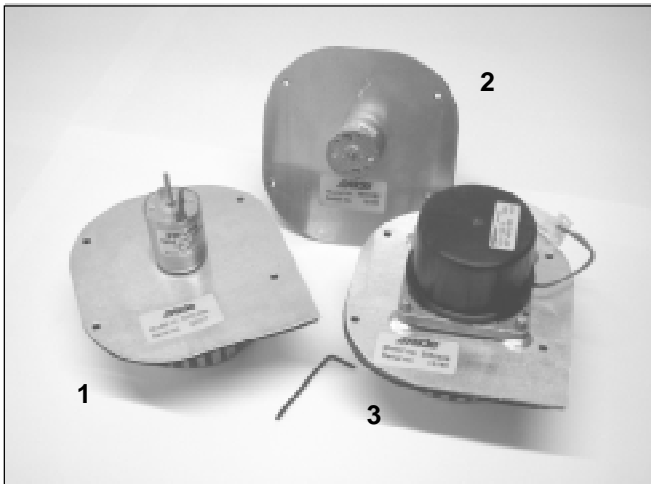
**5:0 Exploded Diagram**



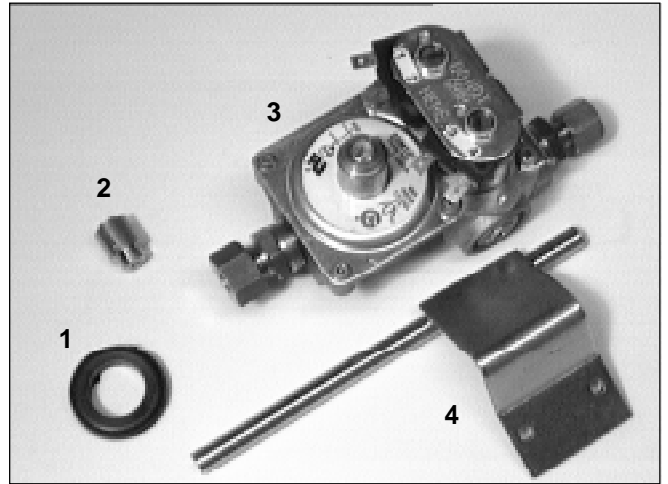
## 5:1 Article Numbers for Exploded Diagram

- |   |  |
|---|--|
| 1. <b>3000 133</b> Metal cover                              | 29. <b>3000 407</b> Ignition kit compl.                            |
| 2. <b>2900 258</b> Self-tapping screw B6 x 9.5              | 30. <b>3000 516</b> Burner   |
| 3. <b>3000 195</b> Fan compl. (for 901-921)                 | 31. <b>3000 127</b> "SIT" pressure switch                          |
| <b>3000 452</b> Fan compl. (for 92x and 93x)                | 32. <b>3000 362</b> Overheating protection device compl.           |
| <b>3000 409</b> Fan compl. (for 94x)                        | 33. <b>3000 365</b> Operating thermostat compl.                    |
| 4. <b>3000 247</b> Insulation                               | 34. <b>3000 185</b> Casing   |
| 5. <b>3000 372</b> Double clip                              | 35. <b>3000 246</b> Insulation                                     |
| 6. <b>3000 297</b> Rubber cap                               | 36. <b>3000 132</b> Front end plate                                |
| 7. <b>3000 324</b> Double clip                              | 37. <b>3000 231</b> Grommet  |
| 8. <b>2930 414</b> Sleeve                                   | 38. <b>3000 232</b> Plastic spacer                                 |
| 9. <b>3000 196</b> Rubber hose, L=190 mm                    | 39. <b>3000 157</b> Electronic ignition unit                       |
| 10. <b>3000 196</b> Rubber hose, L=55 mm                    | 40. <b>7410 325</b> Self-tapping screw 2.9x25                      |
| 11. <b>3000 196</b> Rubber hose, L=330 mm                   | 41. <b>3000 286</b> Mains supply cable                             |
| 12. <b>3000 196</b> Rubber hose, L=110 mm                   | 42. <b>2762 125</b> Cable clamp                                    |
| 13. <b>3000 138</b> T-piece                                 | 43. <b>3000 351</b> Service panel                                  |
| 14. <b>3000 168</b> Soft start valve                        | 44. <b>3000 131</b> Rear end plate                                 |
| 15. <b>3000 289</b> Solenoid valve compl.                   | 45. <b>3000 261</b> Insulation                                     |
| 16. <b>3000 278</b> Gasrör                                  | 46. <b>3000 330</b> Printed circuit board (for 921)                |
| 17. <b>2737 174</b> Screw M4x8                              | <b>3000 333</b> Printed circuit board (for 3 kW heating cartridge) |
| 18. <b>3000 256</b> Electrical heating cartridge 1kW        | <b>3000 334</b> Printed circuit board (for 2 kW heating cartridge) |
| <b>3000 250</b> Electrical heating cartridge 2kW            | 47. <b>3000 367</b> Wiring loom for 230 V                          |
| <b>3000 315</b> Electrical heating cartridge 3kW            | 48. <b>3000 184</b> Wiring loom                                    |
| <b>3000 255</b> Blind plug for electrical heating cartridge | 49. <b>3000 327</b> Spring   |
| 19. <b>3000 240</b> Plug                                    | 50. <b>4071 011</b> Retaining clip                                 |
| 20. <b>3000 159</b> Pipe                                    | 51. <b>3000 460</b> Boiler body compl.                             |
| 21. <b>3000 528</b> Nozzle unit                             | 52. <b>3000 251</b> Insulation                                     |
| 22. <b>3000 204</b> End plate                               | 53. <b>2959 120</b> T-piece  |
| 23. <b>3000 213</b> Gasket                                  | 54. <b>3000 290</b> Pressure relief valve                          |
| 24. <b>3000 206</b> Flame sensor                            | 55. <b>3000 143</b> Pipe   |
| 25. <b>3000 501</b> Burner                                  | 56. <b>3000 166</b> Fuse 2 A                                       |
| 26. <b>3000 205</b> Spark electrode                         |  |
| 27. <b>3000 383</b> Nut                                     |  |
| 28. <b>2930 235</b> Cable grommet                           |  |

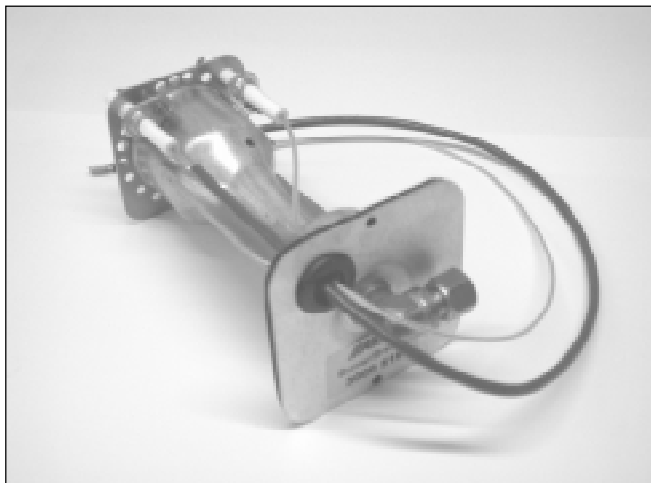
**6:0 Spare parts**



- 1. **3000 195** Fan complete (12 V for 3000 901-921)
  - 2. **3000 452** Fan complete (9 V for 3000 92x-93x)
  - 3. **3000 409** Fan complete (9 V for 3000 94x)
- Packed in cardboard box with Allen key for impeller.



- 1. **3000 231** Grommet
- 2. **3000 168** Soft start valve
- 3. **3000 289** Solenoid valve compl. with soft start valve
- 4. **3000 278** Gas pipe

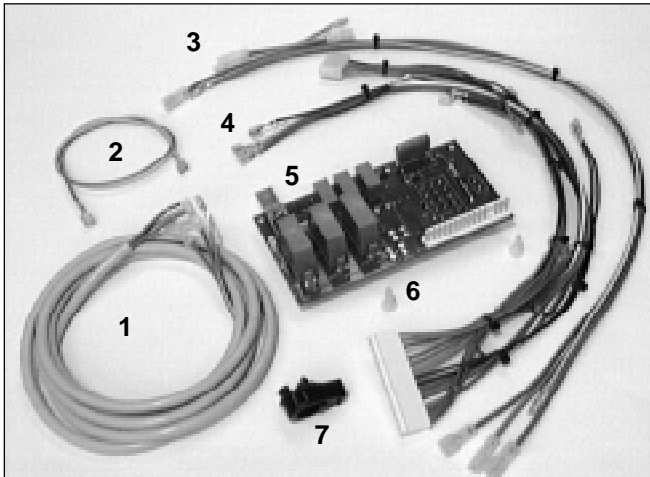


**3000 516** Burner compl. (for 92x-94x)

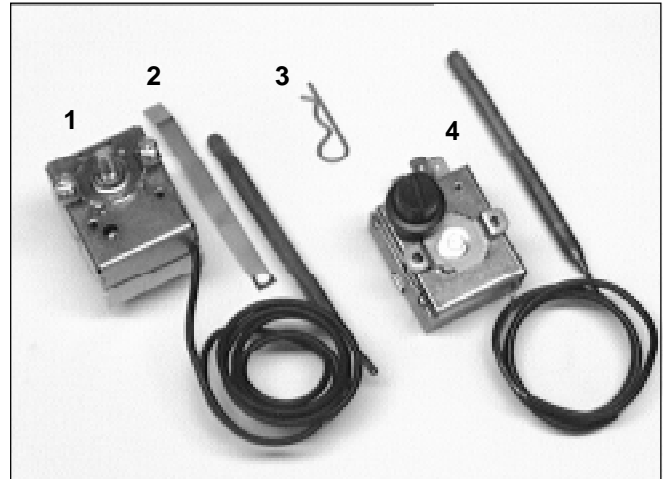


**3000 407** Tändsats bestående av tändstift, sensor, kabelgenomföring och packning (passar alla modeller)

## 6:0 Spare parts



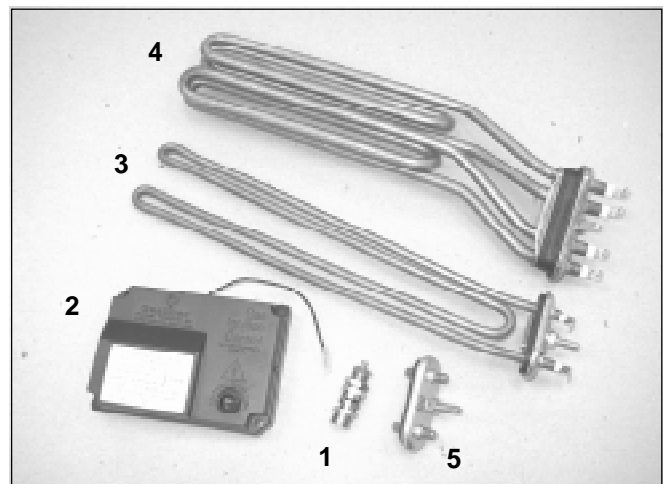
1. **3000 286** Main supply cable
2. **3000 280** Cable
3. **3000 367** Wiring loom
4. **3000 184** Wiring loom
5. **3000 330** Printed circuit board (921)
- 3000 333** Printed circuit board (92x-94x with 3 kW heating cartridge)
- 3000 334** Printed circuit board (92x-94x with 2 kW heating cartridge)
6. **3000 232** Spacer
7. **2762 125** Cable clamp



1. **3000 365** Operating thermostat "Imit" including retaining clip
2. **3000 327** Spring
3. **4071 011** Retaining clip
4. **3000 362** Overheating protection device "Imit" compl.



- 3000 127** "SIT" pressure switch



1. **3000 290** Pressure release valve
2. **3000 157** Electronic ignition unit
3. **3000 256** Electrical heating cartridge 1 kW
4. **3000 250** Electrical heating cartridge 2 kW
- 3000 315** Electrical heating cartridge 3 kW
5. **3000 255** Blind plug for electrical heating cartridge



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