

INDUCTION HEATING SYSTEM

FIRE F35



ITALIAN AUTOMOTIVE EQUIPMENT

TOPAUTO



IMPORTANT: Read these operating and safety instructions before using the INDUCTOR FIRE F35.

OPERATING AND SAFETY INSTRUCTIONS

INDUCTOR FIRE F35 equipment

Specializing in High Performance
Induction Heating Systems



Dear Customer,

Thank you and congratulations for choosing our induction system INDUCTOR FIRE F35, an instrument of great versatility that will be of great help to your business for many years. Our after-sales service is at your disposal for any problems regarding the use or maintenance of this machine.

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Warranty

As delivered, the buyer should verify that the machine is complete with all the parties. Deficiencies and anomalies must be reported within the statutory time limits. Any attempt to tamper with any part of the machine and / or any plaque on the machine itself, invalidate the warranty, the CE mark (if affixed by the manufacturer), the declaration of conformity and / or the manufacturer's declaration.

The manufacturer is not responsible for any damages to people or things caused by the following cases:

- Improper installation;
- Misuse of the machine by personnel not adequately trained;
- Improper use of safety rules in force;
- Lack of maintenance;
- Use of unauthorized or improper parts

PLEASE NOTE: The manufacturer and his distributors are not held responsible for any damages to people or things caused by an inappropriate and irresponsible use of the machine different from the one described in this manual.

The first use of INDUCTOR FIRE F35 involves the implicit acceptance from the user of all conditions prescribed by the manufacturer

Identification of the machine

On the machine is attached the identification label, on which, in addition to CE marking, is reported:

- Name and address of manufacturer
- Year of manufacture
- Model
- Type of equipment
- Weight
- voltage

These data should be mentioned whenever it is necessary a technical intervention or spare parts are requested.

Technical features

Induction Heater Type: Inductor 3.7 kw S Mod: INDUCTOR-FIRE F35

Nominal Power: 4 kW

Nominal Voltage: 230 V

Frequency 50/60 Hz

Heater Frequency: 20-26 kHz

Insulation Class: I

Liquid cooling

9 m cable network

Inductor 3 m cable

Dimensions and Weights

weight 65 kg,

height 935 mm

width 540 mm

depth 530 mm

Rules references

Directive **CE2004/40/** Exposure to electromagnetic fields
Directive CE of low voltage **2014/35/EU**
Machinery Directive **2006/42/EG**
Directive **EMC 2014/30/EU**
Directive RoHS **2011/65/EU**
Directive **CE 2012/19/EG**

Use of the manual

It is very important that this manual, designed to provide the operator with a general knowledge of this machine as well as with the instructions for its use and maintenance deemed necessary for proper functioning, is kept with the machine for any future reference. The manual, as specified by law, is part of the machine and must accompany it to its demolition. The warnings given must be read carefully, for safety reasons, before installation and before use. It is prohibited for any reason to modify this manual without written permission of the manufacturer or authorized dealer.

General safety warnings

- The machine is built on purpose. Its durability and reliability will be much more effective if it is correctly used and regular maintenance will be done.
- **Always read the warnings contained in this manual, they provide important information on safety.**

ATTENTION!

- **The use of the machine should only be performed by adequately trained personnel of full age, in full compliance with current regulations and with the instructions contained in this manual.**
- **Strictly follow the directions and mandatory and danger signs on the machine.**
- **Before any maintenance, electrically isolate the machine to prevent accidental starting.**
- **In case of injury or breakage of the connecting pipes or electrical cables, act quickly to replace them.**
- **If the equipment loses fluids, must immediately eliminate the loss.**
- **Do not leave the equipment exposed to weathering.**
- **Do not leave equipment unattended in the hands of children.**
- **Whenever you decide to stop using the equipment, you should make it ineffective in fulfilling all practices regarding the disposal according to law.**

Terms of use

This machine will be used only for the purposes it has been designed, namely: to generate heat in ferrous materials.

Any other use not specifically covered in this manual is strictly forbidden, as improper and therefore dangerous. The machine is semiautomatic and requires the presence of the operator.

ATTENTION!

The operator has the responsibility for complying all the rules that relate to safety, not only for himself, but also those who may be exposed to the risks of the machine. Therefore, before performing any operation with the machine, read this manual carefully, it shows the instructions and how to proceed properly and safely. Keep this manual for future reference.

Construction Features

The machine was designed and constructed in compliance with the essential safety and health requirements according to the Machinery Directive 89/392 EEC and subsequent amendments. In particular, since the operator is in direct contact with the machine, the manufacturer provided the machine with:

Eliminate sharp edges and angular;

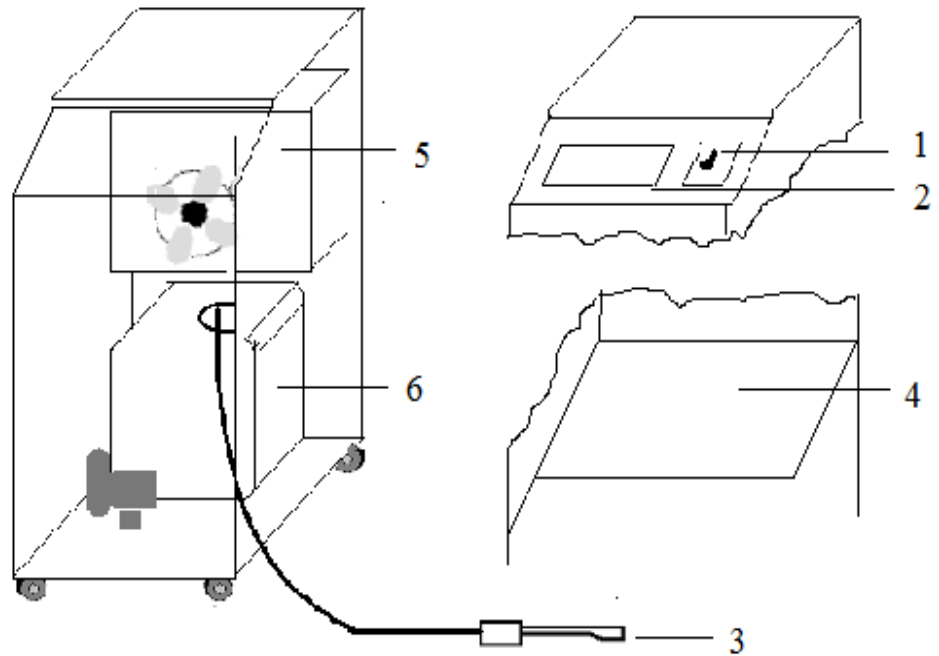
Avoid unstable conditions that can cause risk of overturning, falling or moving inappropriate;

Do not allow the operator to come into direct contact with live parts during working that can result in electric shock or injury.

And everything else needed to make the use of the machine safe.

The main parts composing **INDUCTOR FIRE F35** can be described as follows:

- 1) Power switch
- 2) Control panel
- 3) Inductor
- 4) Electronic card
- 5) Radiator
- 6) Cooling Group



Plates and warnings signs

On the machine are placed warning signs and mandatory signs that the operator must follow for his safety and security.

List of protections

The machine is safe if used correctly, however, should be as careful as heated material may cause burns to the touch even long after the passage of the inductor.

The inductor itself also becomes hot, even if continuously cooled, by contact of red-hot parts and therefore can have risk of burns.

The machine has several electrical and thermal overload protections. The first protection is the “overload” inductor; to restart the machine, simply release the control and then press it again.

For all other protections, switch the machine off with the general switch. Finally, there is a series of 32 A fuse on the incoming line, protection in case of failure of electronic protections. Do not replace these fuses before repairing the fault.



RESIDUAL HAZARDS

WARNING!

The machine is designed for maximum safety. However, there is the possibility that the operator, carelessly, can get burned.

WARNING!

The machine must not be used near sensitive or hazardous materials, explosives, compressed gases, flammable liquids, electrical medical equipment.

It is not allowed to use this machine while wearing metal objects because they heat in the vicinity of the inductor.

It is not allowed to use this machine if the operator has a cardiac pacemaker or other biomechanical implant.

Noise and vibration

The machine produces a sound pressure level for continuous use of less than 60dB (A).

The machine does not generate vibrations that can cause consequent danger.

Demolition and disposal

Some materials, with which the machine is built, can be recycled, so do the demolition and recycling, in accordance with existing regulations.

Unpacking and Installation

The machine is supplied ready for use.

Before using it, you must remove all packing material and place it carefully in place (leveled floor, dry and windy).

WARNING!

The installation must be designed to allow easy access to all its parts. The minimum spaces, on its perimeter, must ensure the use and maintenance, without problems and risks for the operator.

Connection

The voltage and frequency must match the nameplate data. The machine is supplied complete with wiring, so you just plug it in a suitable socket.

WARNING!

Connect the plug only to a socket provided with lifesaving.

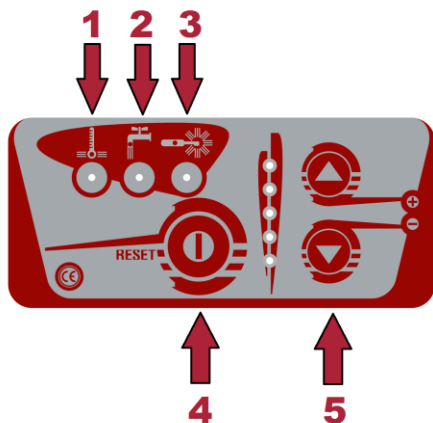
Use of the machine

Turn on the main switch on the left side and the machine will be already functional and operating



fig. 1

Pressing the button of Fig. 4 for 10 seconds, all the LEDs remain off. Then the LED indicators of the power will come on and then you can operate. This delay is necessary to allow the cooling liquid to enter fully into circulation. If there are flashing LEDs alert the 1-2-3 keys, press the reset button (4) and wait a few seconds. If the problem persists, contact the dealer after sales service.



Thanks to the display you can easily check and set the power, by clicking the button (see number 5)

Button number 1 check of the water cooling system

Button number 2 advisor of the malfunction of the pump

Button number 3 advisor of the malfunction of the manipulator

Button number 4 Reset

Place the inductor on the part to be heated



fig. 2



fig. 3



giving power through the button on the handle , move the inductor as needed.

When finish to use the machine, turn off pump and fans with the main switch, to give way to the machine to cool.

Replacement of the flow concentrator



In case of the flow concentrator wear, unfasten the screw, take off the ferrite, thoroughly clean the copper and replace the new piece fastening the stainless-steel part very



firmly.

Replacement of the Inductor

WARNING!

The replacement of the inductor should be performed by authorized staff only and only after turning off power to the machine.

WARNING!

During the maintenance and / or repairing operations, wear protective gloves.

- Isolate electrically the machine disconnecting it from the power supply.

WARNING!

It is prohibited to start the machine unless all protections are installed.

Maintenance – general rules

- It is essential that interventions on the machine are carried out by qualified and authorized personnel to be aware of the mode of maintenance.
- Never perform any cleaning, lubrication or maintenance operation with the machine running.
- Before any maintenance, position the main power switch to “0” to disconnect power, unplug it from the network to avoid electrical shock or other hazards from mishandling.
- Do not wear rings, watches, jewelry, clothing undone or dangling, such as ties, torn clothing, scarves, jackets unbuttoned and zipped open that can get caught at work.
- It is recommended instead to use garments suitable for accident prevention, for example: sturdy shoes, deadening headphones, safety glasses, appropriate gloves, etc ...
- Never use gasoline or flammable solvents to clean the machine. Use water and, if necessary, commercial non-toxic solvents.
- After the interventions, before restarting the machine, always reassemble the protections that may have been removed.

Preventive maintenance

Meticulous inspections conducted at regular intervals of time are necessary in order to detect and eliminate faults quickly before they can cause more damage.

ATTENTION!

- **Whenever you need to use the **INDUCTOR FIRE F35** previously control the efficiency of safety devices, connection status, or that there are not any other anomalies, making several test maneuvers idling and on ferrous scrap.**
- **Check daily for wear and legibility of the warning signs.**

Ordinary Maintenance

WARNING!

The safety operation of the machine can be guaranteed only if the repairs are performed using only original spare parts or other parts approved by the manufacturer and if maintenance instructions are carried out correctly.

- After each use, with the electric switch turned off, the operator must proceed with the cleaning of the machine, promptly removing dust or dirt in general, because it could decrease the aeration and also affect the smooth operation and durability of the machine.
- Before each use check the operation of control devices, safety devices and the integrity of electrical cables.

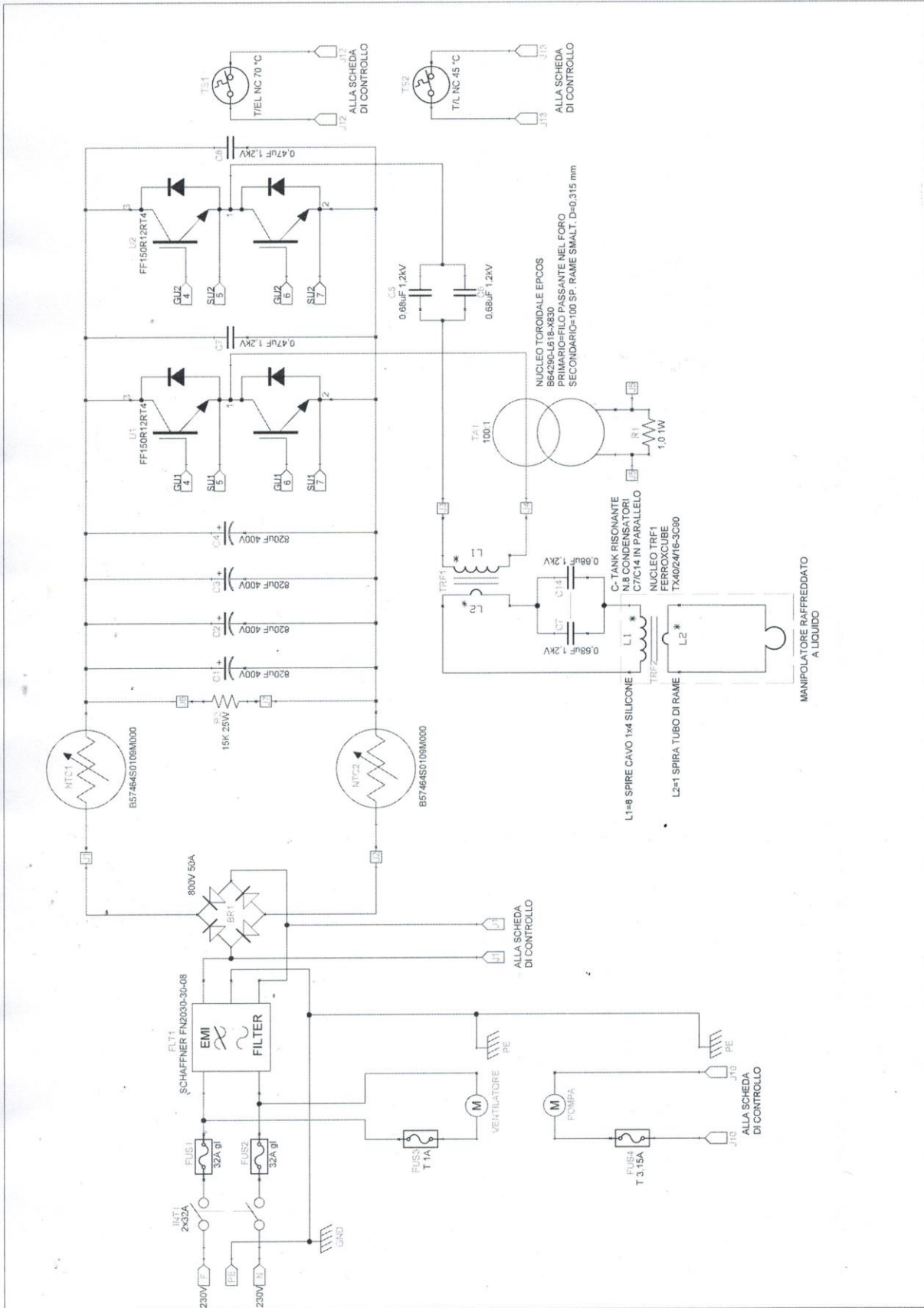
WARNING!

Carry out regular visual checks on the inductor to verify that there are no fluid leaks and on the air inlet ports to verify that they are free.

Extraordinary Maintenance

Whenever there are breaks that require disassembly of machine parts, please contact the manufacturer or the authorized dealer.

Electric drawing



Components and spare parts

This section lists the components of the machine in question. Its contents can be used for the identification technique of spare parts as it lists the parts in detail and provides descriptive data and recognition.

For a speedy delivery of spare parts, please quote the following order:

1. Number of position
2. Code number (drawing or commercial)
3. Name of piece
4. Quantity
5. Number of machine code
6. Year of manufacture

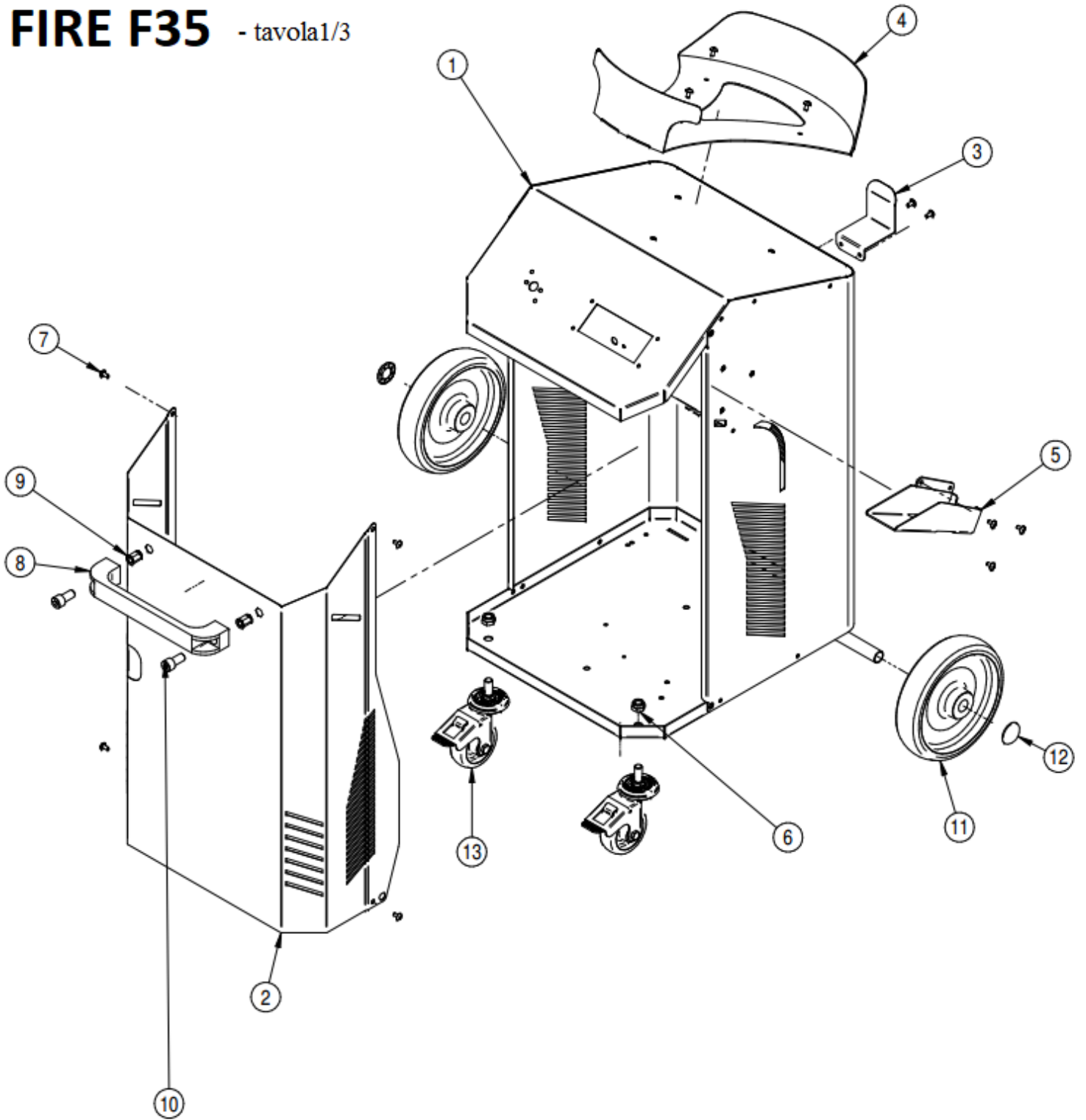
Table 1. Exploded view

Table 2. Electronic board

Table 3. Hydraulic exploded view

Table. 1 Exploded view

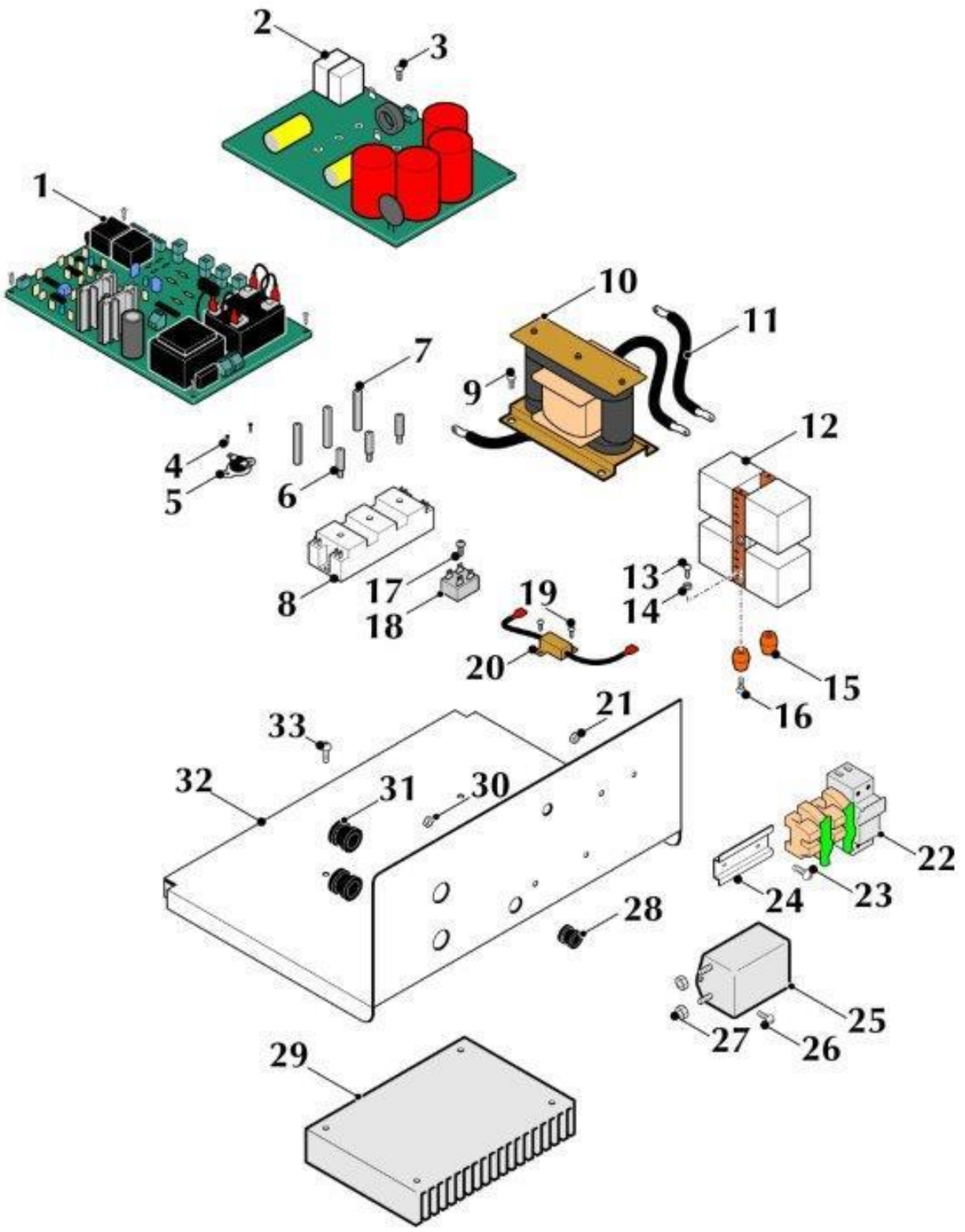
FIRE F35 - tavola1/3



Pos.	code	item
1	TA702014	Corpo macchina riscaldatore fire 3.7 kw
2	TA752025	Carter anteriore macchina fire 3.7 kw
3	TA773044	Staffa supporto cavo fire
4	TA733015	Sella porta tubo fire
5	TA700005	Assieme fondina per riscaldatore fire
6	DADOM12_UNI7473	Dado autofrenante M12EN7473
7	7380M5X10	Vite uni-iso 7380 M5X10
8	MAN-235	Maniglia nera I-235 F.Ø10.5 (B224235.TG10.50 1PP)
9	INSERTO FEMMINA ESA 13 – M10	Inserto filettato femmina ESA 13 – M10
10	VITEUNI5931_M12X25	Vite M12 X 25 UNI5931
11	RUOTA-DB200	Ruota DB200 – Øe=200 SP.45 Øi=20 (res ruote)
12	CAPP-20	Tappo serie CAPP Ø20 Øe=36 H=10.5
13	RUO-80-12-114+F	Ruota Ø80 con freno H=108 M12

Table. 2 Electronic board

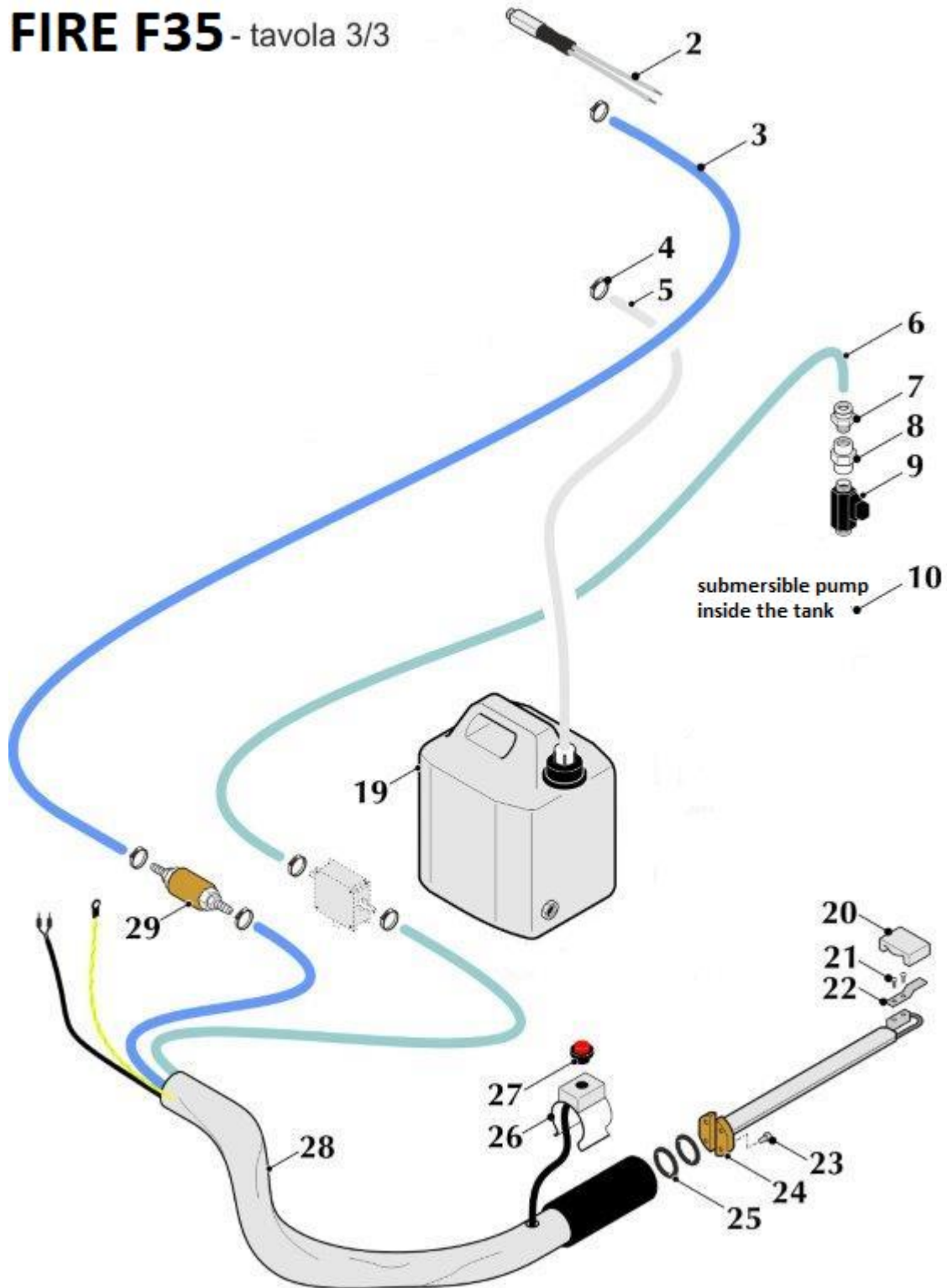
FIRE2401 - tavola 2/3



Pos.	code	item
1	IND-5KW/005.C	scheda elettronica controllo
2	IND-5KW/005	scheda elettronica potenza
3	IND-5KW/VT1	vite M5
4	IND-5KW/VT13	vite M3
5	IND-5KW/005.C2	pastiglia termica
6	*IND/002	distanziale IGBT
7	IND-5KW/005.C1	distanziale M3X20
8	*IND/IGBT200	IGBT 200
9	IND-5KW/VT11	vite M4
10	IND-5KW/005.0	trasformatore
11	IND-5KW/005.00	cavo lungh. 65 cm
12	IND-5KW/005.2	condensatore
13	IND-5KW/VT1	vite M5
14	IND-5KW/VT9	dado M5
15	IND-5KW/005.30	Isolatore
16	IND-5KW/VT11	vite M4
17	IND-5KW/VT11	vite M4
18	*IND/016	ponte a diodi
19	IND-5KW/VT13	vite M3
20	*IND/013	resistenza
21	IND-5KW/VT14	dado M3
22	IND-5KW/005.31	gruppo morsettiera
23	IND-5KW/VT13	vite M3
24	IND-5KW/VT15	canalina din
25	IND-5KW/005.5	filtro
26	IND-5KW/VT11	vite M4
27	IND-5KW/VT12	dado M4
28	ED-M05	passacavo
29	IND-5KW/005.6	dissipatore lungh. 200 mm
30	IND-5KW/VT12	dado M4
31	IND-5KW/005.32	passacavo 16/22 mm
32	IND-5KW/CAR.03	vassoio per elettronica
33	IND-5KW/VT11	vite M4

Table. 2 Hydraulic exploded view

FIRE F35 - tavola 3/3



Pos.	code	item
2	IND-5KW/004.1	sonda termica
3	IND-5KW/016	tubo retinato diam. 12
4	IND-5KW/016.4	fascetta stringitubo diam. 12-20
5	IND-5KW/016	tubo retinato diam. 12
6	IND-5KW/018.2	tubo rilsan diam. 10
7	IND-5KW/018.1	raccordo rilsan 10x1/2 (6510)
8	IND-5KW/018.3	manicotto da 1/2 (71270 1/2)
9	IND-5KW/018	flussostato
10	IND-3.7/001	Pompa ad immersione
19	IND-5KW/014	tanica
20	IND-5KW/S03.1	ferrite
21	IND-5KW/S03.3	vite M4x10
22	IND-5KW/S03.3	fermo p. ferrite
23	IND-5KW/S01.2	vite M5X15
24	IND-5KW/S03.2	puntale
25	IND-5KW/S01.3	O-ring
26	IND-5KW/009	Omega sede pulsante attivatore
27	IND-5KW/008	pulsante attivatore pistola
28	IND-5KW/007.13	calza retinata protezione cavo
29	IND-5KW/016.1	valvola Europa 1/2 (di non ritorno)

Inductor FIRE F35 MACHINE LOG

We recommend using the following chart to record the maintenance of FIRE F35 Inductor and all inquiries made over time on the tool.

This will allow the user to be able to have at any moment suitable information on the activity cycle of the machine.

NOTE

Proper records of inspections and maintenance on the Machine Log is specifically prescribed by the manufacturer and is set a san obligation of the end user.

Serial N° Year of manufacture

DATE	INSPECTIONS and MAINTENANCE	REPLACEMENTS	Operator signature

Declaration of Conformity RoHS

2011/65/EU Directive of the European Parliament and of the Council on the restriction of the use of certain hazardous substances in electrical and electronic equipment.

Top Auto s.r.l. declares that:

from 1 July 2006, any product placed on the market by Top Auto s.r.l. is in conformity with RoHS Directive, and does not contain concentrations that exceed the limits for the following substances:

- Lead (Pb)
- Mercury (Hg)
- Cadmium (Cd)
- Chrome (Cr(VI))
- Polybrominated Biphenyls (PBB)
- Polybrominated diphenyl ethers (PBDE)

Top Auto s.r.l. informs that the Rohs Directive does not apply to lead-acid batteries and batteries as these are subject to a specific Directive, the 91/157/EEC, updated later by Directives 93/86/CEE and 89/101/CE, as stated in paragraph 9 of the introduction of the same RoHS Directive.

DICHIARAZIONE CE DI CONFORMITÀ- DECLARATION OF CONFORMITY CE

(according to the Machinery Directive 2006/42/CE and s.m. , Attachment II /A)

Il Fabbricante/The Manufacturer

Top Auto s.r.l.
Viale del Lavoro, 40
37030 Colognola ai
Colli (VR)
ITALY

Dichiara che la macchina/declares that the machine

INDUTTORE FIRE F35

Nome commerciale/Commercial name

INDUCTOR-3.7 KW S

Modello/Model

Matr. Nr

Matricola/Serial Number

Anno costruzione/Year of

manufacture 2020

Attrezzatura di riscaldamento ad induzione ad alte prestazioni

Denominazione commerciale/Commercial denomination

E' conforme alle direttive/complies with the following directives

Machinery Directive 2006/42/CE

Directive 2013/35/EU Exposure to electro-magnetic fields

Directive EMC 2014/30/EU

Directive RoHS 2011/65/EU

Directive CE 2012/19/EU

Riferimenti soggetto autorizzato a costituire il fascicolo tecnico/ Reference person authorized to compile the technical file

Daniele Maria Barbagelata

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Colognola ai Colli, _____

Changes which have effects on the technical specifications and the correct use of the machine as stated in the instruction manual make this declaration of conformity not valid!

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