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Corso Lino Zanussi, 30
I - 33080 PORCIA /PN (ITALY)

Fax +39 0434 394096

SOI

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Built-in hobs

**"DEFENDI"
DOUBLE ZONE
BURNER**

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1 - INTRODUCTION

1.1 - AIM OF THIS MANUAL

The aim of this Manual is to provide information on the operation and accessibility of the burner and "Defendi" double zone burner.

2 - BURNERS

The "Defendi" double zone burner differs from the normal burner used on cooking hobs in having different operation modes and different burning zones.

2.1 - NORMAL BURNER

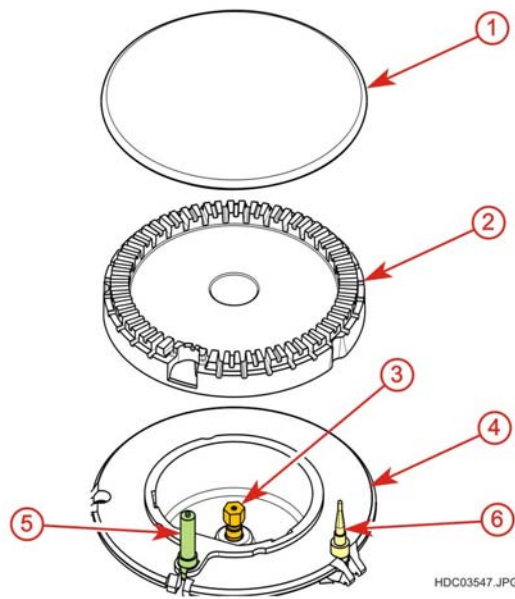


Fig. 1

- 1 - UPPER CAP
- 2 - FLAME-SPREADER
- 3 - NOZZLE
- 4 - BURNER BODY
- 5 - SPARK PLUG
- 6 - THERMOCOUPLE

2.2 - "DEFENDI" DOUBLE ZONE BURNER

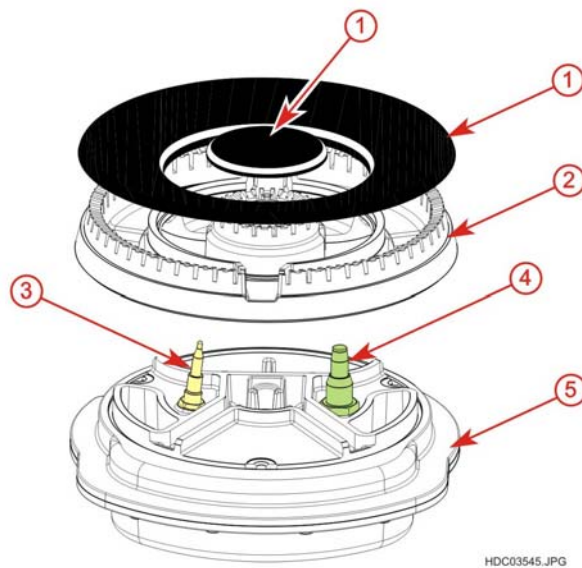


Fig. 2

- 1 - UPPER CAPS
- 2 - FLAME-SPREADER
- 3 - THERMOCOUPLE
- 4 - SPARK PLUG
- 5 - BURNER BODY

2.2.1 - "DEFENDI" DOUBLE ZONE BURNING ZONES

The "Defendi" double zone burner has 3 burning zones, one central and two side zones powered simultaneously.

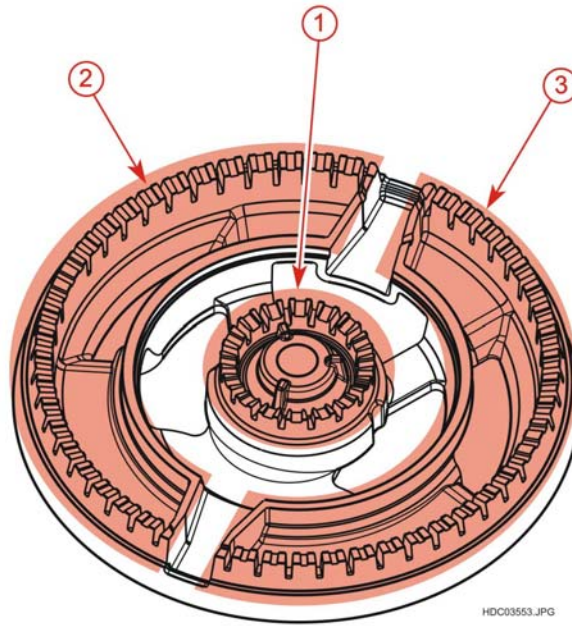


Fig. 3

- 1 - CENTRAL ZONE
- 2 - LEFT SIDE ZONE
- 3 - RIGHT SIDE ZONE

2.2.2 - POSITION OF THE NOZZLES ON THE "DEFENDI" DOUBLE ZONE BURNER

Each burner zone has its own gas supply nozzle. The various nozzles are shown in the figure below.

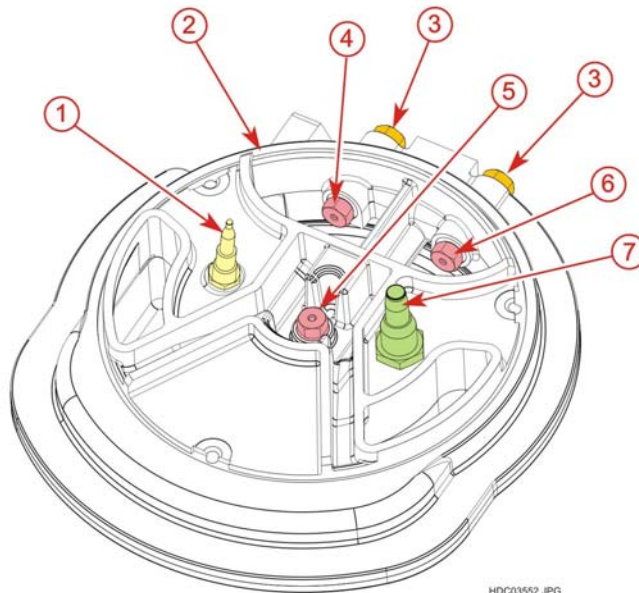


Fig. 4

- 1 - THERMOCOUPLE
- 2 - BURNER BODY
- 3 - BLIND NOZZLES
- 4 - LEFT SIDE ZONE NOZZLE
- 5 - CENTRAL ZONE NOZZLE
- 6 - RIGHT SIDE ZONE NOZZLE
- 7 - SPARK PLUG

The relation between cooking zone - relative nozzle is shown in the figures below.

NOZZLE FOR THE CENTRAL ZONE

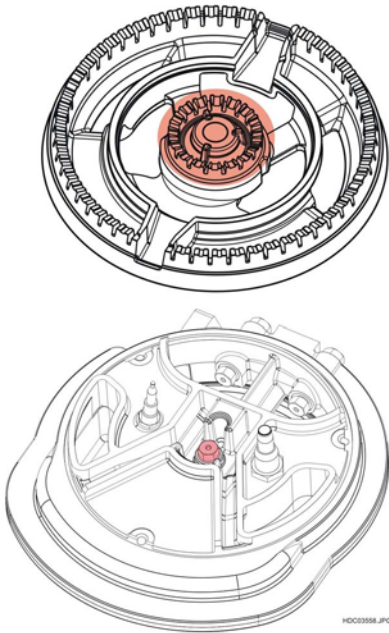


Fig. 5

NOZZLE FOR THE LEFT SIDE ZONE

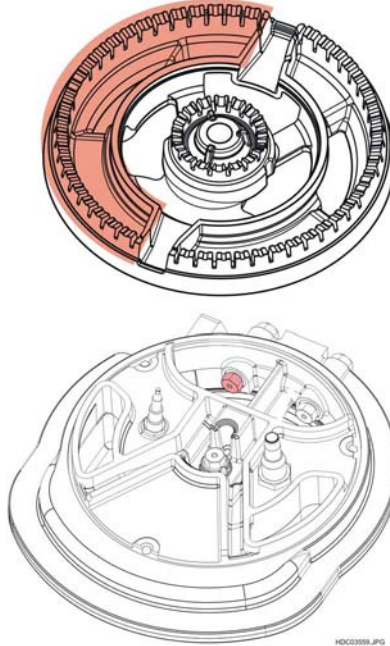


Fig. 6

NOZZLE FOR THE RIGHT SIDE ZONE

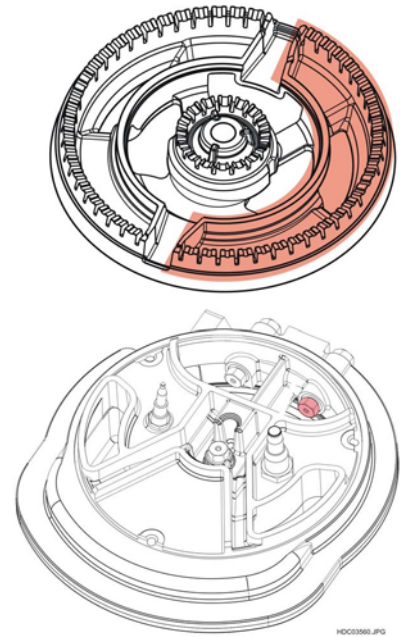


Fig. 7

2.2.3 - POSITION OF THE GAS INPUTS ON "DEFENDI" DOUBLE ZONE BURNER

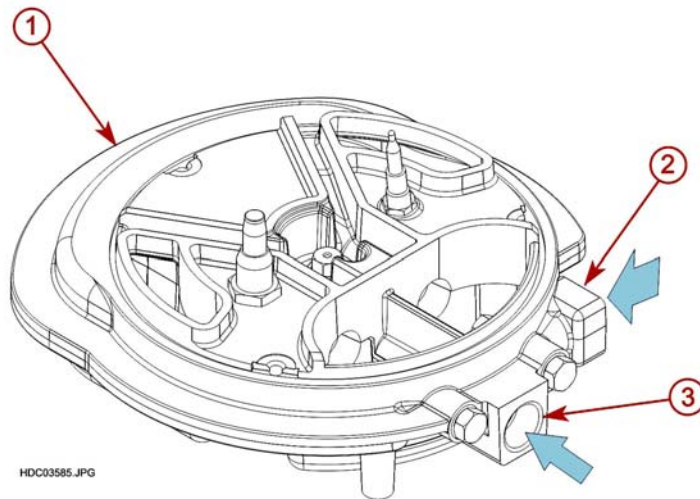


Fig. 8

- 1 - BURNER BODY
- 2 - SIDE ZONES GAS INLETS
- 3 - CENTRAL ZONE GAS INLET

3 - GAS CONTROL TAPS

To control the double zone burner, a two-way tap is used that differs from the normal taps.

3.1 - NORMAL CONTROL TAPS

The following are examples of normal taps for controlling normal burners.

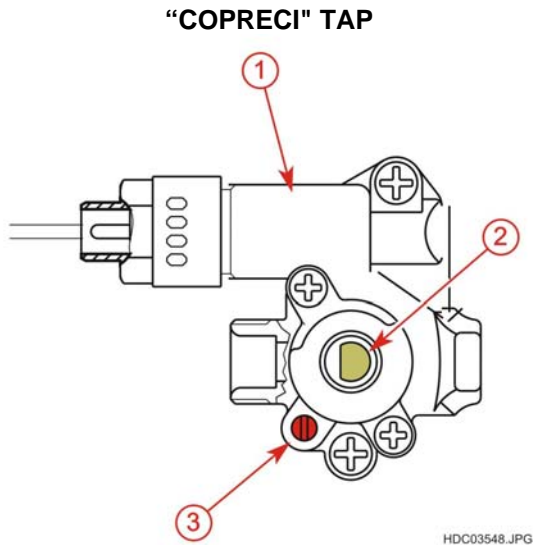


Fig. 9

- 1 - TAP BODY
- 2 - CONTROL PIN
- 3 - MINIMUM REGULATION BY-PASS

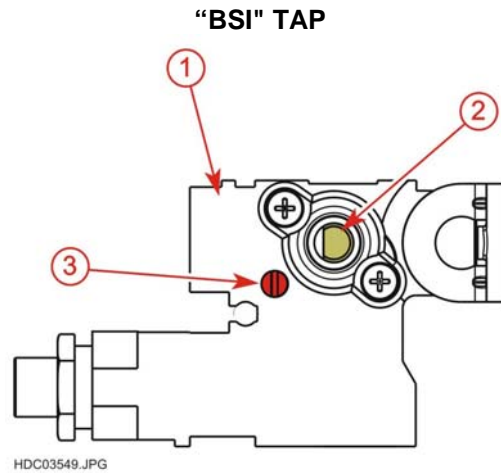


Fig. 10

- 1 - TAP BODY
- 2 - CONTROL PIN
- 3 - MINIMUM REGULATION BY-PASS

3.2 - TWO-WAY CONTROL TAP

The two-way control tap has two operating modes. The clockwise rotation area allows the gas to exit only through the central zone, while the anti-clockwise rotation area allows the gas to exit from both sections (burner fully on).

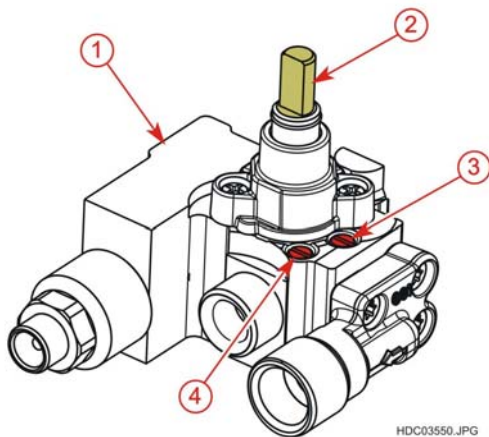


Fig. 11

- 1 - TAP BODY
- 2 - CONTROL PIN
- 3 - MINIMUM REGULATION BY-PASS
INTERNAL CROWN
- 4 - MINIMUM REGULATION BY-PASS
INTERNAL + EXTERNAL CROWN

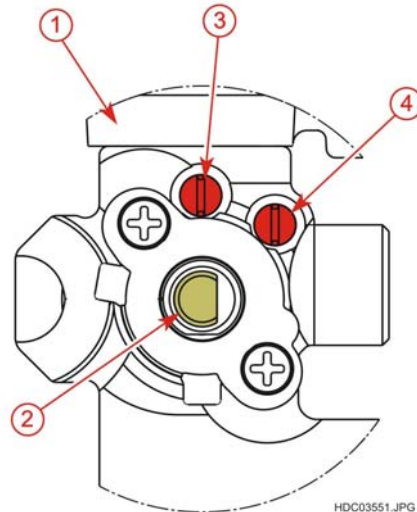
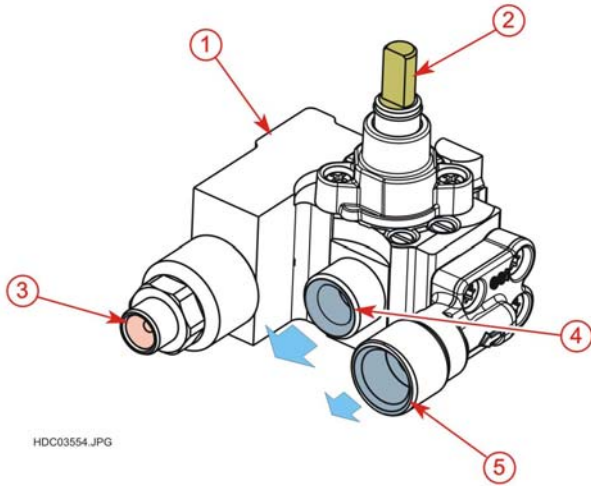


Fig. 12

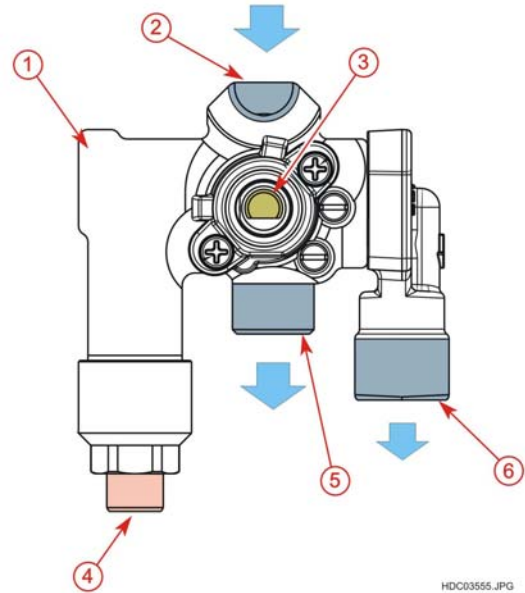
- 1 - TAP BODY
- 2 - CONTROL PIN
- 3 - MINIMUM REGULATION BY-PASS
INTERNAL CROWN
- 4 - MINIMUM REGULATION BY-PASS
INTERNAL + EXTERNAL CROWN



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Fig. 13

- 1 - TAP BODY
- 2 - CONTROL PIN
- 3 - THERMOCOUPLE CONNECTION
- 4 - GAS OUTLET FOR THE SIDE ZONES
- 5 - GAS OUTLET FOR CENTRAL ZONE



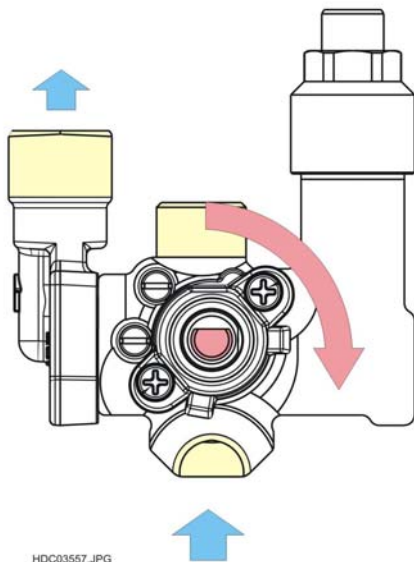
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Fig. 14

- 1 - TAP BODY
- 2 - GAS INLET
- 3 - CONTROL PIN
- 4 - THERMOCOUPLE CONNECTION
- 5 - GAS OUTLET FOR THE SIDE ZONES
- 6 - GAS OULET FOR CENTRAL ZONE

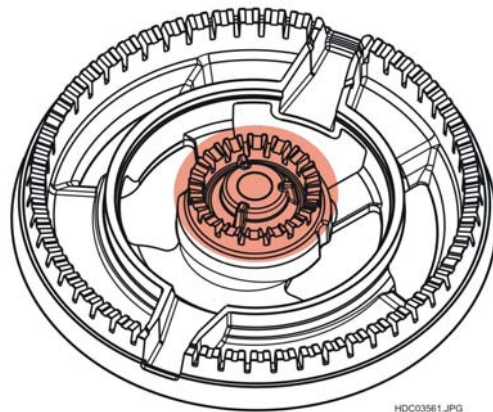
3.2.1 - OPERATION OF THE BURNER CENTRAL ZONE

Power is supplied to the central zone of the burner by turning the control knob in a clockwise direction.



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Fig. 15



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Fig. 16

3.2.2 - OPERATION OF THE BURNER CENTRAL AND SIDE ZONES

Power is supplied to the central and side zones by turning the control knob in a clockwise direction.

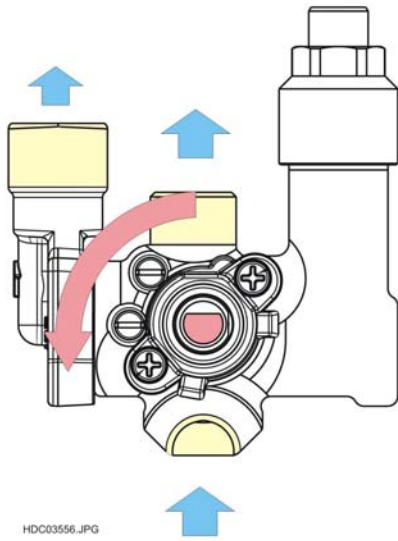


Fig. 17

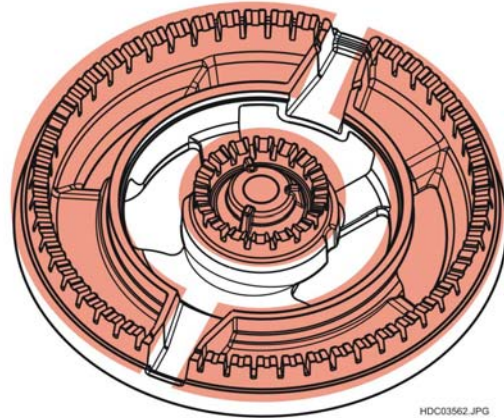


Fig. 18

4 - IGNITION AND THERMOCOUPLE

4.1 - SPARK PLUG

The burner ignition occurs via a spark plug powered by the ignition generator (see Fig. 21). The spark plug is fixed to the burner assembly by a lock nut with spring (see Fig. 19).

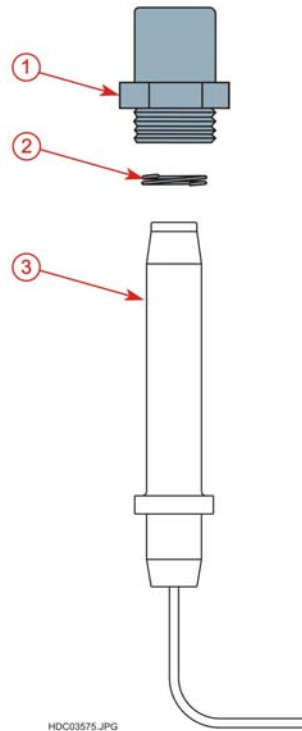


Fig. 19

- 1 - SPARK PLUG NUT
- 2 - SPRING
- 3 - SPARK PLUG

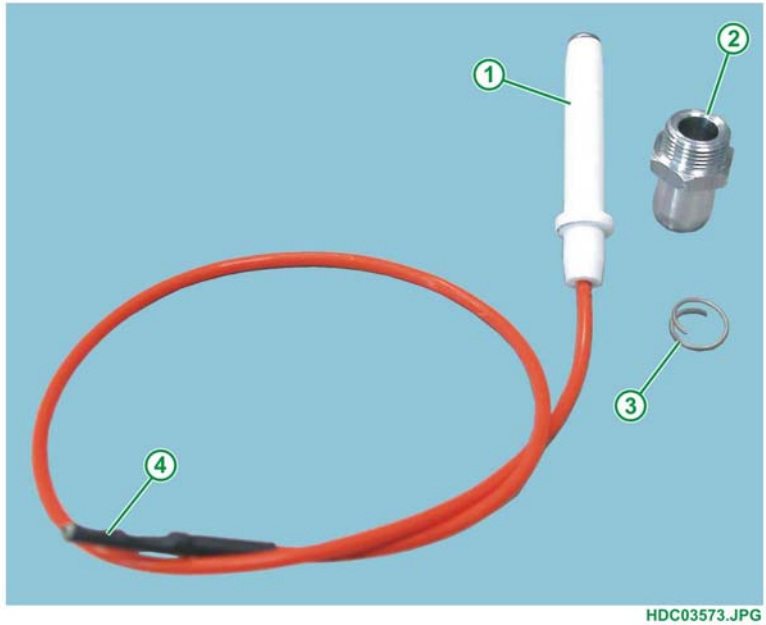


Fig. 20

- 1 - SPARK PLUG
- 2 - SPARK PLUG LOCK NUT
- 3 - SPRING
- 4 - ELECTRIC CONNECTION

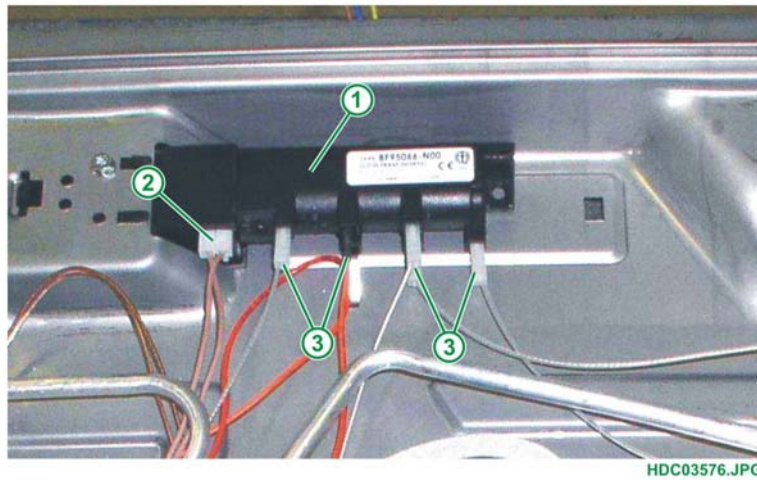


Fig. 21

- 1 - IGNITION GENERATOR
- 2 - POWER SUPPLY TO GENERATOR
- 3 - HIGH-VOLTAGE CABLE CONNECTION FOR THE SPARK PLUGS

4.2 - THERMOCOUPLE

The possibility of the burner being shut-off is prevented by the thermocouple and tap magnet.

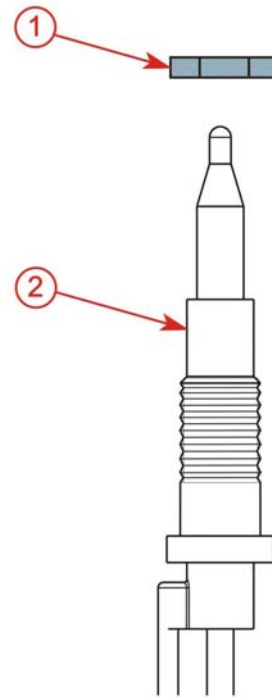


Fig. 22

- 1 - THERMOCOUPLE NUT
- 2 - THERMOCOUPLE

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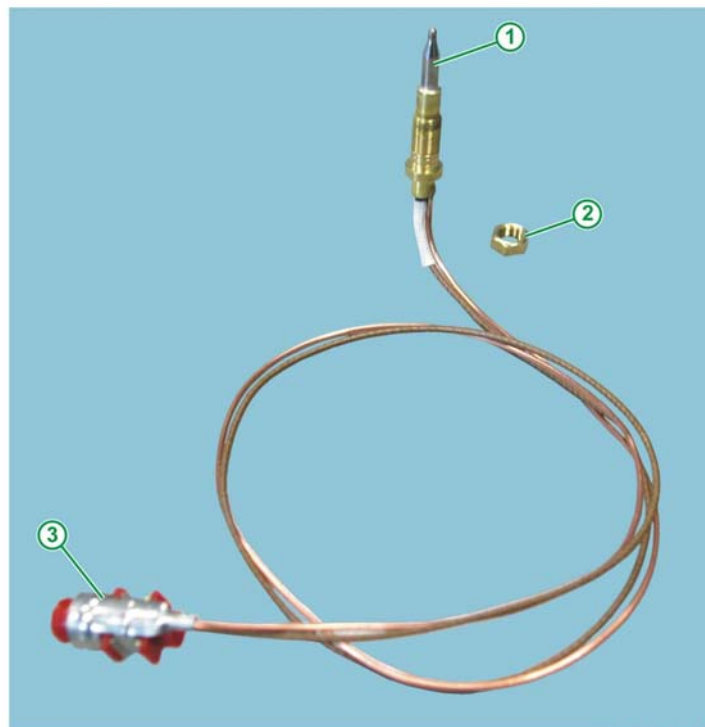


Fig. 23

- 1 - THERMOCOUPLE
- 2 - THERMOCOUPLE LOCK NUT
- 3- CONNECTION TO TAP

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5 - EXAMPLES OF APPLICATION

5.1 - APPLICATION ON 5 BURNER HOBS

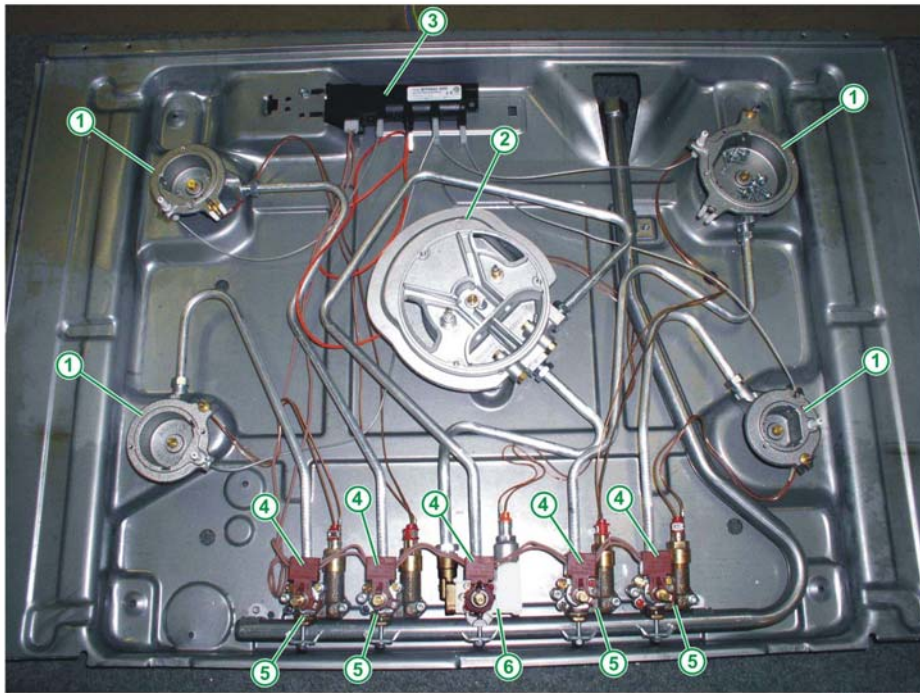


Fig. 24

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- 1 - NORMAL BURNERS
- 2 - "DEFENDI" DOUBLE ZONE BURNER
- 3 - IGNITION GENERATOR

- 4 - CATENARY MICROSWITCHES
- 5 - NORMAL TAPS
- 6 - TWO-WAY TAP

5.2 - APPLICATION ON 6 BURNER HOBS

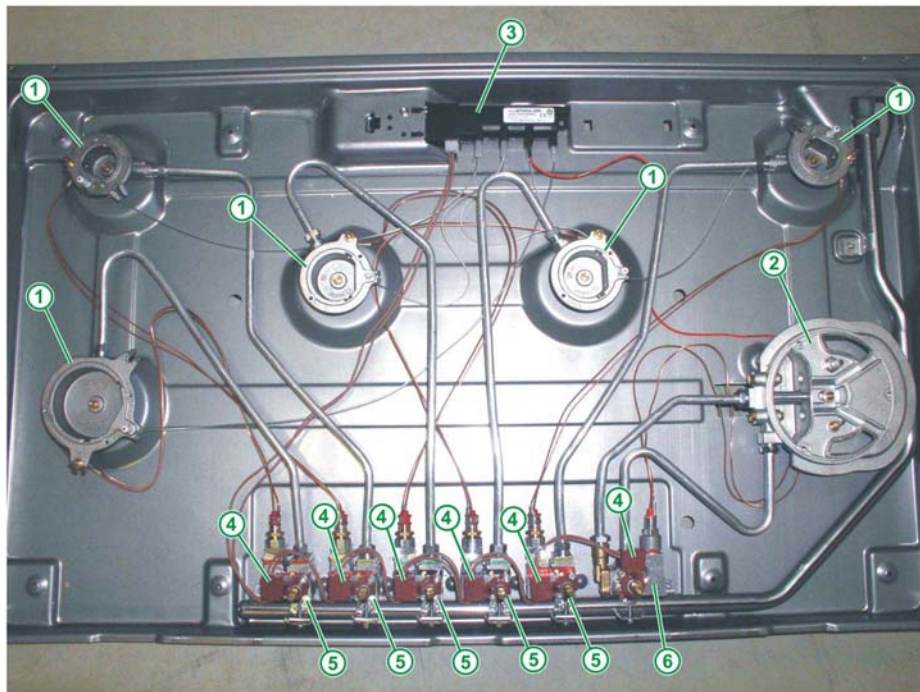


Fig. 25

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- 1 - NORMAL BURNERS
- 2 - "DEFENDI" DOUBLE ZONE BURNER
- 3 - IGNITION GENERATOR

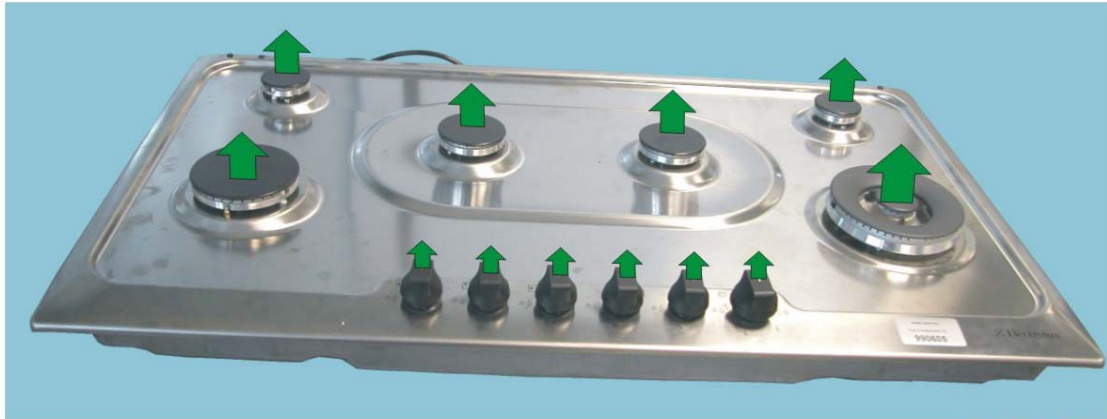
- 4 - CATENARY MICROSWITCHES
- 5 - NORMAL TAPS
- 6 - TWO-WAY TAP

6 - ACCESSIBILITY

6.1 - REMOVING THE UPPER HOB

To remove the upper hob, after extracting the cooking hob:

1. Remove the control knobs.
2. Remove the burner caps and the flame spreaders.



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Fig. 26

3. Unscrew the burner fixing screws (see Fig. 27 and 28).



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Fig. 27

- 1 - "DEFENDI" DOUBLE ZONE BURNER SCREWS.
2 - NORMAL BURNER SCREWS.

DETAIL OF THE "DEFENDI" DOUBLE ZONE BURNER FITTING

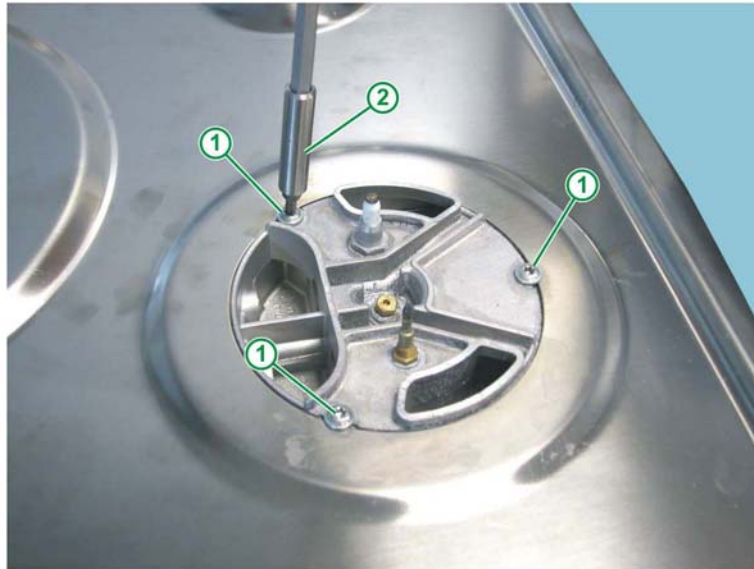


Fig. 28

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- 1 - "DEFENDI" DOUBLE ZONE BURNER SCREWS.
- 2 - "TORX" SCREWDRIVER.

4. Extract the 7 hole covers in the rear part using a screwdriver (see Fig. 29 and 30).

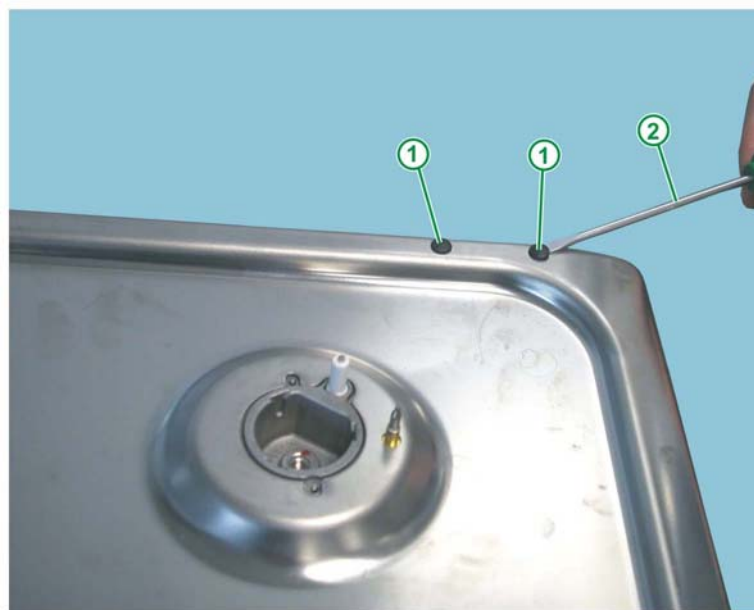
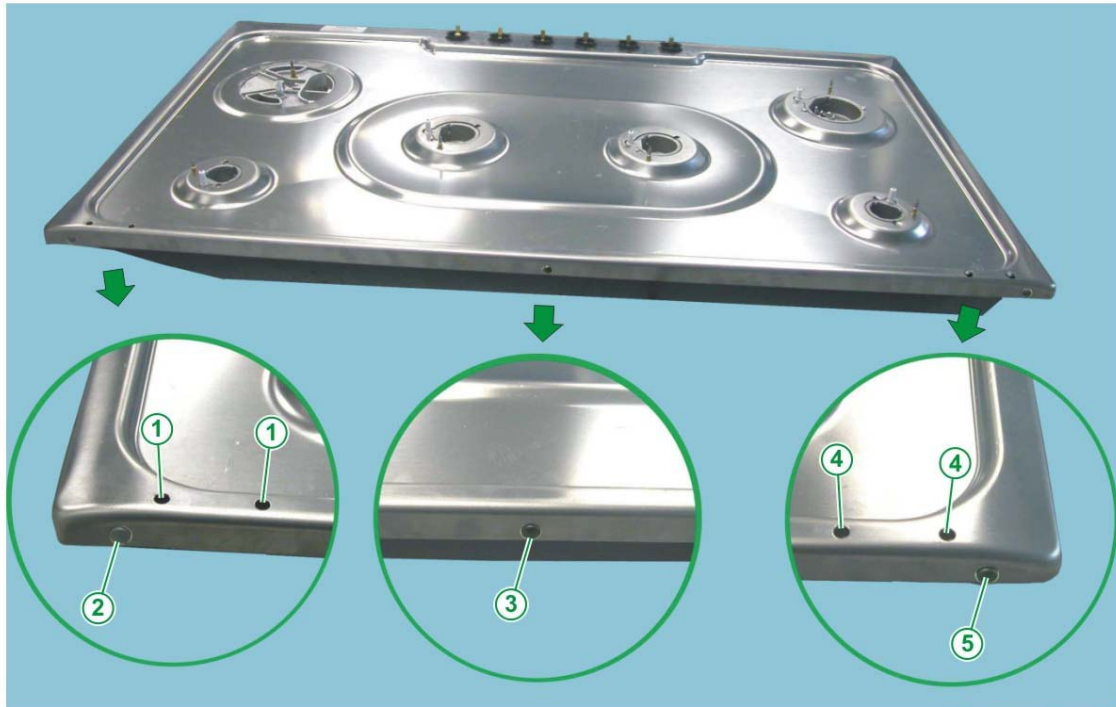


Fig. 29

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- 1 - PLASTIC HOLE COVERS
- 2 - PHILIPS SCREWDRIVER.

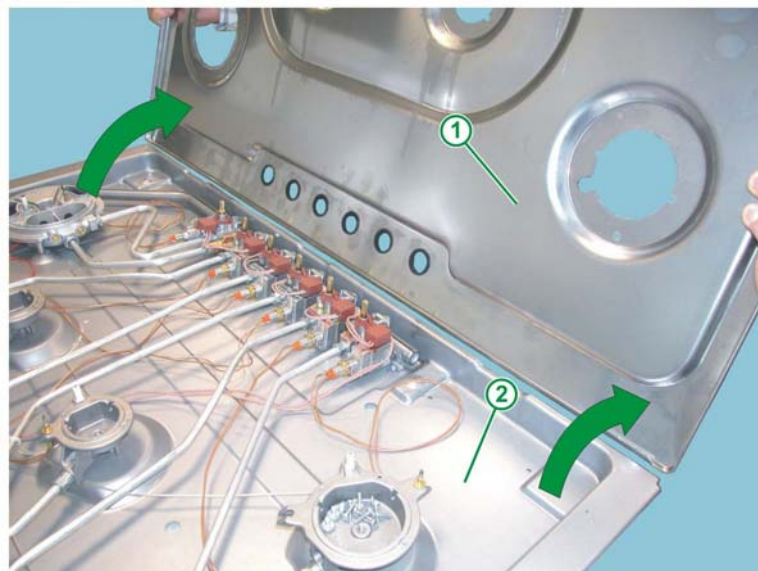


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Fig. 30

- 1 - PLASTIC HOLE COVERS LEFT UPPER PART
- 2 - PLASTIC HOLE COVER LEFT SIDE PART
- 3 - PLASTIC HOLE COVER CENTRAL SIDE PART
- 4 - PLASTIC HOLE COVERS RIGHT UPPER PART
- 5 - PLASTIC HOLE COVER RIGHT SIDE PART

5. Remove the upper hob lifting it up from the front part (see Fig. 31).



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Fig. 31

- 1 - UPPER HOB
- 2 - HOB BASE

NOTE: While reassembling the upper hob, take care to fit together the upper hob rear edge with the relative edge of the base with the relative edge of the base.

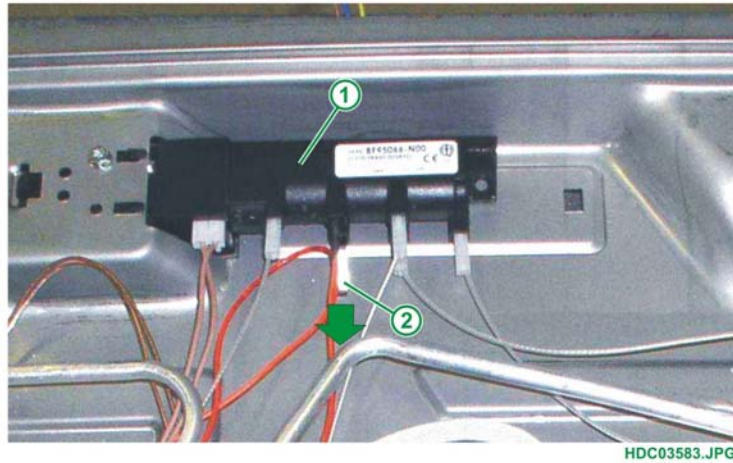
6.2 - REMOVING THE "DEFENDI" BURNER

To remove the "Defendi" double zone burner assembly:

1. Remove the upper hob (see Chapter 6.1).
2. Detach the spark plug supply cable (see Fig. 32).

Fig. 32

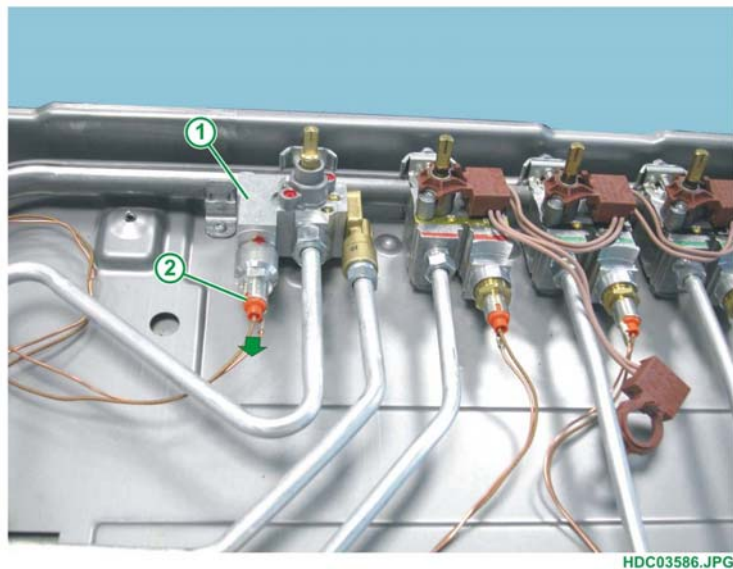
- 1 - IGNITION GENERATOR
- 2 - CABLE CONNECTION FOR THE SPARK PLUG ON THE DOUBLE ZONE BURNER



3. Detach the connection of the thermocouple to the two-way tap (see Fig. 33).

Fig. 33

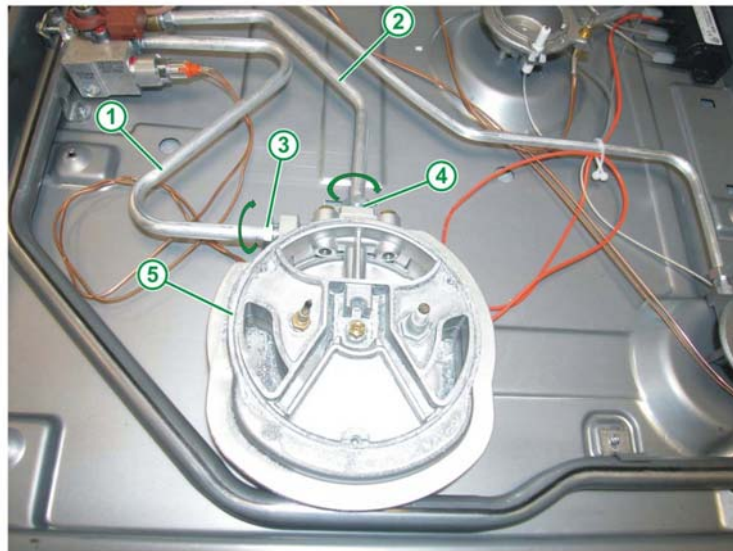
- 1 - TWO-WAY TAP
- 2 - CONNECTION FOR THE THERMOCOUPLE OF THE DOUBLE ZONE BURNER



4. Unscrew the fixing nuts of the gas supply pipes to double zone burner (vedi Fig. 34).

Fig. 34

- 1 - GAS SUPPLY PIPE SIDE ZONES
- 2 - GAS SUPPLY PIPE CENTRAL ZONE
- 3 - PIPE FITTING NUT FOR SIDE ZONE SUPPLY
- 4 - PIPE FITTING NUT FOR CENTRAL ZONE SUPPLY
- 5 - DOUBLE ZONE BURNER ASSEMBLY



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5. Unscrew the 3 fixing screws of the double zone burner placed at the base of the hob (see Fig. 35).

Fig. 35

- 1 - HOB BASE SEEN FROM THE LOWER PART
- 2 - FIXING SCREWS OF THE DOUBLE ZONE BURNER ASSEMBLY
- 3 - NORMAL BURNER FIXING SCREWS

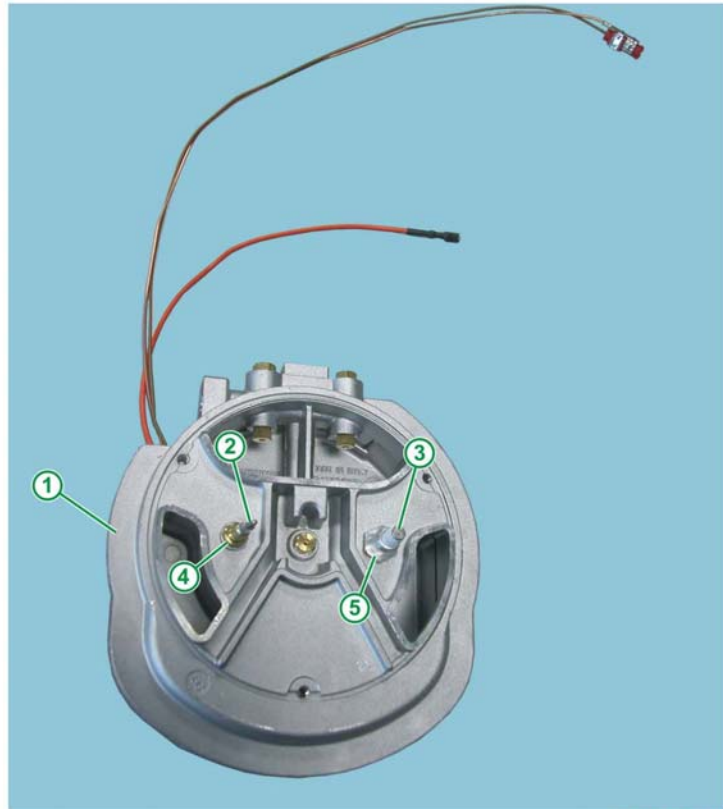


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6. Remove the double zone burner assembly from its base.

Fig. 36

- 1 - DOUBLE ZONE BURNER ASSEMBLY
- 2 - THERMOCOUPLE
- 3 - SPARK PLUG
- 4 - THERMOCOUPLE FIXING NUT
- 5 - SPARK PLUG FIXING NUT



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NOTE: FOR SAFETY REASONS, EACH TIME THE GAS CONNECTIONS ARE DISMANTLED, IT IS ESSENTIAL TO CARRY OUT A GAS SEAL TEST ONCE THE CONNECTIONS HAVE BEEN PUT BACK IN PLACE PROPERLY.

6.3 - REMOVING THE NOZZLES FROM DOUBLE ZONE BURNER

Replacing the nozzles:

1. Remove the grids
2. Remove the caps flame spreader from the burner
3. Use a 7 inch Allen key to unscrew and remove the central nozzle
4. Use a 7 inch spanner to unscrew and remove the nozzles from the side zones (see Fig. 37).

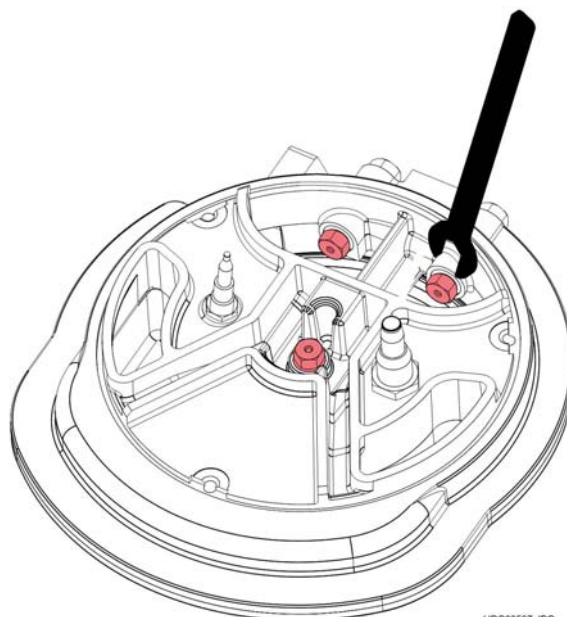


Fig. 37

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6.4 - REMOVE THE SPARK PLUG

In order to dismantle the spark plugs:

1. Unscrew the spark plug fixing nut (see Fig. 38).

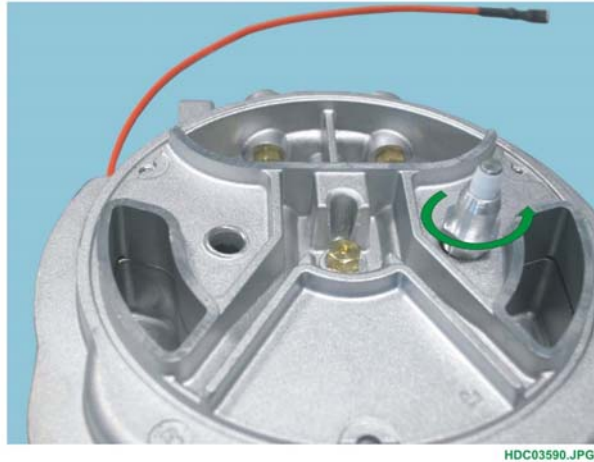


Fig. 38

2. Remove the nut and spring (see Fig. 39).

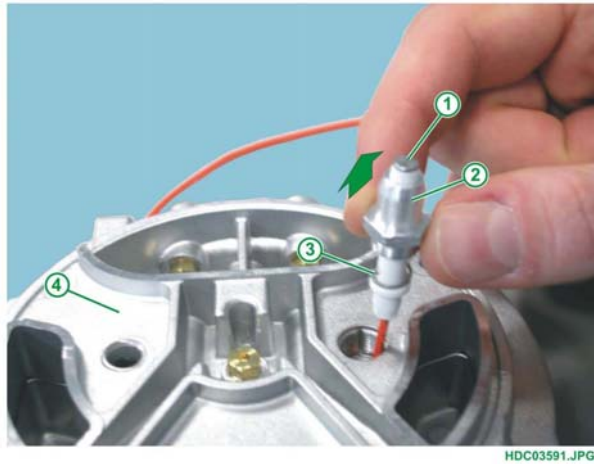


Fig. 39

- 1 - SPARK PLUG
- 2 - THERMOCOUPLE FIXING NUT
- 3 - SPRING
- 4 - DOUBLE ZONE BURNER ASSEMBLY

3. Lift the spark plug upwards (see Fig. 40).

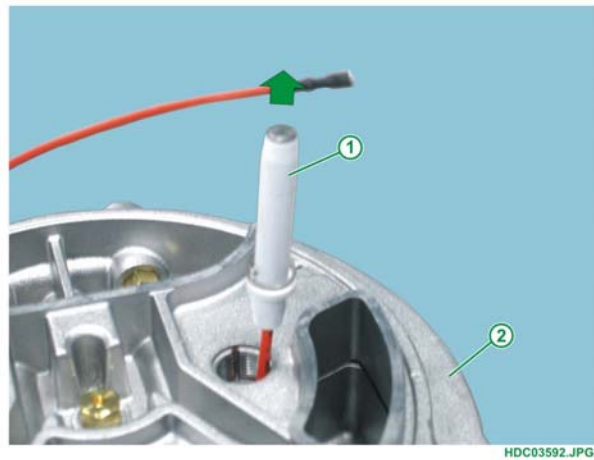


Fig. 40

- 1 - SPARK PLUG
- 2 - DOUBLE ZONE BURNER ASSEMBLY

6.5 - REMOVING THE THERMOCOUPLE

In order to simplify the operations and avoid the gas loss inspection required after refitting the gas connections, it is possible to dismantle the thermocouple without disconnecting the piping:

1. Unscrew the thermocouple fixing nut (see Fig. 41).

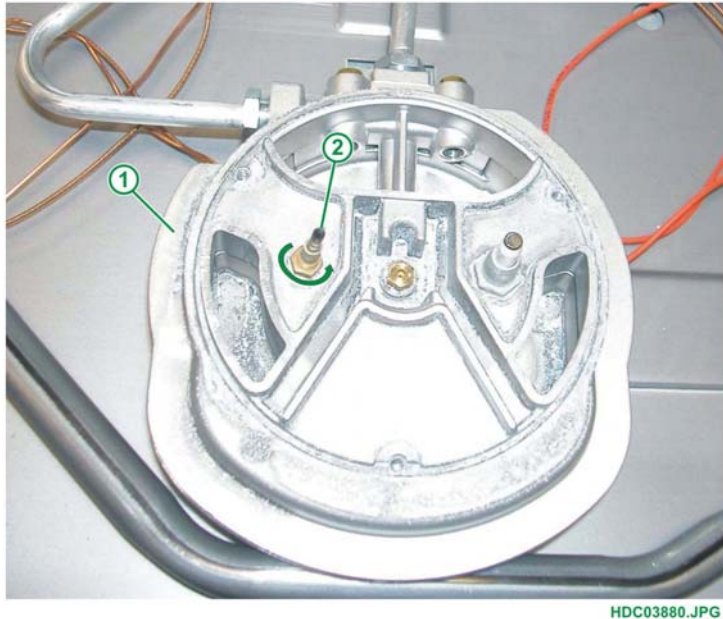


Fig. 41

- 1 - BURNER ASSEMBLY
- 2 - THERMOCOUPLE

2. Unscrew the 2 fixing screws on the back part of the ramp assembly (see Fig. 42).

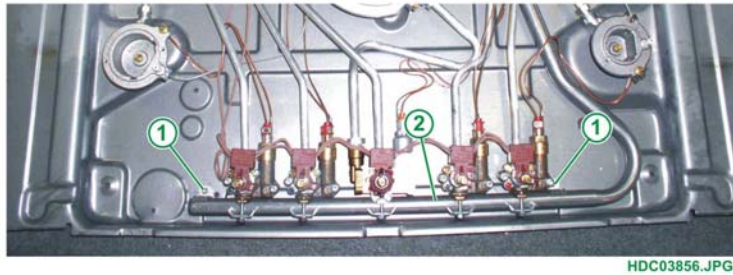


Fig. 42

- 1 - RAMP FIXING SCREWS
- 2 - RAMP ASSEMBLY

3. Unscrew the fixing screws at the bottom of the ramp assembly (see Fig. 43 and 44).

POSITION SCREWS ON 5 BURNER HOB

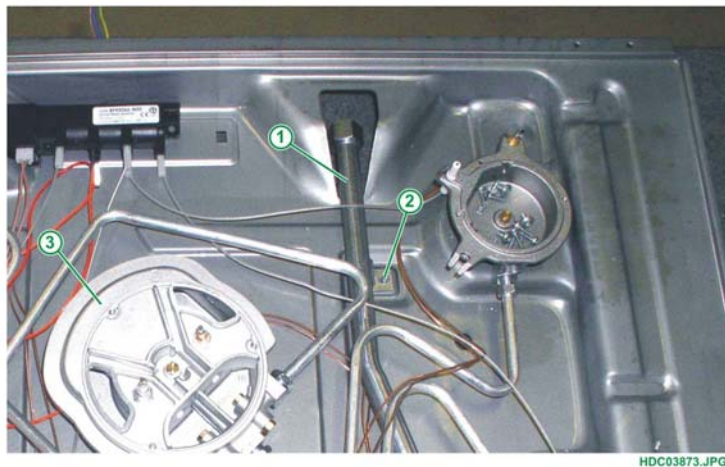


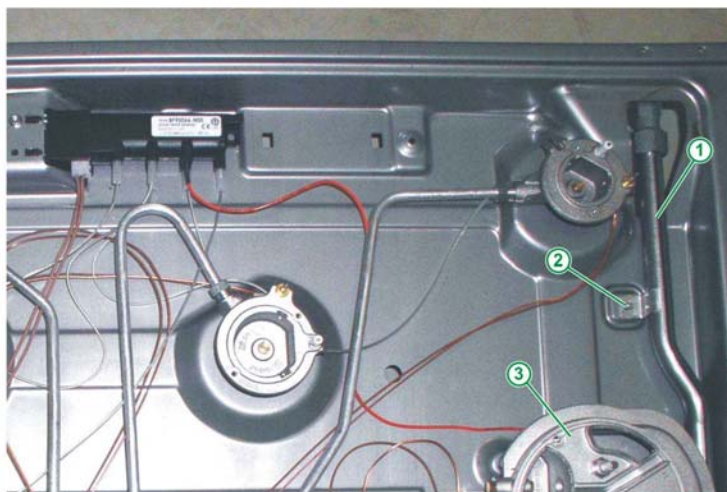
Fig. 43

- 1 - RAMP ASSEMBLY
- 2 - RAMP FIXING SCREWS
- 3 - DOUBLE ZONE BURNER ASSEMBLY

POSITION SCREWS ON 6 BURNER HOB

Fig. 44

- 1 - RAMP ASSEMBLY
- 2 - RAMP FIXING SCREWS
- 3 - DOUBLE ZONE BURNER ASSEMBLY



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3. Unscrew the burner fixing screws (see Fig. 35).
4. Lift the gas circuit on one side to have enough space to remove the thermocouple taking care not to bend the gas circuit.
5. Remove the thermocouple towards the lower part.

NOTE: FOR SAFETY REASONS, EACH TIME THE GAS CONNECTIONS ARE DISMANTLED, IT IS ESSENTIAL TO CARRY OUT A GAS SEAL TEST ONCE THE CONNECTIONS HAVE BEEN PUT BACK IN PLACE PROPERLY.

7 - REVISIONS

| REVISION | DATE | |
|----------|---------|--|
| 01 | 01/2010 | <ul style="list-style-type: none"> - Note added to Chapter 6.2 - "DEFENDI" BURNER DISMANTLING on page 18. - Chapter 6.4 changed - SPARK PLUG DISMANTLING on page 19. - Chapter 6.5 changed - THERMOCOUPLE DISMANTLING on pages 20 and 21. |