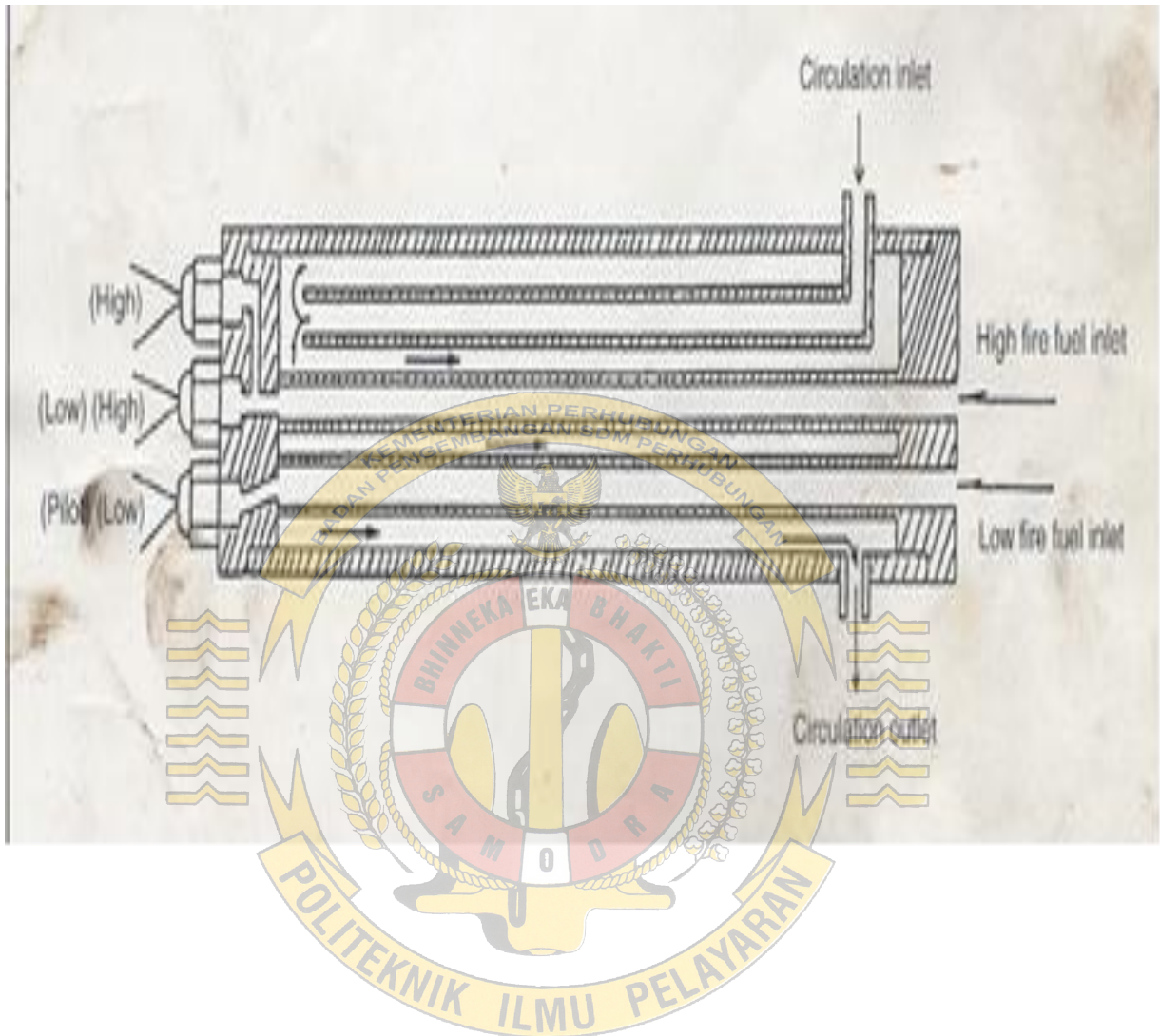


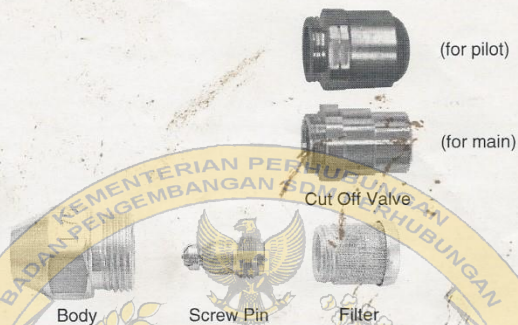
DAFTAR GAMBAR

Gambar : 2.2 <i>Nozzle Tip</i>	10
Gambar : 2.3 <i>Nozzle Pipe</i>	11
Gambar : 2.4 <i>Ignition Rod</i>	11
Gambar : 2.5 Filter Bahan Bakar (<i>Strainer</i>).....	12
Gambar : 2.6 <i>Solenoid Valve</i>	13
Gambar : 2.7 Pompa Bahan Bakar Ketel Bantu.....	14
Gambar : 2.8 <i>Termostat (For Fuel Oil)</i>	14
Gambar : 2.9 <i>Ignition Transformer</i>	15
Gambar : 3.0 <i>Flame Eye</i>	16



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6-8 Nozzle Tip



The oil coming into the nozzle passes through the cut off valve for prevention of oil leakage and enters the Spinning Chamber via a thin channel of the Distributor. This Spinning Chamber is conical and the tip has an orifice. The oil increases its velocity while it swirls inside the Spinning Chamber, passes through the orifice and sprayed to the Combustion Chamber. As the machine work of the nozzle is very precisely, care must be exercised in handling the nozzle. In addition, a hard material is used for the nozzle as oil always frictions the orifice and other parts at a very high pressure and speed, it should be exchanged every year. The size by the model differs slightly. Please check the notes on the final drawing.

- There is a cut-off valve attached to the nozzle tip. When replacing the nozzle tip, please remove the filter and attach the cut-off valve.
- When removing and fitting the nozzle tip use the special box wrench which is provided as special tool.
- The cut off valves for 2.0G×60° (pilot) have been changed to ones equipped with the nets to withstand clogged. Use after switching to the old parts because combustion capacity is not affected by modification.



Warning

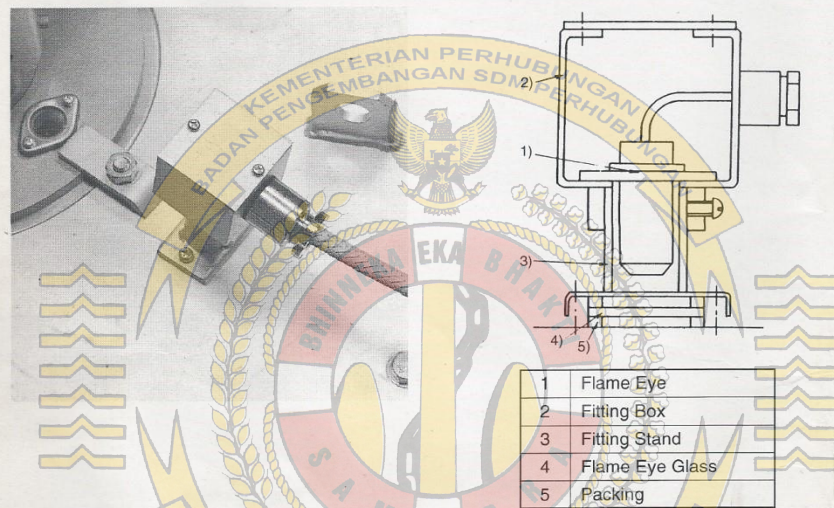
Improper spray volume, spray angle, and/or spray pattern can lead to poor combustion, which may sometimes cause backfiring that can damage the unit. Please use only genuine parts.



Caution

The cut off valves with the nets cannot be used for C. F. Oil. Replace the valves after checking the nozzle standards.

6-13 Flame Eye



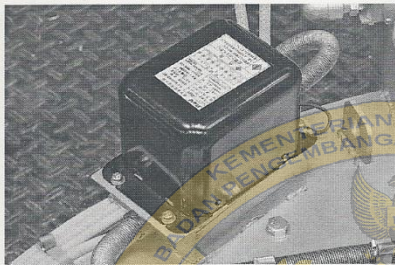
The Flame Eye is a device that gives an indication to the combustion circuit by detecting the flame during combustion and monitors the flame using its photosensitive characteristic (Normally, when a resistance of 100k Ω catches flame, it drops under 500 Ω) of CdS (Cadmium sulfide cell).

The Flame Eye will not be able to catch the brightness of the flame inside the furnace when it is damaged or the protection glass is blackened with soot. Such soiling could stop the burner as it produces the same condition to failed ignition or mis-fire. The failure of the Flame Eye may be caused by soiled protection glass if the flame dies out in about 3-4 seconds after combustion as the burner is ignited by turning the burner switch to combustion while looking inside the furnace from the sight glass. Do not neglect cleaning the protection glass at all times.

Note

Clean the protection glass regularly.

6-12 Ignition Transformer



The Ignition Transformer is an important device for creating sparks from the Ceramic Insulator for the Ignitor by changing the 100V voltage on the primary side to high voltage. (10kv)

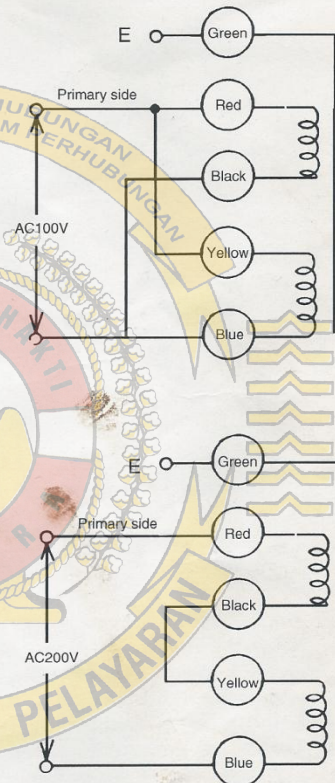
The primary voltage of the transformer has dual voltages; 100V and 200V. When the control circuit voltage is 100V, install the wire on the primary side as shown in the right diagram.



Warning

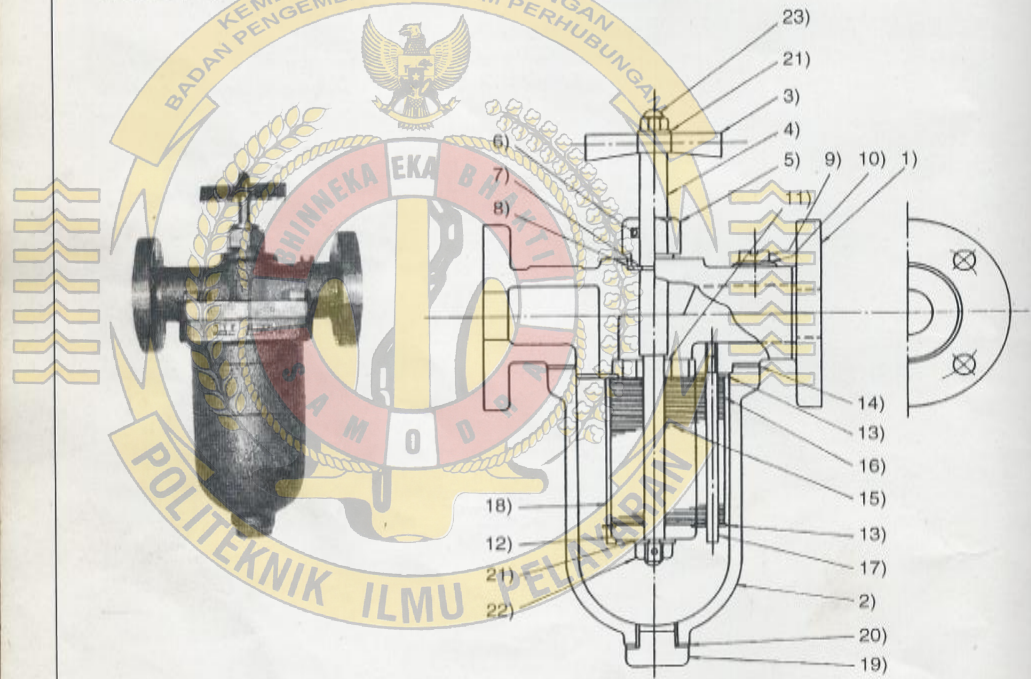
Beware of electrocution as the Ignition Transformer conducts high voltage.

Avoid using it with rubber disconnected from the boiler as it cannot be earthed, which would cause the transformer to burn out.

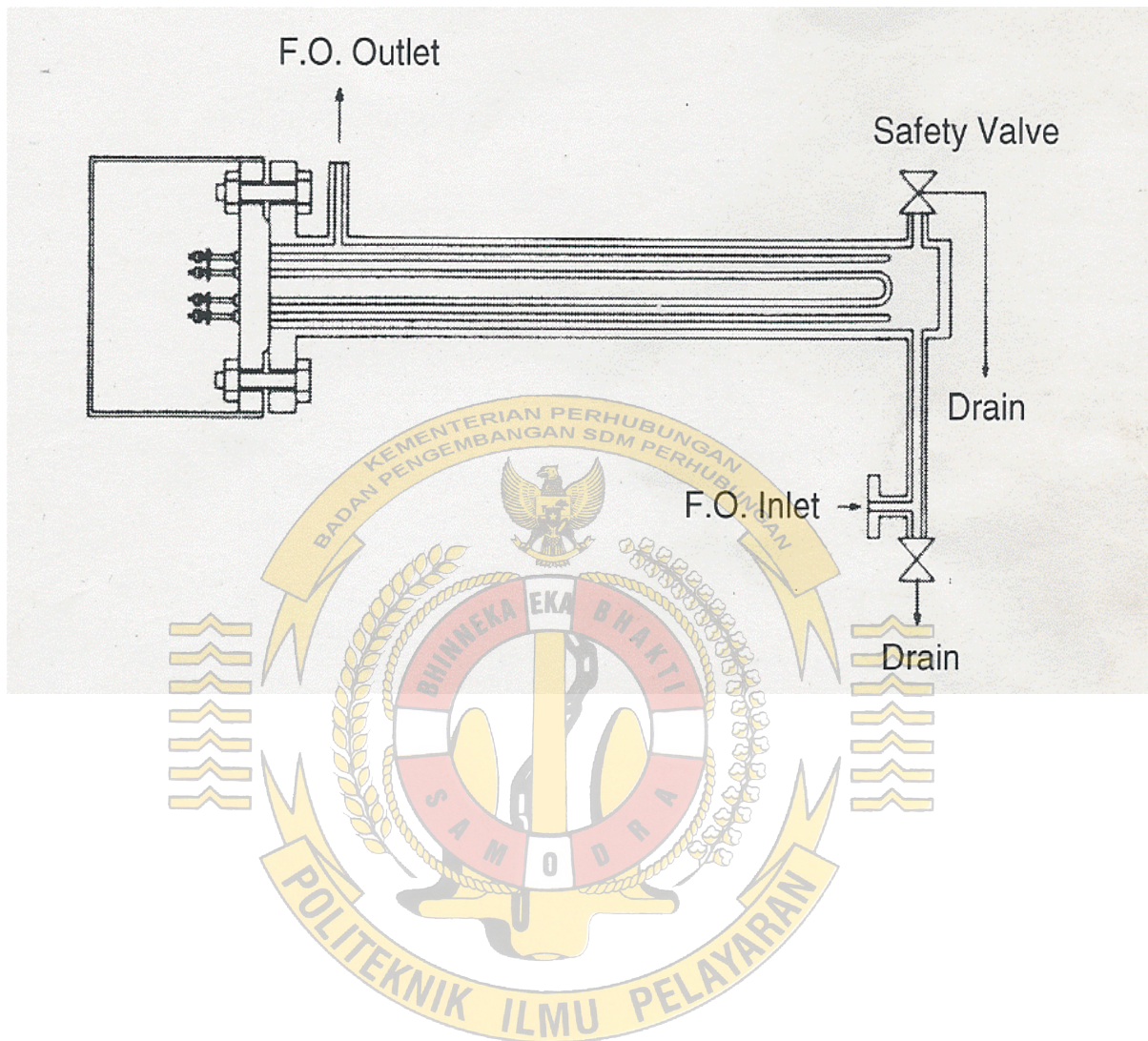


6-24 Fuel Oil Strainer (Fuel System)

The oil strainer removes dust and impurities from the fuel entering the boiler and prevents them from entering into and damaging the fuel pump, solenoid valve, or burner nozzle. It is installed on the suction side of the fuel pump. Since it is an oil strainer, its element can be cleaned during operation. Turn the handle once a day to prevent it from clogging. Open the plug then drain all water and sludge out once a month.



1	Cleaner Cover	9	Air Plug	17	Square Rod
2	Oil Tank	10	Packing	18	Round Rod
3	Handle	11	Upper End	19	Plug
4	Main Shaft	12	Lower End	20	Packing
5	Gland	13	Fixing Plate	21	Washer
6	O-ring	14	Packing	22	Nut
7	Ring	15	Filter Plate	23	Cap Nut
8	Packing	16	Scraper Plate		

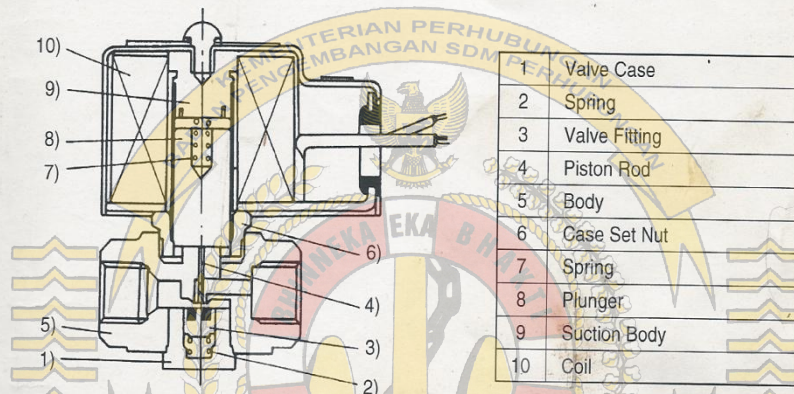




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(2) Solenoid Valve for Main Burner

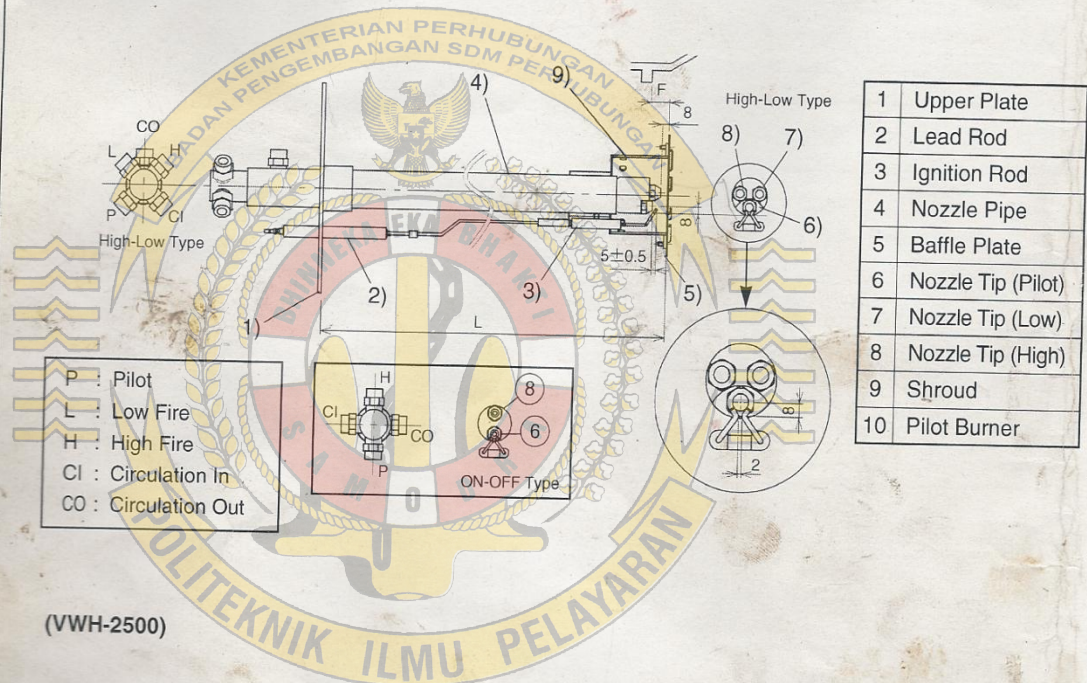
The main burner of Series VWH uses a valve that opens when an electrical current passes through it.



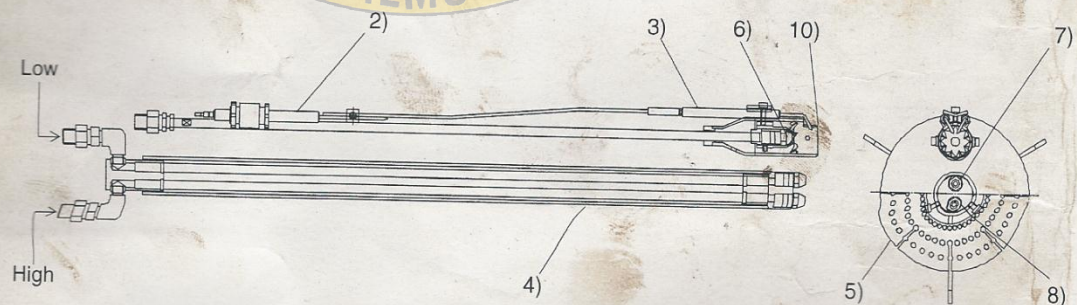
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6-7 Burner Nozzle (VWH400~2000)

(Refer to final drawing for details of the size of each burner.)



(VWH-2500)



The burner nozzle part is a device that burns fuel while igniting and keeping the flame effectively by atomizing the supplied fuel, and is an important part that determines the combustion.

The fuel sent in by the fuel pump is sprayed from the nozzle tip via the Fuel Heater, Solenoid Valve and Burner Nozzle Pipe, atomizes and expands the contact area with air, ignites and makes flame by the spark from the tip of the Spark Rod.

The spark disappears a few seconds after ignition and the flame is kept by pulling back the flame in front of the nozzle tip by the reverse-flow region of air that is produced at the back of the Baffle Plate.

When the butterfly bolts for fixing the burner on the top part of the window box are removed and the plug caps on the Spark Rod, fuel joint pipes are removed, the burner nozzle part can be pulled out as shown in the diagram above.

The pulled out burner nozzle can be disassembled further into Nozzle Pipe, Nozzle Tip, Spark Rod and Baffle Plate. The parts should be washed with light oil and cleaned with air for assembly. It is advisable to adjust the relative distance of the Nozzle Tip, Baffle Plate and Spark Rod based on the unit.