HEDSON TECHNOLOGIES

MODEL 10500 (220v) & 10600 (120v)

- SOLVENT RECYCLER WITH TRANSFER PUMPS -

Service Manual

Table of Content

1 INTRODUCTION

This manual is written for the Safety Kleen Representative and the Safety Kleen Technician.

The Level One Repairs described can be done by the Safety Kleen Representative.

The Level Two Repairs described can be done by the Safety Kleen Technician.

The Level Three Repairs described should not be done on site.

1.1 List of recommended tools

Philips screw driver
Flat head screw driver
Flexible socket wrench (7 mm.)
Adjustable wrench
Wrenches: 8, 10, 13, 14, 17, 19 (mm. size)
Extended socket 3/8" with ratchet
7 mm nut driver (preferably flexible)
Adjustable pliers
Channel lock
Hex wrench set (mm)
Cutting pliers
Power drill
R2 Bits
Flat nose pliers
Multi meter

2 SCHEDULED SERVICE & MAINTENANCE

Weekly:

Clean the boiler compartment.
Rinse the load pump system with clean solvent (see 2.1).
Check the condenser water level.
Recycler bag must be replaced after every cycle.

When "Oil change due" is indicated in the display, change oil (see chapter 2.2).

2.1 LOAD PUMP MAINTENANCE

To prevent blocking of the hoses and seizing of the pump in the loading system, please note the following:

When loading solvent into the boiler using the load pump, there is a risk that thick sludge -often found on the bottom of containers with contaminated solvent- will block the suction hoses and seize the pump.

It is therefore very important that the loading system is rinsed at the end of the loading procedure.

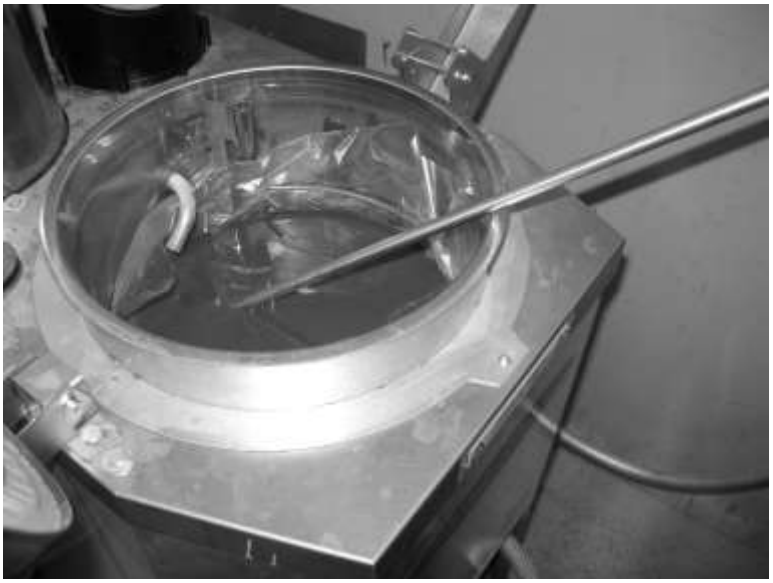
The best way to do this is to suck some clean solvent through the system until you hear the pump work freely.

If clean solvent is not at hand, the suction tube can be placed at the very surface of the loaded solvent in the recycler where the solvent is least contaminated (see picture 1). Start the pump and recirculate the solvent through the system until you hear the pump work freely.

If the load pump is left unused for some time, pumping solvent through the pump as described above will prevent waste material from drying or hardening in the system and hence block it.

NOTE: THICK UN-DILUTED PAINT MATERIAL MUST NEVER BE PUMPED THROUGH THE LOAD PUMP. IT WILL BLOCK THE SYSTEM, AND CAN NOT BE DISTILLED IN THE RECYCLER.

Picture 1.



2.2 OIL MAINTENANCE

The unit will automatically indicate when it requires an oil change; the display will read, *"Oil change due. Press start"*. By pressing the "START" button you can continue to use the recycler.

Oil change is carried out as follows:

Make sure the oil is cold.
Disconnect power.
Place a collection pan/drum under the lower oil tap (see picture 2). The collecting pan/drum must be big enough to take 3,6 US Gallons (13,6 litres) of oil.
Remove the oil plug (see picture 2) and drain out all of the oil.
Re-place aluminium washer and refit oil plug.
Remove the black oil pipe cover on the left side of top plate (see picture 3).
Refill oil, no more than 3,6 US gallon (13,6 litres) into the oil inlet. Use only original Safety Kleen Diathermic Oil. Use a funnel to avoid spilling oil onto/into the machine. Minimum oil requirements are: Cracking temperature higher than 320ºC (608 ºF) and viscosity close to 31cSt at 40ºC (104ºF) and 5,3 cSt at 100ºC (212ºF).
Refit oil pipe cover
Reconnect power.

To remove "Oil change due" message reset the working hours as follows:

Press the "STOP" and "START" button at the same time and keep pressed for 10 seconds. After 10 seconds display will read: "Select Mode 1".

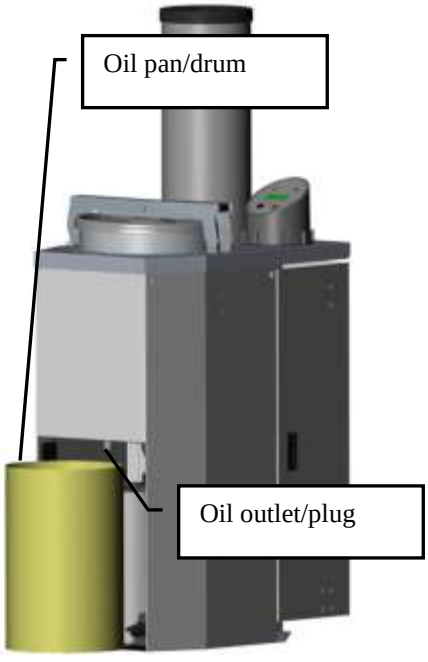
Keep "STOP" button pressed. By pressing the "START" button you will be able to loop through the following operations:

Select mode 1 / Select mode 2 / Select mode 3 / Resetting working hours

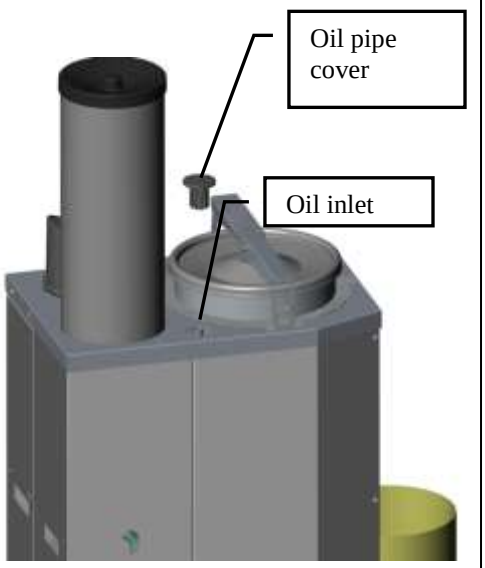
Release the buttons when the display reading is "Resetting working hours". By doing this the working hours of the oil is reset and the machine is ready for use again without "Oil change due" message.

NOTE: It recommended that the heating element is removed and cleaned every second oil change. This will increase the life span of the heater and reduce the risk of heater malfunction.

Picture 2.



Picture 3.



3 TROUBLE SHOOTING GUIDE

Note: The numbers used below, Example: (25), refer to the part numbers in the Pneumatic circuit diagram or spare part Illustrations.

3.1 Distillation problems

PROBLEM	POSSIBLE CAUSES	SOLUTION	LEVEL	SEC
Unit only distils a part of the dirty solvent	The un-distilled fraction has a boiling temperature higher than the maximum operating temperature of the unit.	Use a solvent with lower boiling temperature.	1	
	Insufficient operating time	Change operating mode to Mode 2 or Mode 3. This increases the power input during the distillation process	1	0
Distillate comes out dirty	Unit is loaded above the maximum level.	Load unit with not more than 5 US gal.	1	0
	Solvent foams during boiling	Load a lower quantity than 5 Us gal.	1	
		Change operating mode to 1. This decreases the power input during the distillation process	1	
		Leave dirty solvent to rest for 12-24 hours before starting unit	1	
Residues have to loose consistency	Solvent mixture includes a fraction of solvent with a boiling temperature higher than the maximum operating temperature.	Change to mode 2 or 3 to increase the power input and the “baking time” See chapter “The recycling process” in OEM manual. Alternatively: replace solvent.	1	0
	Too much residues in recycler waste bag.	Replace recycler bag	1	3.4
Distillation time is longer than normal	Heater is scaled	Change the diathermic oil and clean the heater	3	
	Diathermic oil is worn out Display shows “Oil Change Due”	Change the diathermic oil	2	2.2
Waste bags dissolves	Presence of acidified solvent. Acetates may acidify when heated.	Check MSDS. If solvent has acidified it can not be recycled in the Minimizer 710.2/710.3	1	

3.2 Unit displayed error codes

Note: The numbers used below, Example: (234), refer to the part numbers in the Pneumatic circuit diagram or spare part Illustrations.

PROBLEM	POSSIBLE CAUSES	SOLUTION	LEVEL	SEC
"ERROR CODE: 1" "OIL PROBE FAULTY"	One of the 2 temperature probes (234) for oil is malfunctioning	Replace the two white oil-probes. (Use 212)	2	5.9
"ERROR CODE: 2" "H2O PROBE FAULTY"	The temperature probe (235) monitoring the water temperature is malfunctioning	Replace the grey temperature probe (Use 212)	2	5.9
"ERROR CODE: 3" "OIL PROBE FAULTY"	One of the 2 temperature probes (234) for oil is malfunctioning	Replace the two white oil-probes. (Use 212)	2	5.9
"ERROR CODE 4-8" NOT USED	N/A	N/A	N/A	N/A
"ERROR CODE: 9" "OIL PROBE DIFF."	Temperature reading from the two white temperature probes (234)(oil) differs too much	Check placement of probes. Probes must be inserted into the white Teflon tube.	2	5.9
		Replace the two white oil-probes.		
"ERROR CODE: 10" "CHECK OIL LEVEL"	Oil level is low, hence causing the oil temperature to rise too fast	Check oil level. Check for oil leaks. Refill or replace oil	2	2.2
"ERROR CODE: 11" "CHECK FUSES"	Oil temperature rises too slow due to heater (231/232) failure	Check and if needed replace power board fuse	2	5.5
		Check and if needed replace Control board fuse	2	5.6
		Check Heater and if needed replace heating element	3	
"ERROR CODE 12" NOT USED	N/A	N/A	N/A	N/A
"ERROR CODE: 13" "CIRCUITS FAULTY"	CPU malfunctioning	Replace Control box (218)	2	5.8
"ERROR CODE: 14" "OIL TEMP TO HIGH"	Controls have monitored a top temperature above 380ºF	Reset and restart	1	3.5
		Change from Mode 3 to Mode 2 or 1		0
"ERROR CODE: 15" "H2O TEMP HIGH"	Grey temperature probe (235) indicates that the condenser water temperature is to high	Check the water level in the condenser	2	
		If unit is operating in warm conditions, leave condenser to cool down or replace water		
"ERROR" "LEVEL INDICATOR"	Signal from the level sensor (143) in collecting drum is abnormal.	Check for accidental grounding of the indicator	2	5.3
		Check cable attachments at top of indicator		
		Check for fouling of the indicator. Clean if necessary		

3.3 Pneumatic problems

Note: The numbers used below, Example: (30), refer to the part numbers in the Pneumatic circuit diagram or spare part Illustrations.

PROBLEM	POSSIBLE CAUSES	SOLUTION	LEVEL	SEC
LOAD PUMP STRIKES ALTHOUGH THE FOOT PEDAL IS NOT PRESSED	THE FOOT PEDAL (30) IS LEAKING AIR TO THE PUMP A hissing noise should come from the filter wrapped coupling connected to the pump. This can be caused by dirt collected under the knob of the Foot valve.	Replace or clean the Foot valve. When fitted to the machine, the knob of the Foot valve should be free to move a little bit, and not firmly jammed.	2	5.4
THE LOAD PUMP STRIKES, BUT DOES NOT SEEM TO PUMP ANY SOLVENT, ALTHOUGH THE SUCTION TUBE IS WELL DOWN INTO THE SOLVENT DRUM	VALVES OF THE PUMP (28) MALFUNCTIONING The valves may seal poorly if debris is collected in the valves, preventing them from sealing against the valve seats.	Dismantle and clean the valves.	2	5.14
THE PUMP IS "DEAD" (APPLICABLE FOR BOTH PUMPS)	AIR DOES NOT GO THROUGH TO THE PUMP To investigate, remove air hose (22 alt. 32) from coupling (25). Press the foot pedal (30). Air should come out through the hose.	If air comes out through the hose, the pump is faulty and must be replaced. If not, there is an air feed problem that needs to be investigated.	2 2	5.12 5.13
THE LOAD PUMP STRIKES ONE OR A FEW TIMES AND THEN STOPS AND/OR LOADING SOLVENT TAKES UNUSUAL LONG TIME	SUCTION TUBE (43) AND/OR TUBING IS BLOCKED.	Clean suction tube mesh (53) and tube (43) with clean solvent. Pump clean solvent through tube and load pump to dissolve residues. If paint residues have been left to dry or harden load pump assembly must be replaced.	1 2	2.1
DISCHARGING (PUMPING) THE DISTILLED SOLVENT TAKE UNUSUAL LONG TIME	THE CHECK VALVE (31) ON THE PUMP IS LEAKING	REPLACE CHECK VALVE	2	5.11
DISCHARGE TAP-HANDLE MALFUNCTION	Trigger valve (42) faulty.	Replace tap handle with hoses	2	5.10
LID MECHANISM LOOSES CLOSING PRESSURE OVER TIME.	The rubber seal (128) under the Teflon sheet (131) may change shape over time due to pressure and heat. As a result, the closing force on the lid handle may change.	Remove one or both of the rectangular shims (108) situated under the lid bar.	2	5.2
UNIT SHOWS SIGNS OF LEAKAGE AROUND THE BOILER LID.	Lid seal is damaged. Lid seal consists of two parts: One rubber seal (128) and one white Teflon sheet (131) for universal solvent resistance.	Check and if necessary clean or replace lid seal and/or Teflon sheet.	2	5.1
LEVEL INDICATOR INDICATES THAT DISTILLATE DRUM IS FULL ALTHOUGH IT IS COMPLETELY DRAINED	Level indicator rod (143) malfunctioning due to fouling or faulty cable (233) connection to control box.	Check and clean indicator rod. Check cable shoe connection to rod. If necessary replace rod	2	5.3

Changing Recycling Modes

The Minimizer 710.2/710.3 has got three different recycling modes that can be used.
Mode 1, Mode 2 and Mode 3.

Mode 1:

This program should be used if the solvent has a high percentage of solvents with low boiling points, e.g. acetone.
Mode 1 uses a low level of power over a longer period of time compared to the default Mode 2. This means that the cycle-time is slightly longer but the recovery rate higher. Mode 1 also reduces the risk of foaming compared to the default Mode 2.

Mode 2: DEFAULT MODE

This is the default mode of the unit and is recommended for the normal solvents and contaminants found in a body shop (see chapter "PERMITTED SOLVENTS") in the OEM Manual.

Mode 3:
Mode 3 can be used when the acetone level (or other substances with a low boiling temperature) of the solvent is very low. Mode 3 uses an increased level of power during the initial heating of the solvents compared to the default Mode 2.

In Mode 3 the baking time during the last phase of the distillation is longer compared to the default Mode 2. The prolonged baking time can in some cases make the consistency of the residue more firm.

Changing Mode:

Press the "STOP" and "START" button at the same time and keep pressed for 10 seconds. After 10 seconds display will read: "Select Mode 1".

Keep "STOP" button pressed. By pressing the "START" button you will be able to loop through the following operations:

Select mode 1 / Select mode 2 / Select mode 3 / Resetting working hours

Release the "START" AND "STOP" buttons at the preferred mode.

3.4 Fitting of bags

1. Check that the green light on the control panel is on. This means that the unit is cool and the lid of the boiler can be opened.
2. Open the lid.
3. Remove the bag retainer ring.
4. Remove the used bag. Should it stick to the bottom, press "START" and let the recycler warm up for 5 minutes. Press "STOP" and gently pull out the bag and clean the boiler.
5. Open a new bag and place inside boiler. Tuck the bag well down to the bottom of the boiler.
6. Squeeze the bag retainer ring and place it down into the bag. The ring must slide into the recess of the boiler
7. Snap the bag retainer ring into position, in the recess of the boiler.
8. Make sure the bag is tucked well behind the waste intake manifold
9. The bag should be replaced before each cycle.

3.5 Resetting "Error Code"

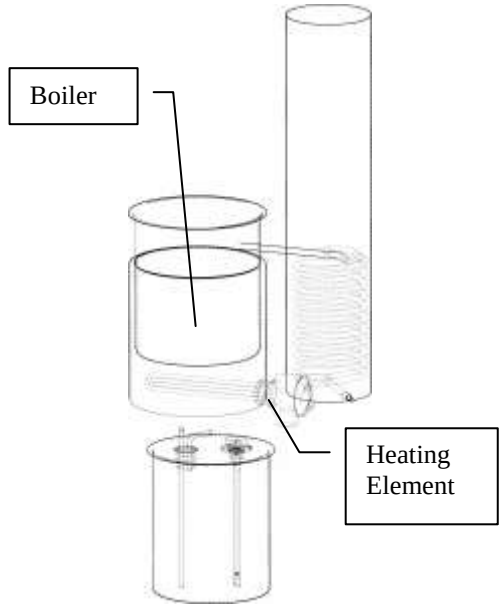
If unit displays and error code note the type of error displayed. Check the trouble shooting chart (3.2) for corrections. To reset the error code do as follows:
Press "START" AND "STOP" to confirm error message. Display will then read "Turn off power and repair error".
Turn off power and correct problem. Re-connect power. If unit is cold display will read: "Ready to start Mode X" (i.e. Mode 1, 2 or Mode 3). If unit is hot, display will read "Cooling down"

4 COMPONENT DESCRIPTIONS

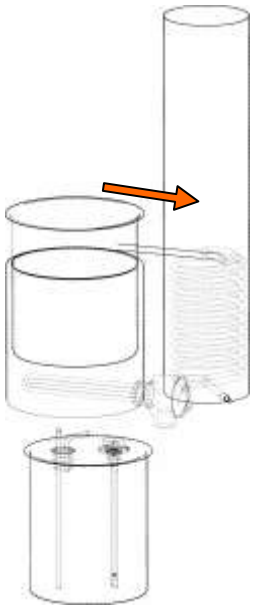
4.1 Boiler and condenser

How this unit works is described below in 4 steps:

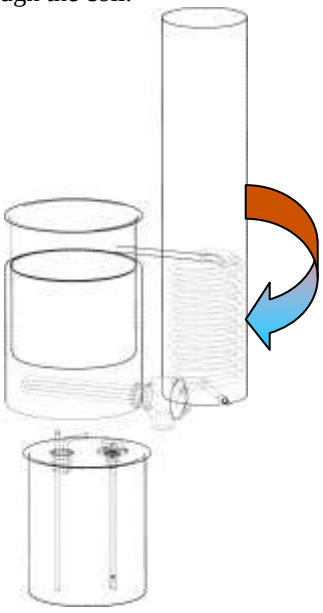
1. The heating element heats the diathermic oil inside the boiler.



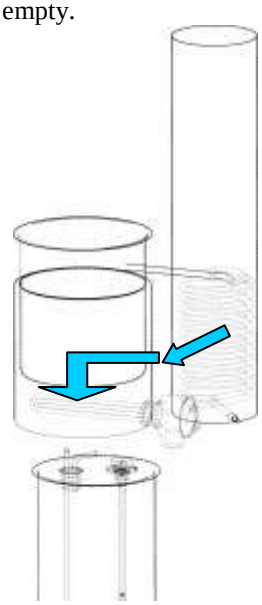
2. The solvent in the boiler vaporises and escapes out the vapour outlet into the condenser column.



3. Solvent vapours are cooled by the water in the condenser column and condenses on its way through the coil.



4. Solvent collects in the collecting drum. Level is monitored by the level indicator. Unit can only be restarted if the collecting drum is empty.



5 REPAIR PROCEDURES

5.1 Replacing the rubber seal and/or the Teflon sheet

Referenced Spare Part: R14650 Referenced illustration: 6.7 Lid Assembly

Unscrew the nut and remove the cover.
Remove the Teflon sheet

Check and if necessary replace rubber seal.

Check and if necessary replace the Teflon sheet.

5.2 Adjusting the lid

If lid handle closes without “snapping” lid bar must be adjusted.

Loosen the two inner bolts securing the lid bar. Remove a shims piece.

Retighten bolts and check closing “force” of the lid handle

Check gap between top plate and lid handle bracket. Gap should be approx. ¼”.

5.3 Inspect or replace the level indicator

Referenced illustration: 6.8 Collection Drum Assembly

Remove foot pedal to access collecting drum (ref. 5.4). Remove the clamps securing the lid. Check and if necessary clean the level indicator.

Remove the indicator cover and check cable connections.

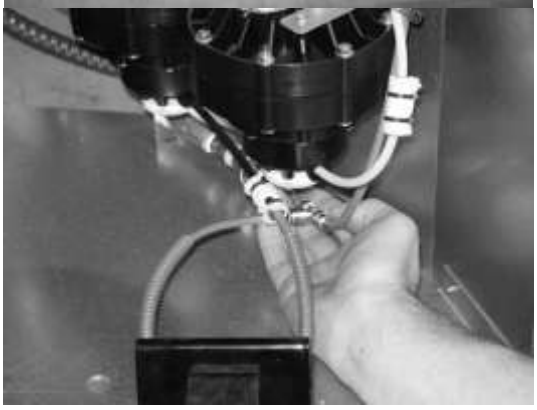
Note how indicator is attached to drum plug. Unscrew the two Philips screws with washers to release the pipe.

Remove top nut on the indicator. Replace rod and reassemble in reverse order.

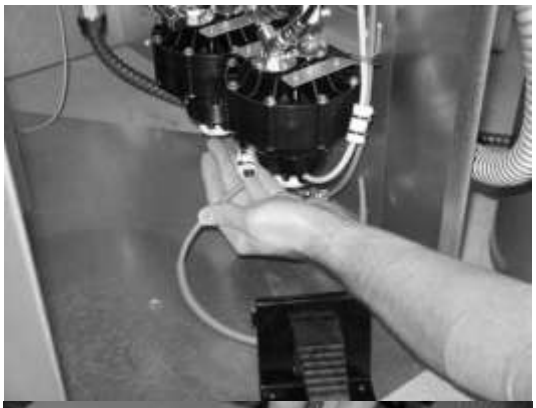
5.4 Inspect or replace the Foot valve

Referenced Spare Part: R14640 Referenced illustration: 6.1 Pneumatic Circuit Diagram

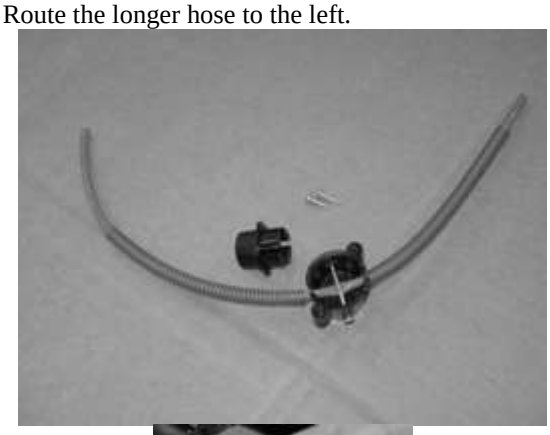
Unscrew four Philips screws to loosen the pedal plate. Disconnect hoses from fittings.



Lift the pedal and unscrew the two Philips screws to remove the foot-valve.



Check the foot-valve and if necessary replace it. Route the longer hose to the left.

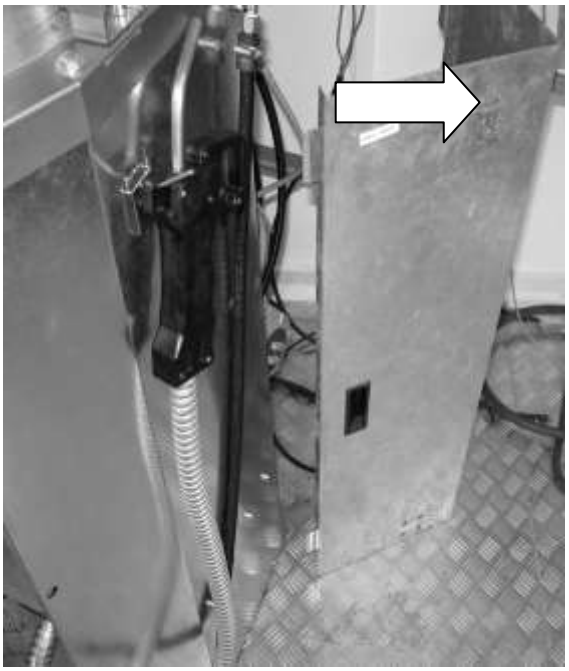


5.5 Replacing main fuse on 220V unit and 110V unit

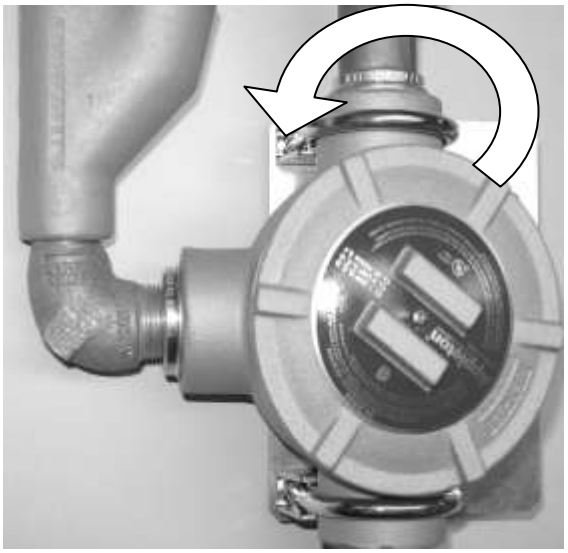
NOTE: MAIN POWER MUST BE DISCONNECTED BEFORE ANY WORK ON THE UNIT

Referenced Spare Part: R13380(110V) R13390(220V) Referenced illustration: 6.9 (110V power box) alt. 6.10 (220V Power box)

Remove side door by unhooking and sliding along rear handle bar

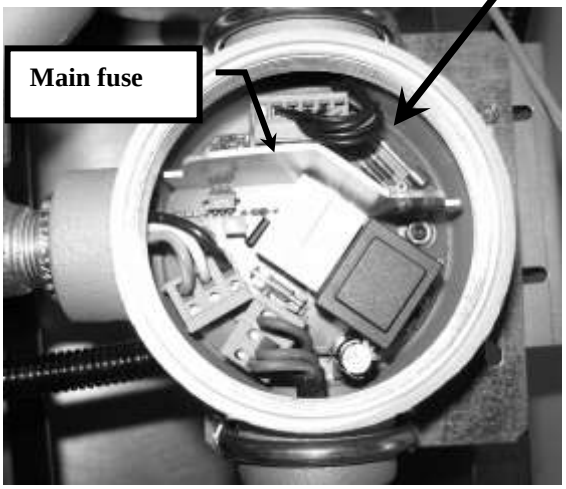


Remove the power box lid by turning the lid anti clockwise.



220 V UNIT ONLY!

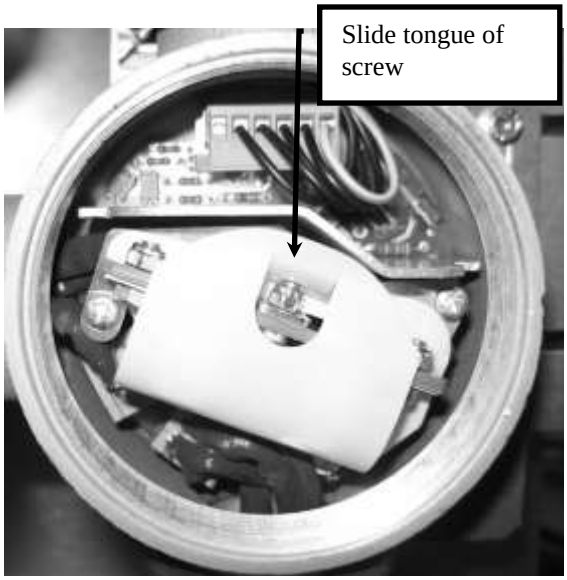
Main fuse is situated next to the green terminal.
Fuse data 250V Fuse 5x20 10Amp Slow.
Example: Little fuse part no. 218.010 T



NOTE:
*Intrinsically safe fuse is solded to circuit board and is **NOT replaceable**. If fuse has burnt the complete Power box assembly must be replaced*

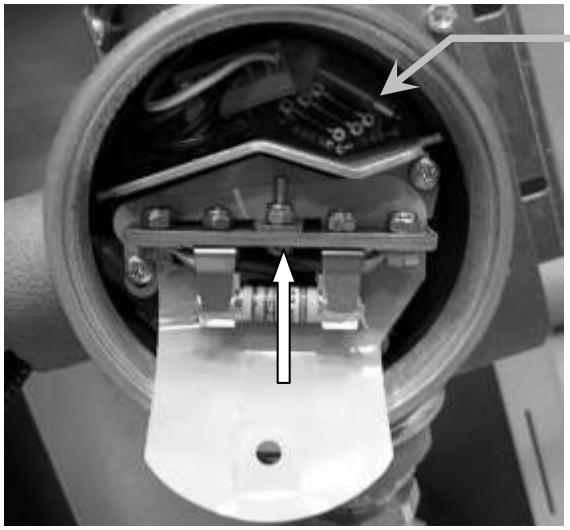
110 V UNIT ONLY!

Main fuse is covered by an insulating sheet (white) Open sheet by un-hooking the tongue of the sheet from centre screw.



110 V UNIT ONLY!

Main fuse is now accessible. Fuse must be replaced with original fuse. Fuse data: Littelfuse KLK 20



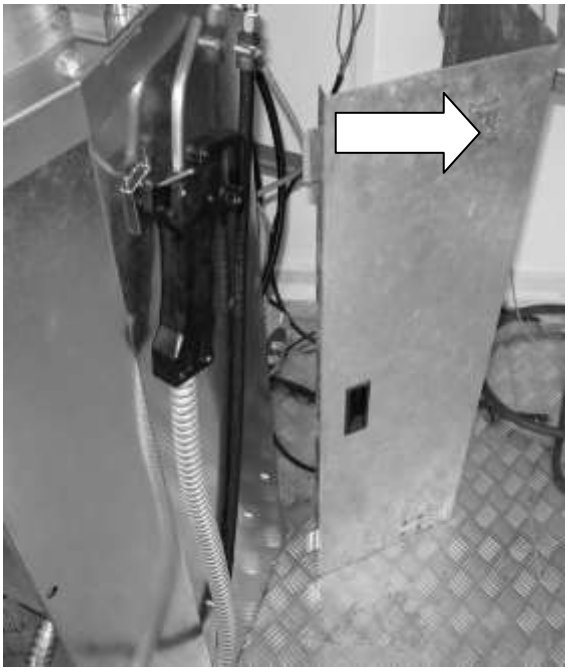
NOTE:
*Intrinsically safe fuse is solded to circuit board and is **NOT replaceable**. If fuse has burnt the complete Power box assembly must be replaced*

5.6 Replacing Control Box Fuse

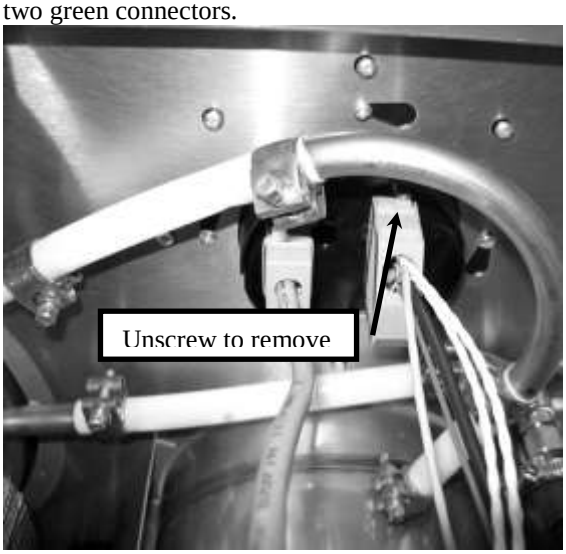
NOTE: MAIN POWER MUST BE DISCONNECTED BEFORE ANY WORK ON THE UNIT

Referenced Spare Part:R14630 (110V) R13990 (220V) Referenced illustration: 6.11 Control Box Assembly

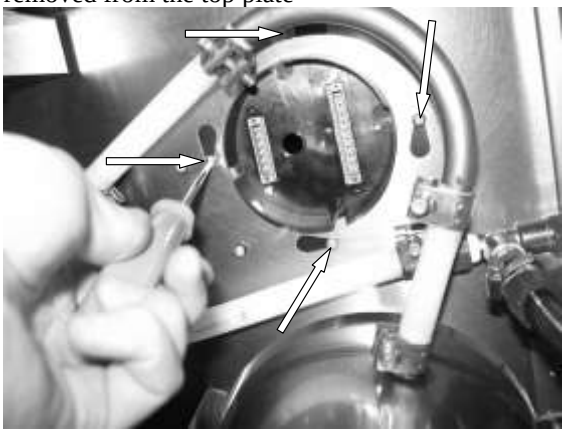
Remove side door by unhooking and sliding along rear handle bar



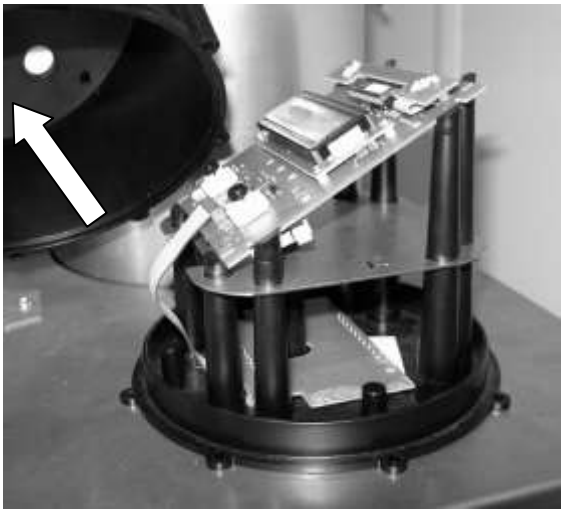
Unscrew the four small flat head screws securing two green connectors.



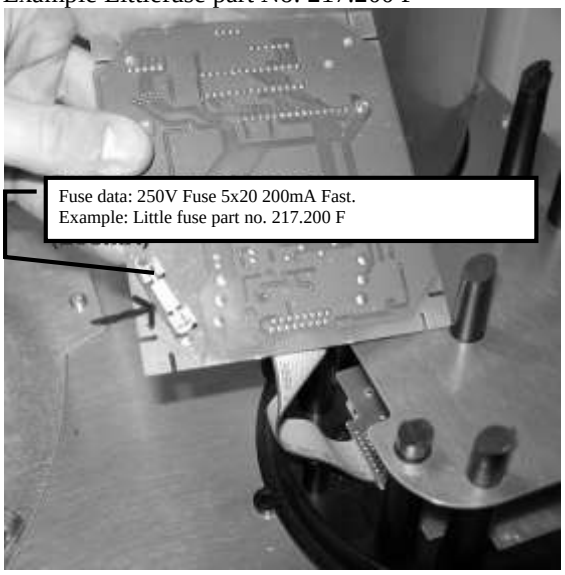
Unscrew the four small screws holding the control box to the top plate. The control box can now be removed from the top plate



Unscrew the eight screws securing the control box cover and remove the Control box lid.



The control box fuse is situated under the top circuit board. Check fuse and replace if necessary. Fuse type: 250V Fast acting 200mA (5x20)
Example Littlefuse part No: 217.200 F



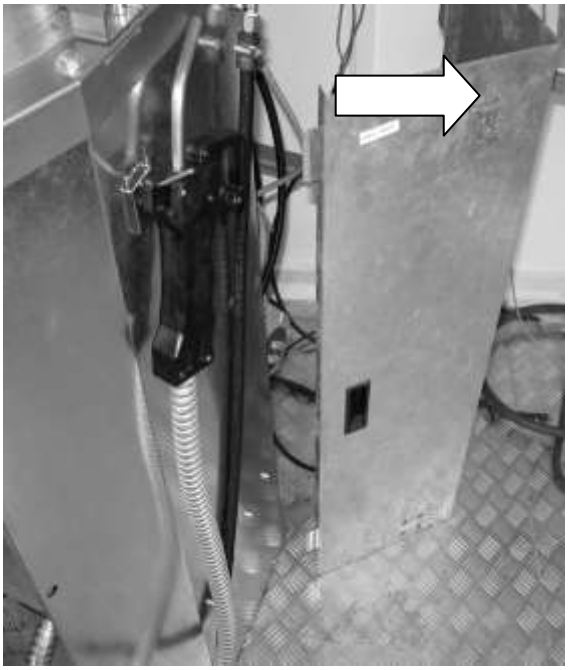
- Reverse operation to fit the new Power Box -

5.7 Replacing the Power Box

NOTE: MAIN POWER MUST BE DISCONNECTED BEFORE ANY WORK ON THE UNIT

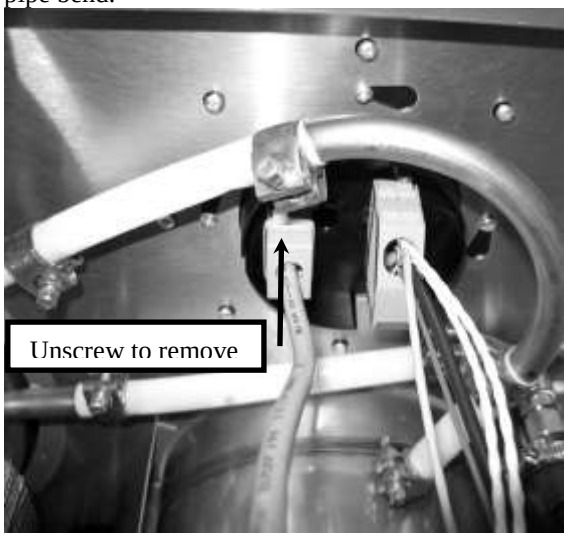
Referenced Spare Part: R13380(110V) R13390(220V) Referenced illustration: 6.9 (110V power box) alt. 6.10 (220V Power box)

Remove side door by unhooking and sliding along rear handle bar

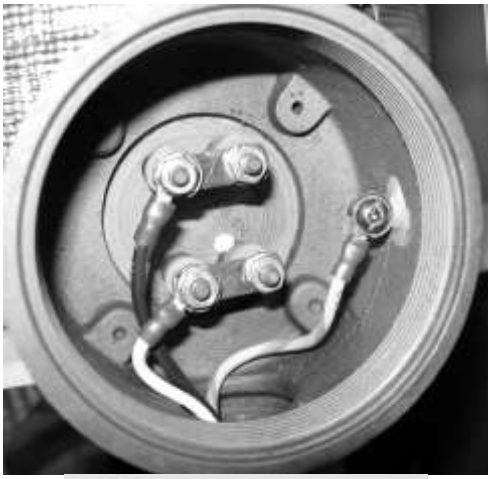


Unscrew the two small screws for the small green connector.

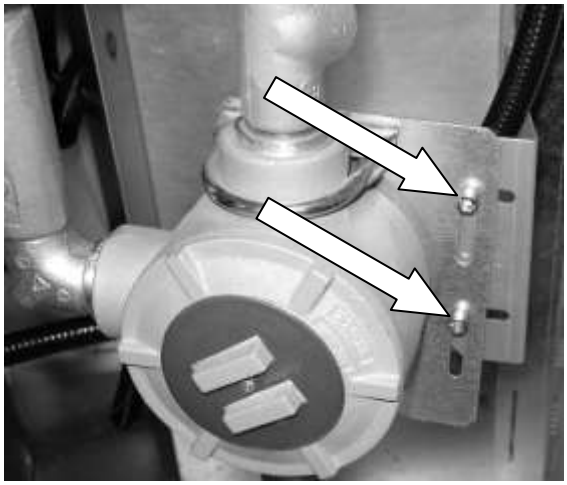
Picture shows early model Teflon tubing. Later models have got corrugated Teflon tubing without pipe bend.



Remove heater lid and disconnect the two leaders and ground cable. Note position of leaders and position of the washers.



Unscrew the two bolts holding the power box assembly



Unscrew the large aluminium gland nut securing the power box to the heater. Ensure that only the gland nut rotates when un-screwing. Cable conduit and the entry reduction fitted to the heater should not rotate. These may have to be fixated with the aid of a second pair of pliers.

- Reverse operation to fit the new Power Box -

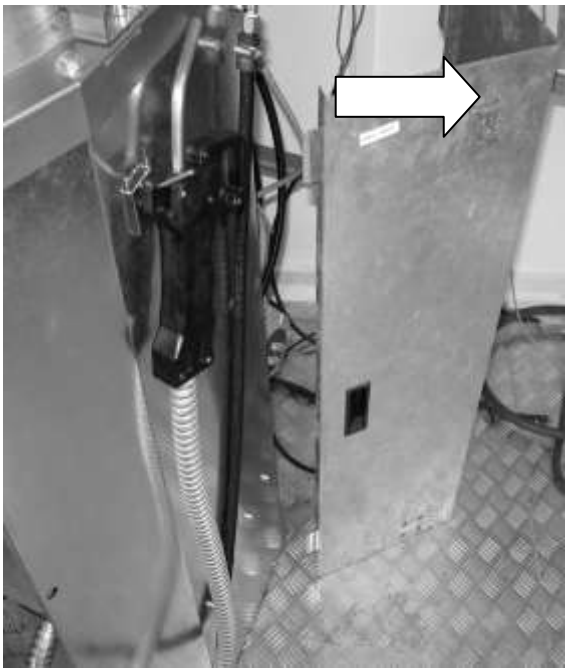
1. Remove and replace the Power box assembly. Start by fitting the gland nut to the heater loosely by hand.
2. Fit the two bolts and reconnect the green plug.
3. Tighten the heater gland nut.
4. Fit the leaders to the heater. Make sure cables are clear from the heating element rods and terminals.
5. Tighten nuts and ground screw gently.
6. Fit the heater lid. Tighten lid firmly by hand.

5.8 Replacing the Control Box

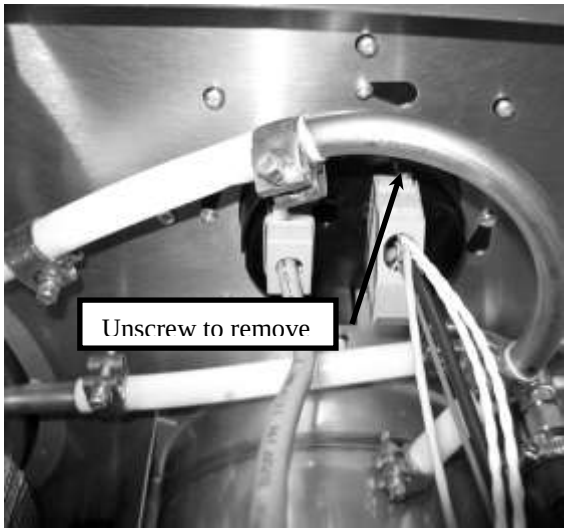
NOTE: MAIN POWER MUST BE DISCONNECTED BEFORE ANY WORK ON THE UNIT

Referenced Spare Part: R11188 Referenced illustration: 6.11 Control Box Assembly

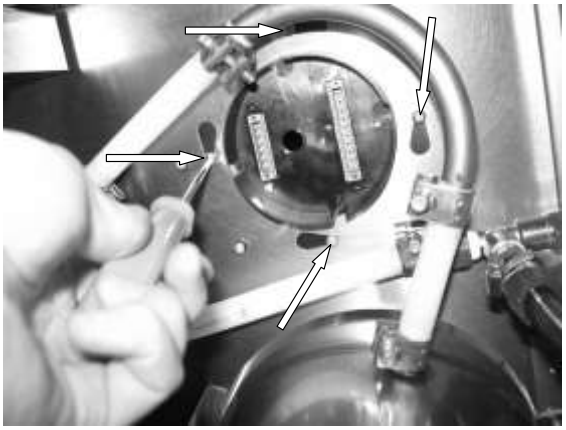
Remove side door by unhooking and sliding along rear handle bar



Unscrew the four small screws for the two green connectors.
Picture shows early model Teflon tubing. Later models have got corrugated Teflon tubing without pipe bend.



Unscrew the four small screws holding the control box to the top plate. The control box can now be removed from the top plate



- Reverse operation to fit the new control Box -

Replace Control box and reverse operation to fit new box.

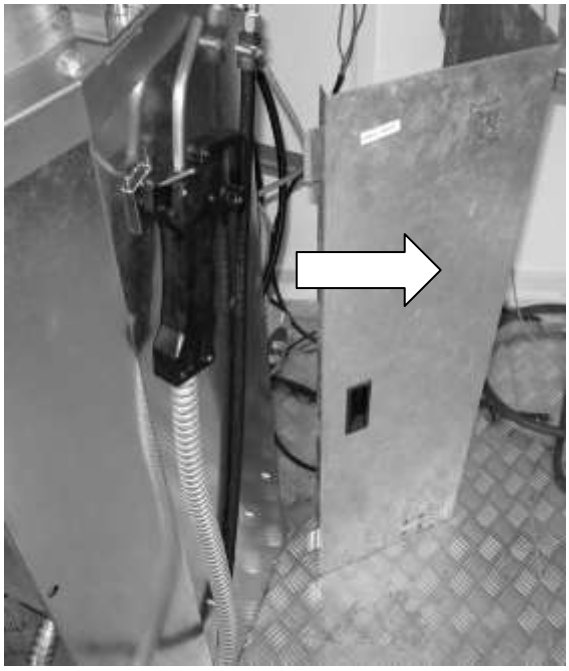
Reconnect power to the unit and check the selected operating mode. Default mode is Mode 2. Change mode if desired.

5.9 Replacing the temperature probes

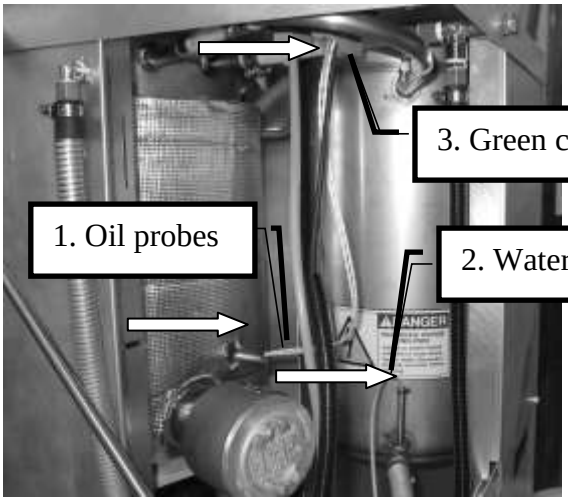
NOTE: MAIN POWER MUST BE DISCONNECTED BEFORE ANY WORK ON THE UNIT

Referenced Spare Part: R13980 Referenced illustration: 6.2 Electric Circuit Overview

Remove side door by unhooking and sliding along rear handle bar.

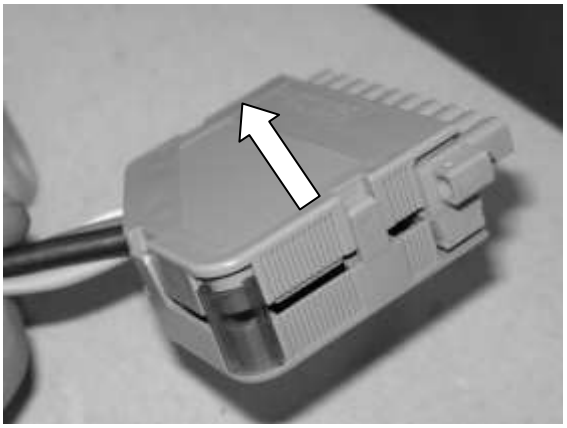


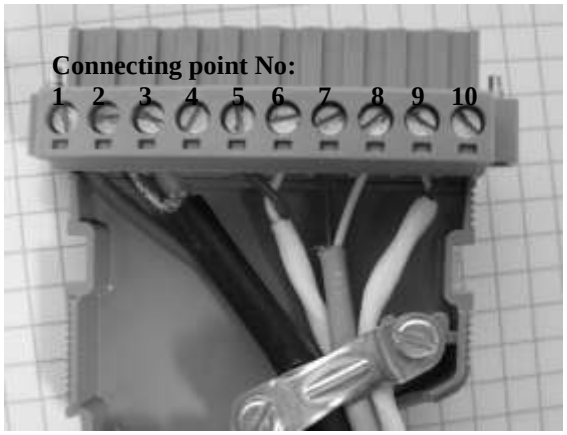
Picture shows the position of the temperature probes. The two white oil temperature probes (No.1) are inserted into a white Teflon tube witch then is inserted into the boiler plunge tube (inside boiler).
The grey water temperature probe (No.2) is inserted into the small pipe welded to the vapor outlet of the condenser. No 3 shows the position of the probe connector
Please note how probes are secured with cable ties.



Unscrew the two small screws on the large green connectors.

Open the green connector by gently lifting the three snap hooks.



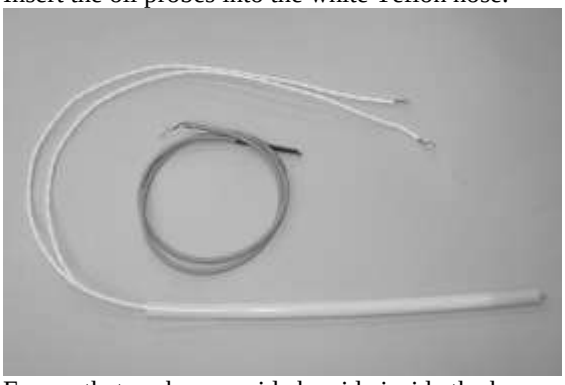


The probes are connected from the right as follows:
White oil probe 1 (connecting point. 9&10)
Grey water probe (connecting point. 7&8)
White oil probe 2 (connecting point. 5&6)

Function of the probes is checked by measuring the resistance between the red and white / brown and white lead. Resistance should be 1080Ω ± 100 Ω
If probe leads are short circuited (near 0 Ω) or disconnected (Off limit) probe must be replaced.

Fitting new oil probe/probes

Insert the oil probes into the white Teflon hose.



Ensure that probes are side by side inside the hose.
Push the white Teflon hose with probes all the way into the boiler plunge tube (see picture).
Fit the cable tie through the plunge tube hole and secure the two white cables firmly.

Fitting new water probe

Insert the grey probe into the small pipe. Secure the cable with the cable tie.

5.10 Replacing the Tap handle and hoses

Referenced Spare Part: R14620 Referenced illustration: 6.1 Pneumatic Circuit Diagram

Unscrew the four screws holding the foot-valve plate.

Push the foot-valve plate aside and pull out the collecting drum.

Remove the four clips securing the lid and loosen nut and screw to release the ground cable.

Bend the clip to release the ground cable.

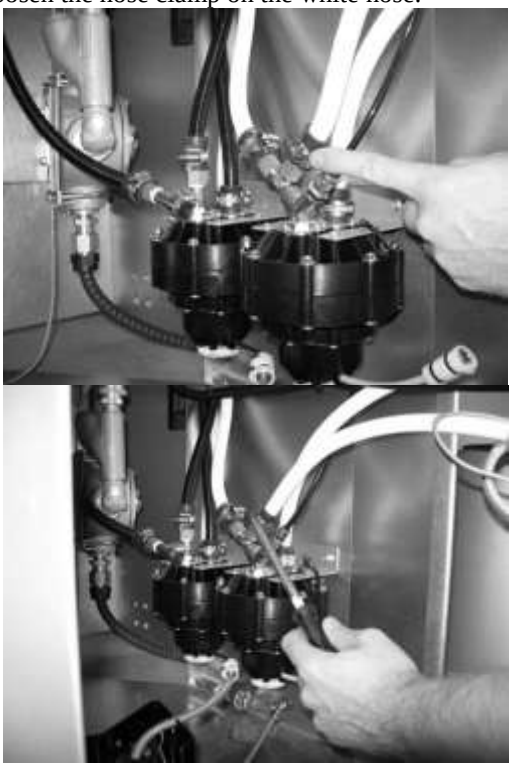
Release the ground cable secured to the tubing.

Loosen screw and nut to release the hose clamp.

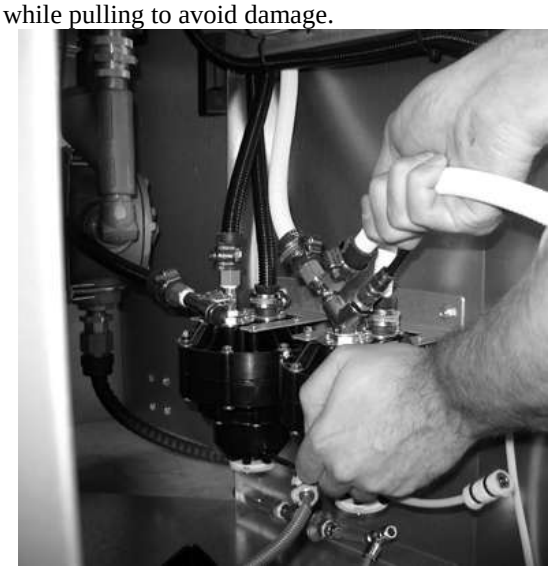
Disconnect the yellow hose from the fitting.

Disconnect the blue hose from the T-fitting.

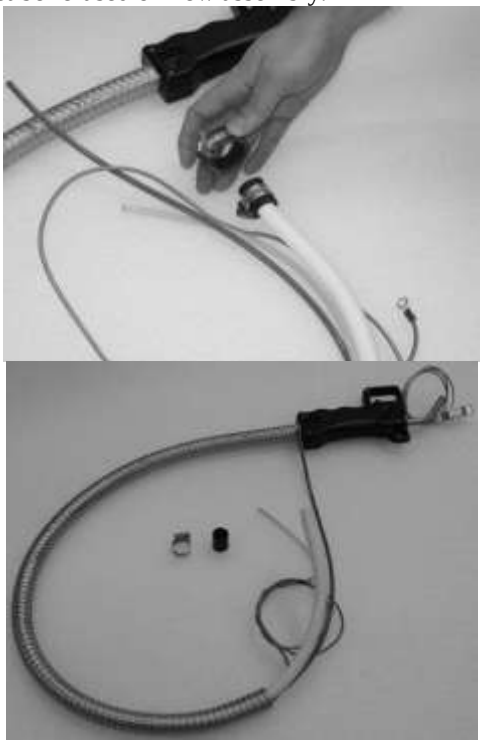
Loosen the hose clamp on the white hose.



Pull the white hose off of the pump assembly. Twist and turn while pulling. White hose is fitted to a barbed brass piece and requires some pulling force in order to come off. Support pump and fittings while pulling to avoid damage.

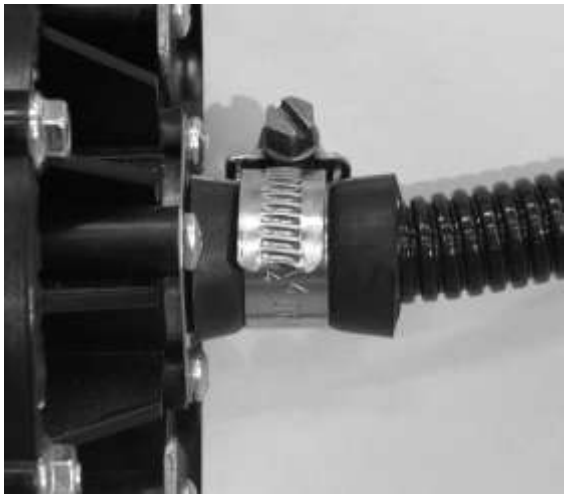


The large hose clamp securing the metal jacket must be re-used on new assembly.



This picture shows a correctly tightened joint. NOTE to what level the rubber bushing is deformed, securing a tight joint.

Now run a test of the pump, and make sure there are no leaks of air or solvent.

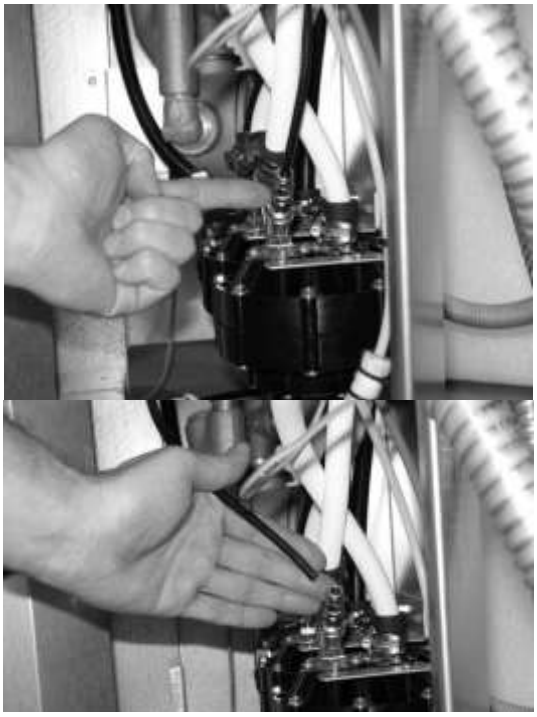


Reverse order to fit the new Tap handle

5.11 Replacing the Check valve

Referenced Spare Part: R13929 Referenced illustration: 6.2 Pump Assembly

Check vale is integrated with discharge pump to avoid accidental spillage if tap handle is dropped (Anti Siphon effect).
Remove the black hose from the check valve.



Use a 17 mm wrench to unscrew the valve.
Replace valve and fit black hose.

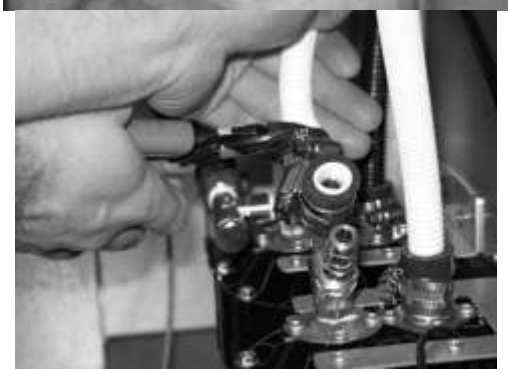
5.12 Replacing the Discharge pump (Front pump)

Referenced Spare Part: R14080 Referenced illustration: 6.1 Pneumatic Circuit Diagram

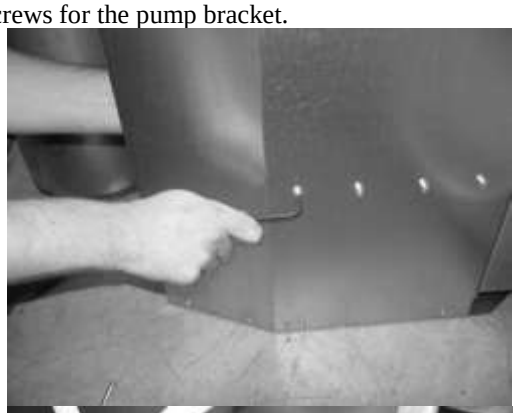
Disconnect the yellow hose from the fitting. Cut the white hose from the tap handle as close to the pump as possible.

Disconnect the black hose from the check valve.

Cut the remaining white hoses as close to the pump as possible. NOTE the position of the different white hoses



Remove the pump by unscrewing the two Allen screws for the pump bracket.



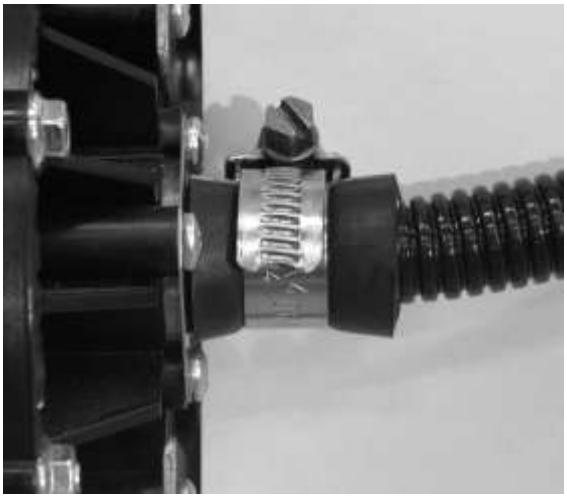
Old pump removed

Fit new rubber hose piece with clamps from the spare part onto the cut hoses. Make sure that the hose is pushed through to the end of the rubber piece.

Fit the hoses back onto the new pump. Make sure hoses are pushed all the way onto the brass pieces. One should hear/feal two “snaps” as hose passes the barb on the brass piece.

This picture shows a correctly tightened joint. NOTE to what level the rubber bushing is deformed, securing e tight joint.

Now run a test of the pump, and make sure there are no leaks of air or solvent.



Reverse order to fit the new Tap handle

5.13 Replacing the Load Pump (Rear pump)

Referenced Spare Part: R14070 Referenced illustration: 6.1 Pneumatic Circuit Diagram

Remove side door by unhooking and sliding along rear handle bar

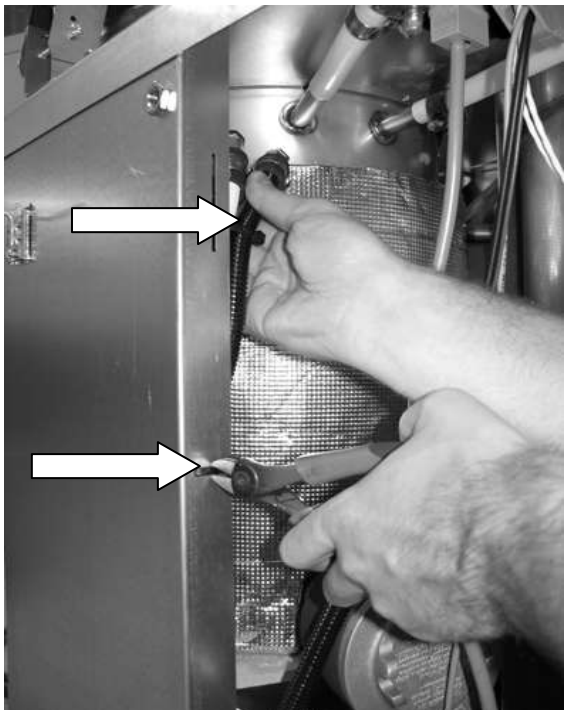
Unscrew the four screws holding the foot-valve plate.

Push the foot-valve plate aside and pull out the collecting drum.

Remove the black hose (from the rear pump) from the fitting to free pump from foot pedal/blue hose.

Remove suction tube and hose from the side of the unit.

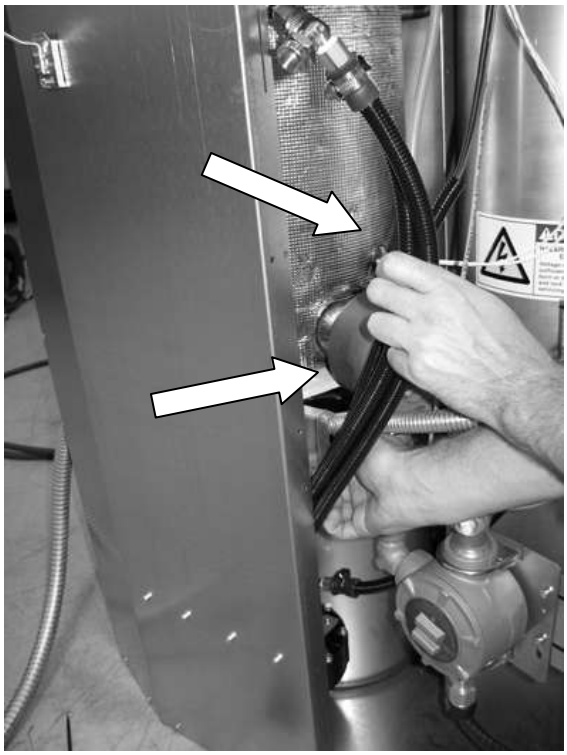
Cut the two cable ties securing the three hoses (black, black, white). Hoses are situated in the rear, behind the right panel.



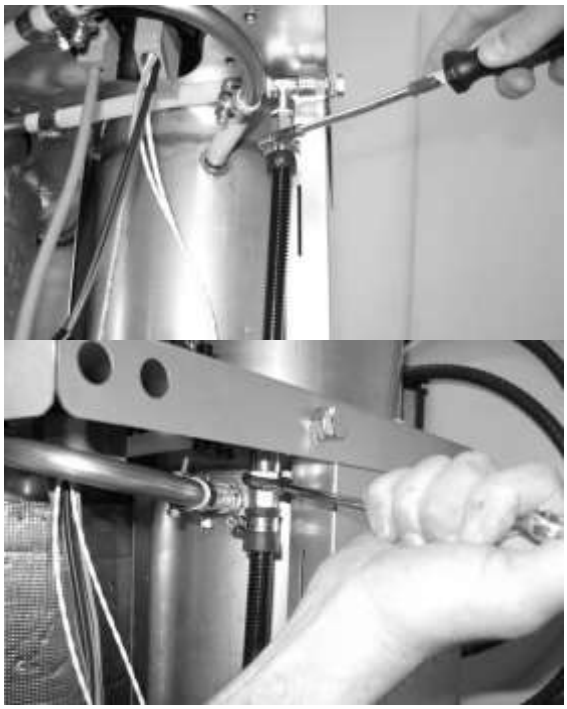
Unscrew the inlet fitting. Use a 19mm spanner (or adjustable) and hold the L-piece (rear) by hand.

Unscrew the two sheet metal screws securing the hose support bar. Use a Philips screwdriver.

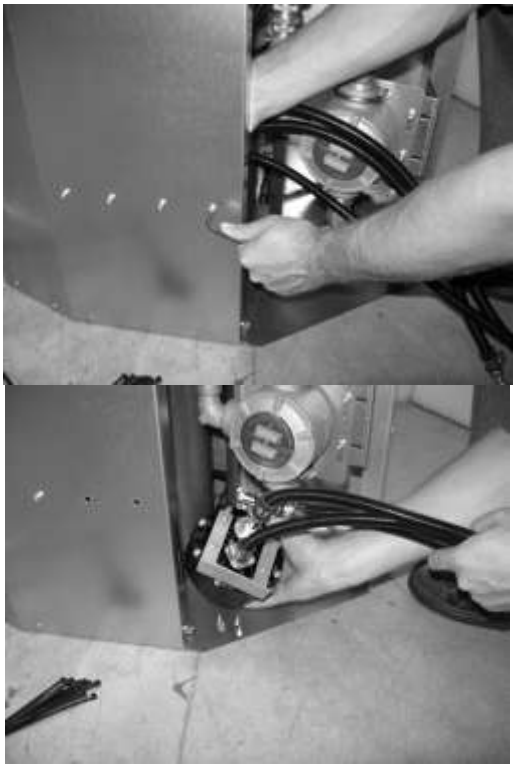
Push the rear of the hose support bar to the side to free the two black hoses.



Loosen the hose clamp at the rear T-piece, under the top panel. Remove hose and fittings from T-piece.



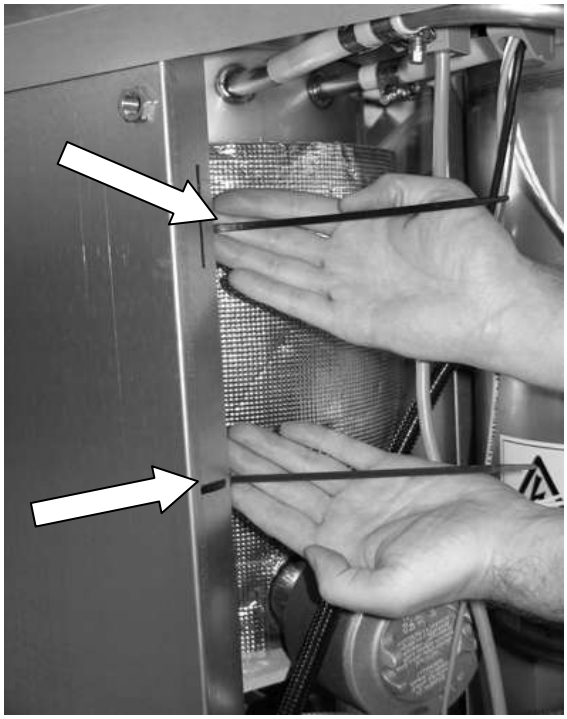
Unscrew the two bolts holding the pump bracket.



A. Reverse operation to fit the new Load Pump -

1. Start by fitting new pump to rear panel
2. Push the long black hose firmly onto the brass fitting and tighten hose clamp. One should hear/feel two snaps as hose passes the barb on the brass piece.
3. Extend hose with L-piece and plugged hose upwards between hose support bar and side panel.
4. Fit the two sheet metal screws to secure the hose support bar to right panel.
5. Re-fit Teflon tape to the 3/8" coupling.
6. Fit L-piece through the right side panel

Continued…



Fit the two cable ties included in the Load Pump Assembly to secure all three hoses (White, Black, Black). Bottom tie is lead through the two holes of the right side panel.

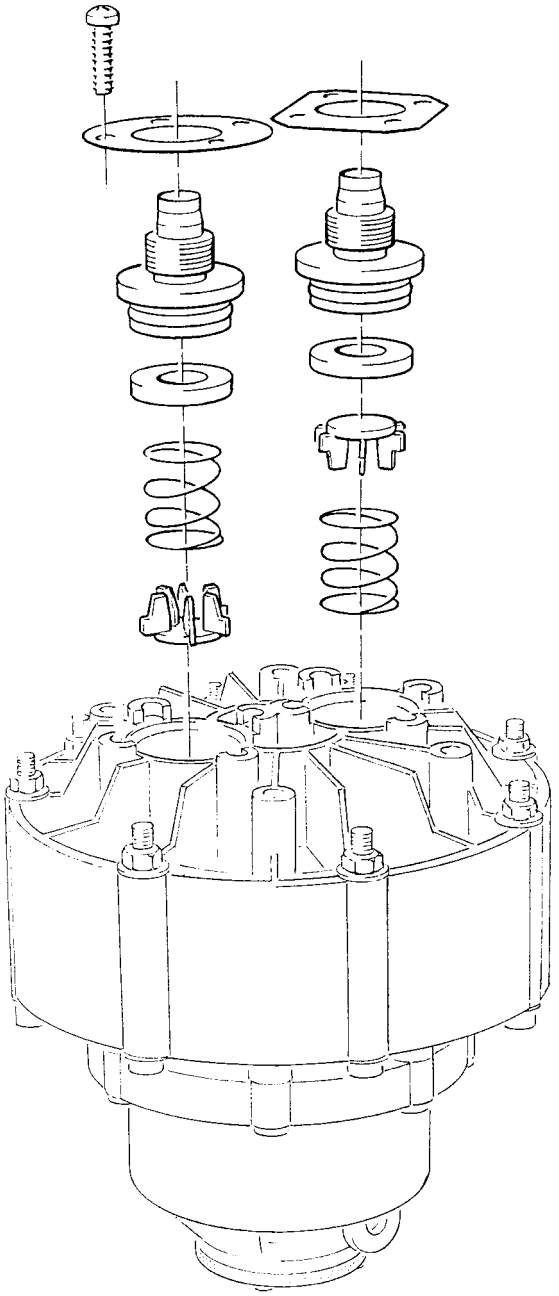
-B Continue to reverse operation -

1. Re-fit Teflon tape to suction tube L-piece.
2. Fit the suction tube to the inlet fitting.
3. Fit black 6mm pump hose to the foot pedal/blue hose
4. Place collection drum inside unit and fit the four screws to secure the foot pedal.
5. Fit the rear right door.
6. Test pump by pushing the foot pedal.

5.14 Cleaning the pump valves

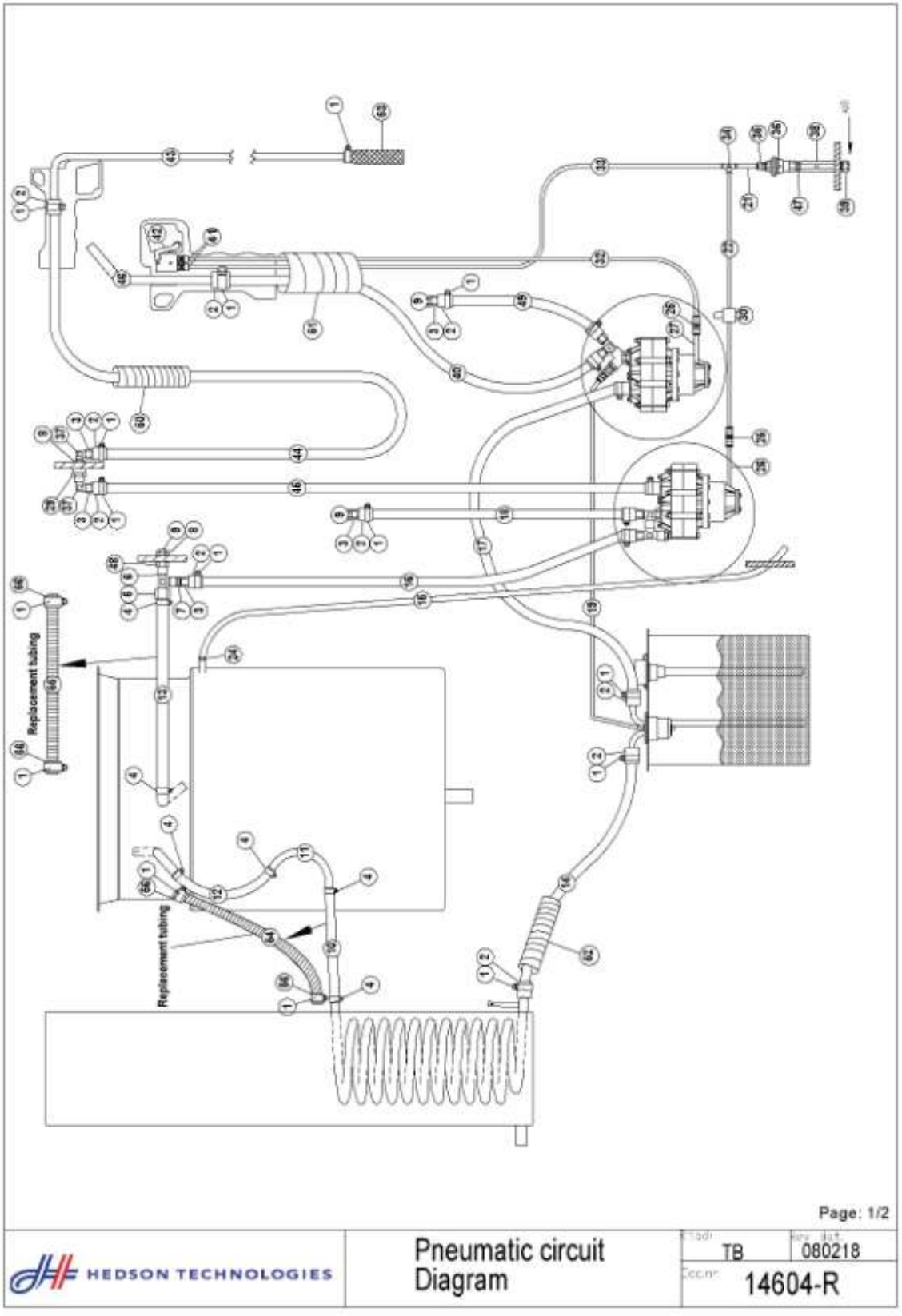
Referenced Spare Part: R6336 and R9178 Referenced illustration: 5.14 Cleaning the pump valves

Remove the 8 screws, dismantle as shown, clean the components, replace the O-rings and assemble in reverse order.

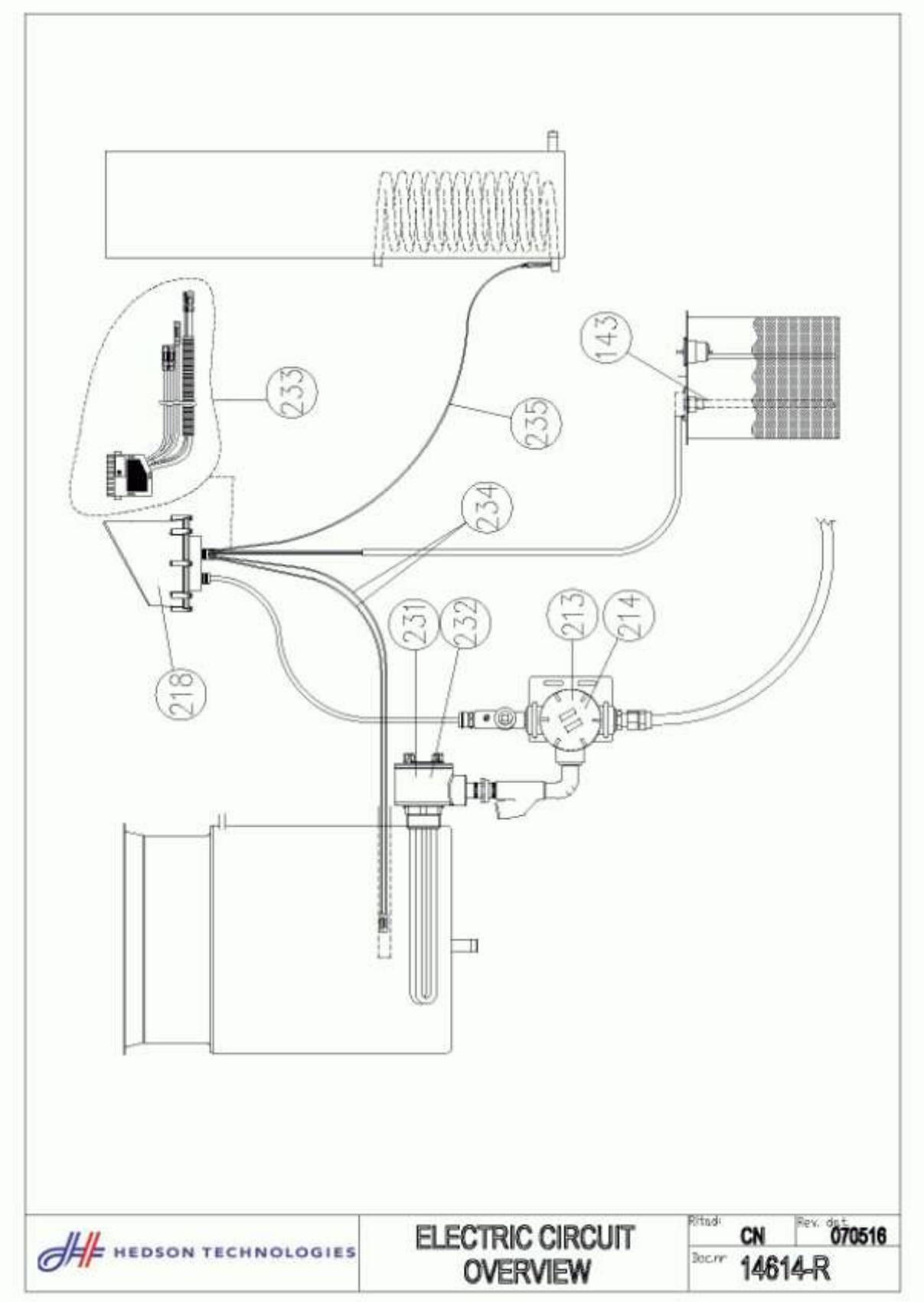


6 REPLACEMENT PARTS ILLUSTRATIONS

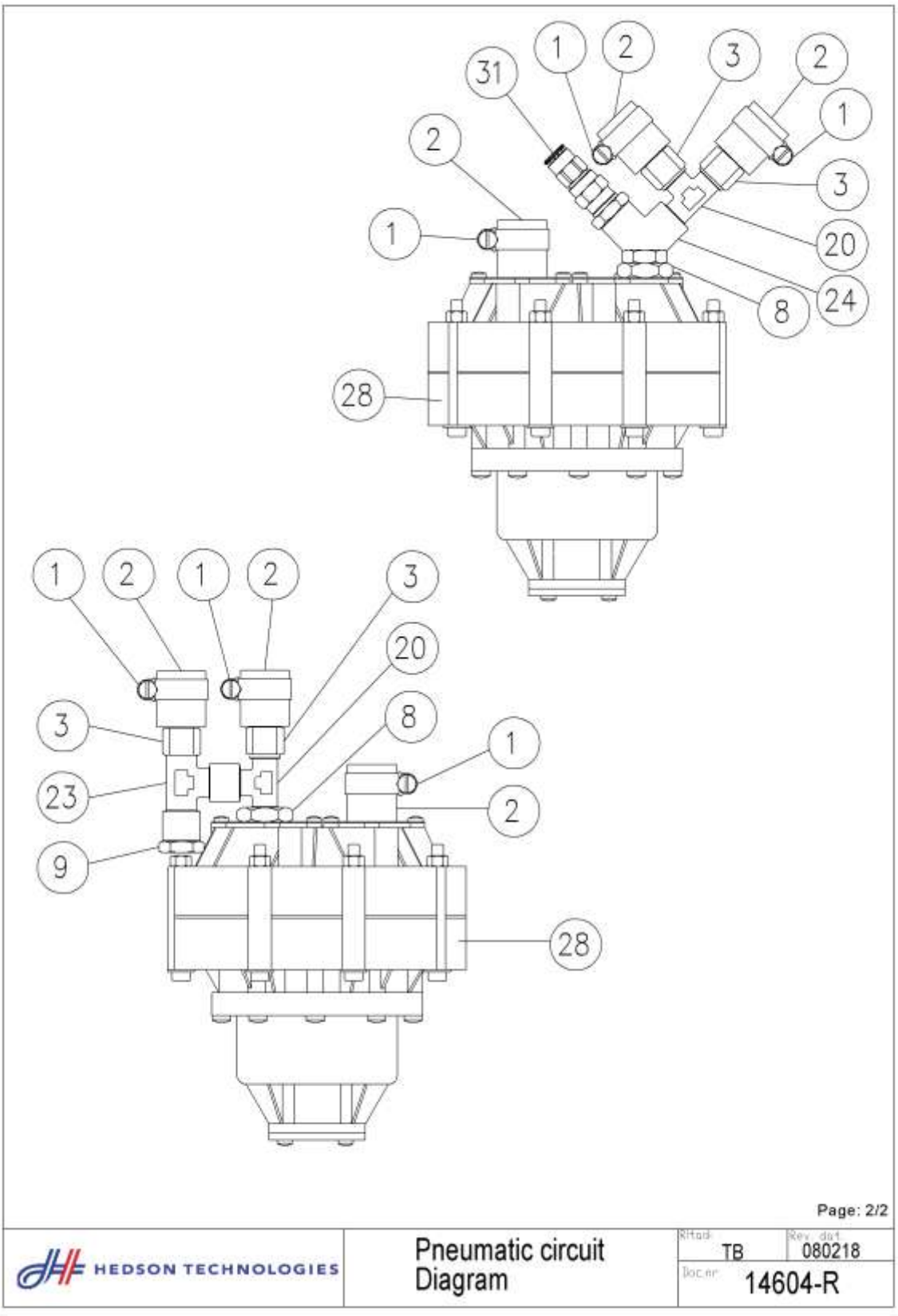
6.1 Pneumatic Circuit diagram



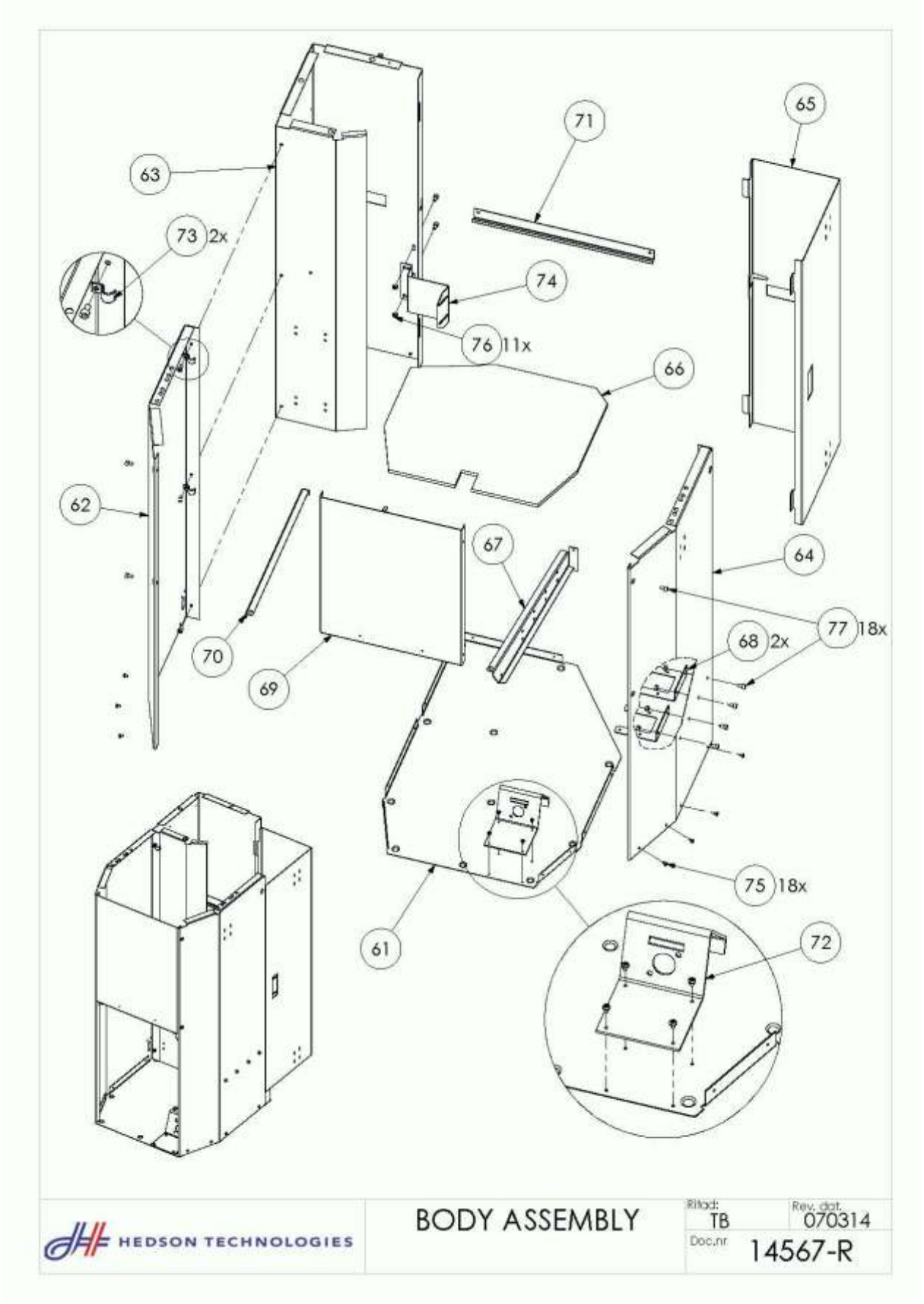
6.2 Electric Circuit Overview



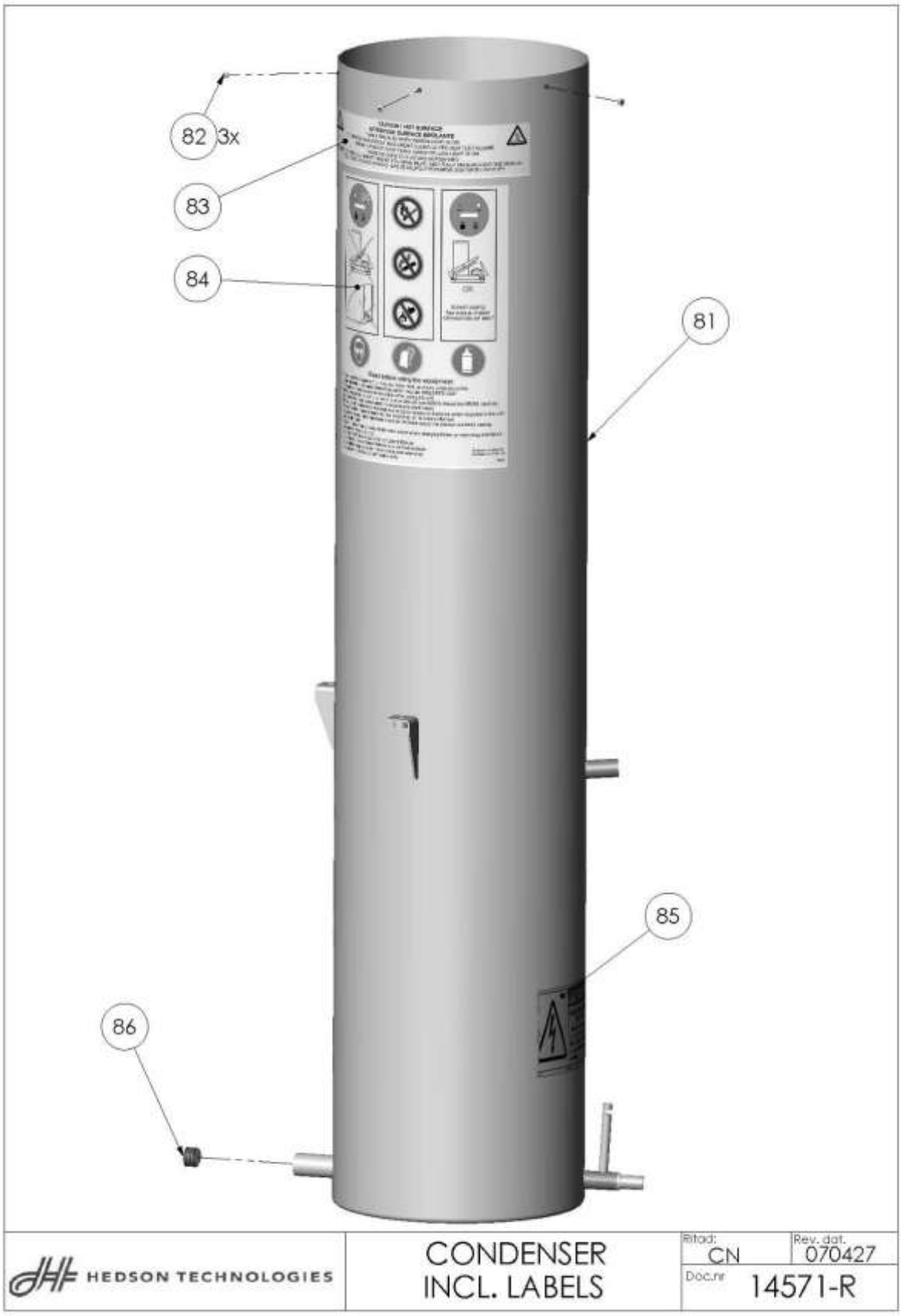
6.3 Pump Assembly



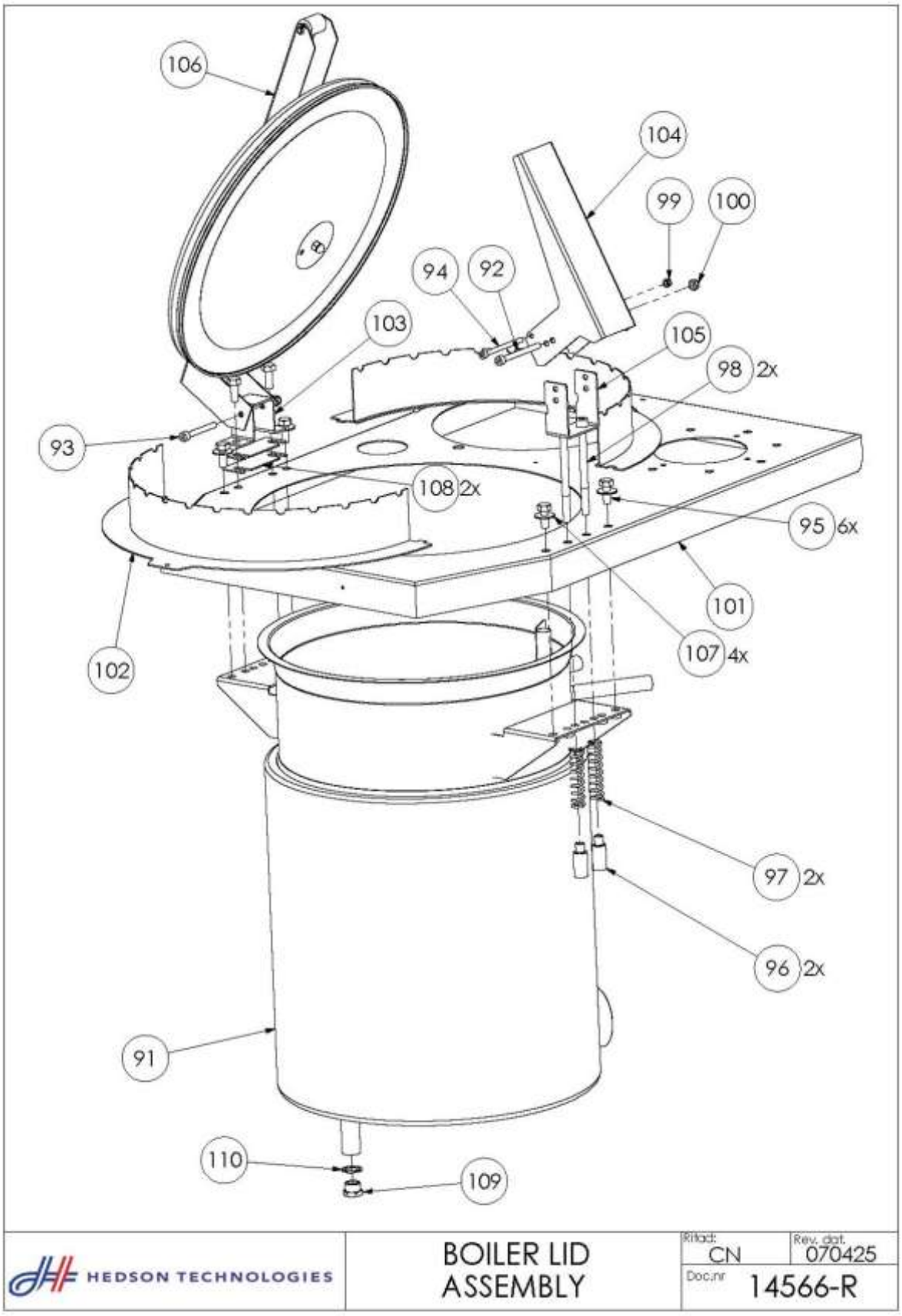
6.4 Body Assembly



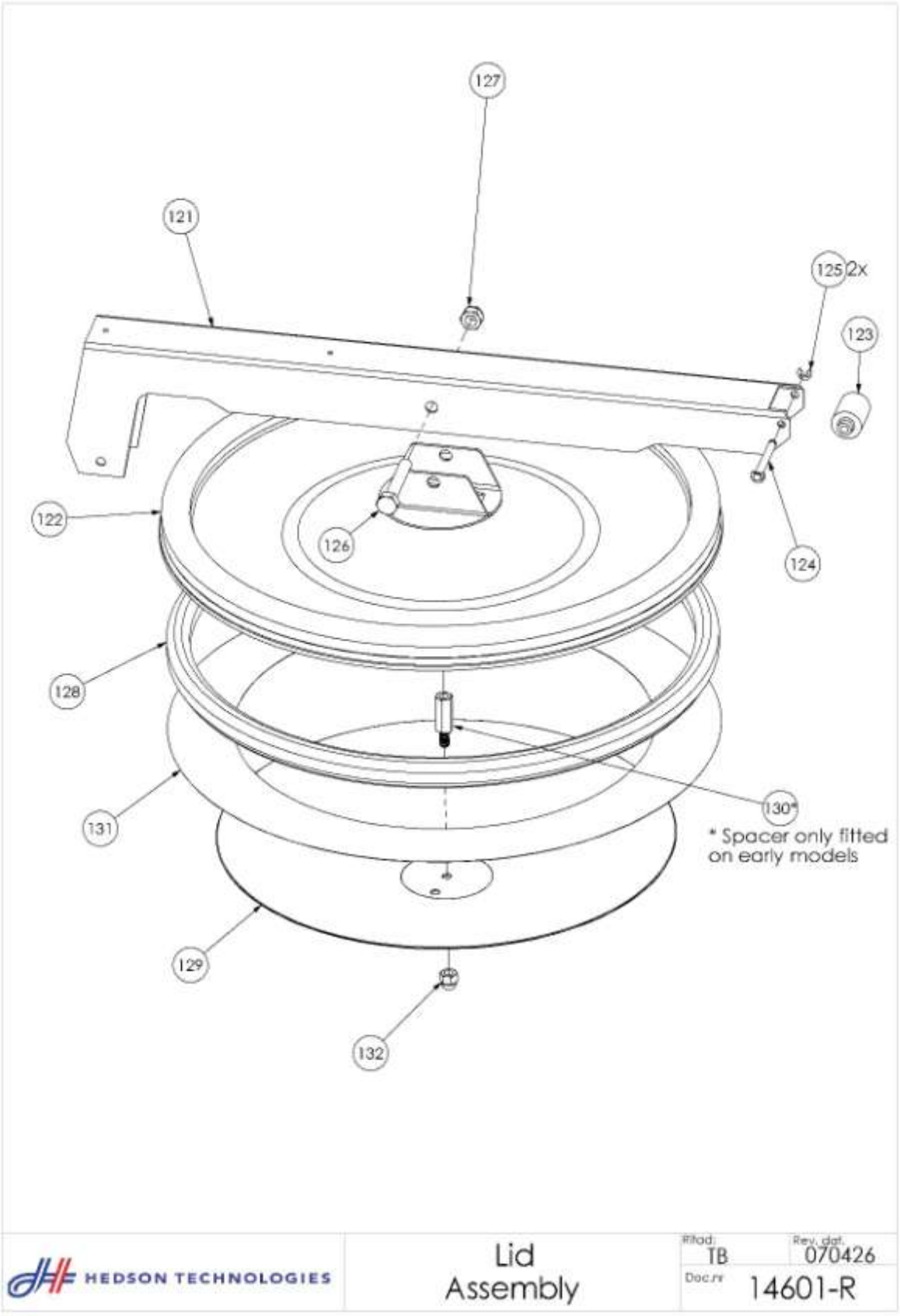
6.5 Condenser Assembly



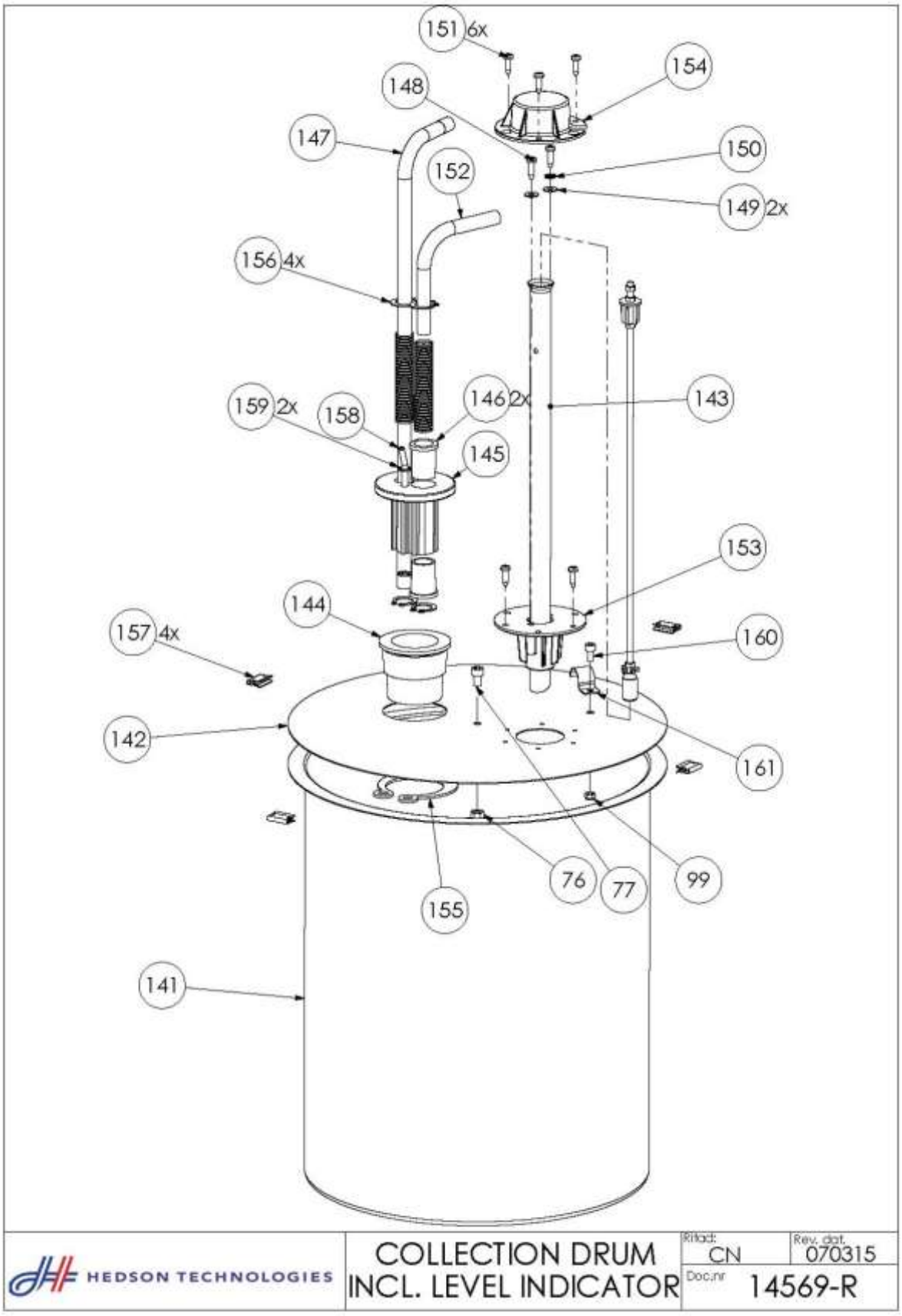
6.6 Boiler Lid Assembly



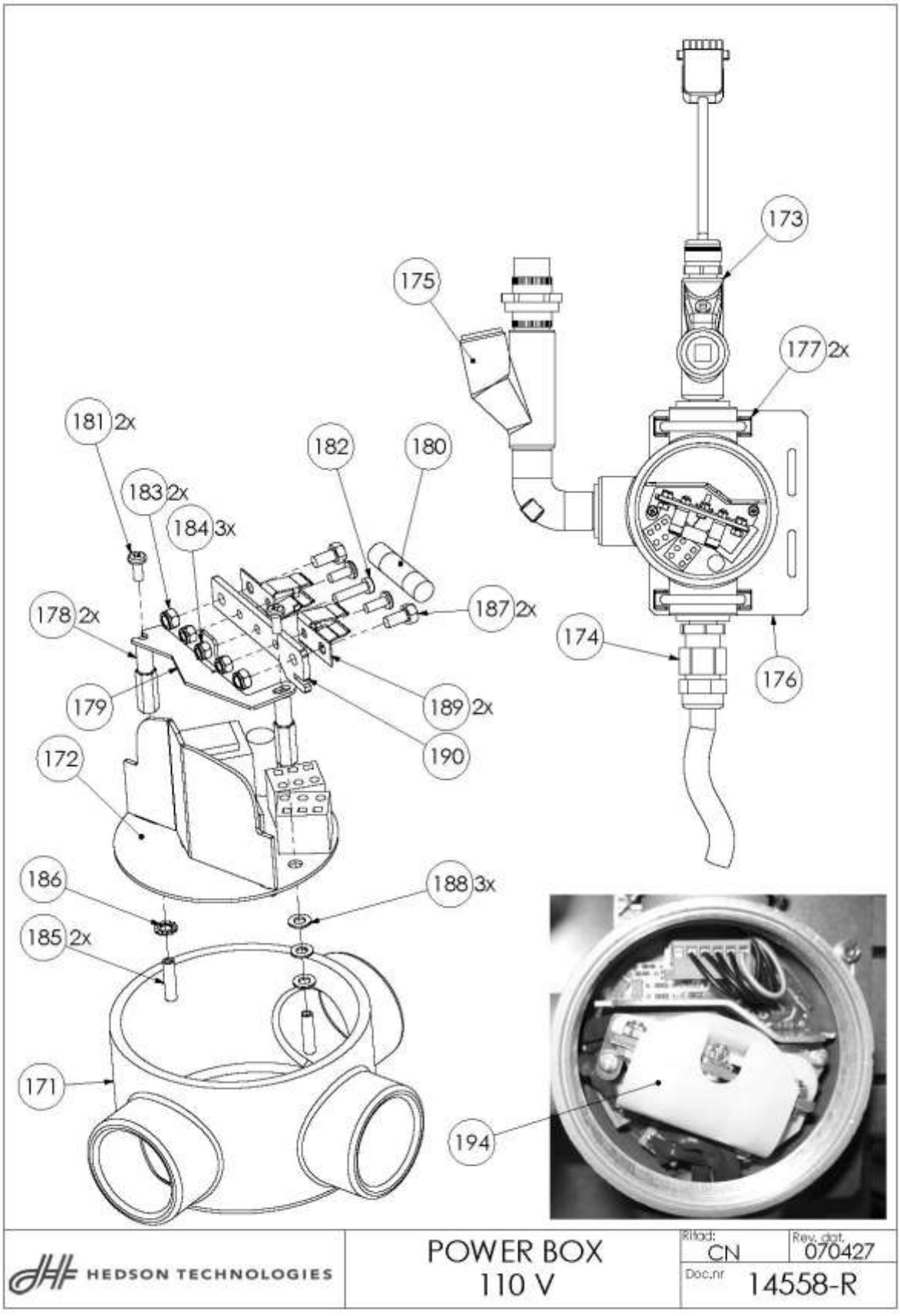
6.7 Lid Assembly



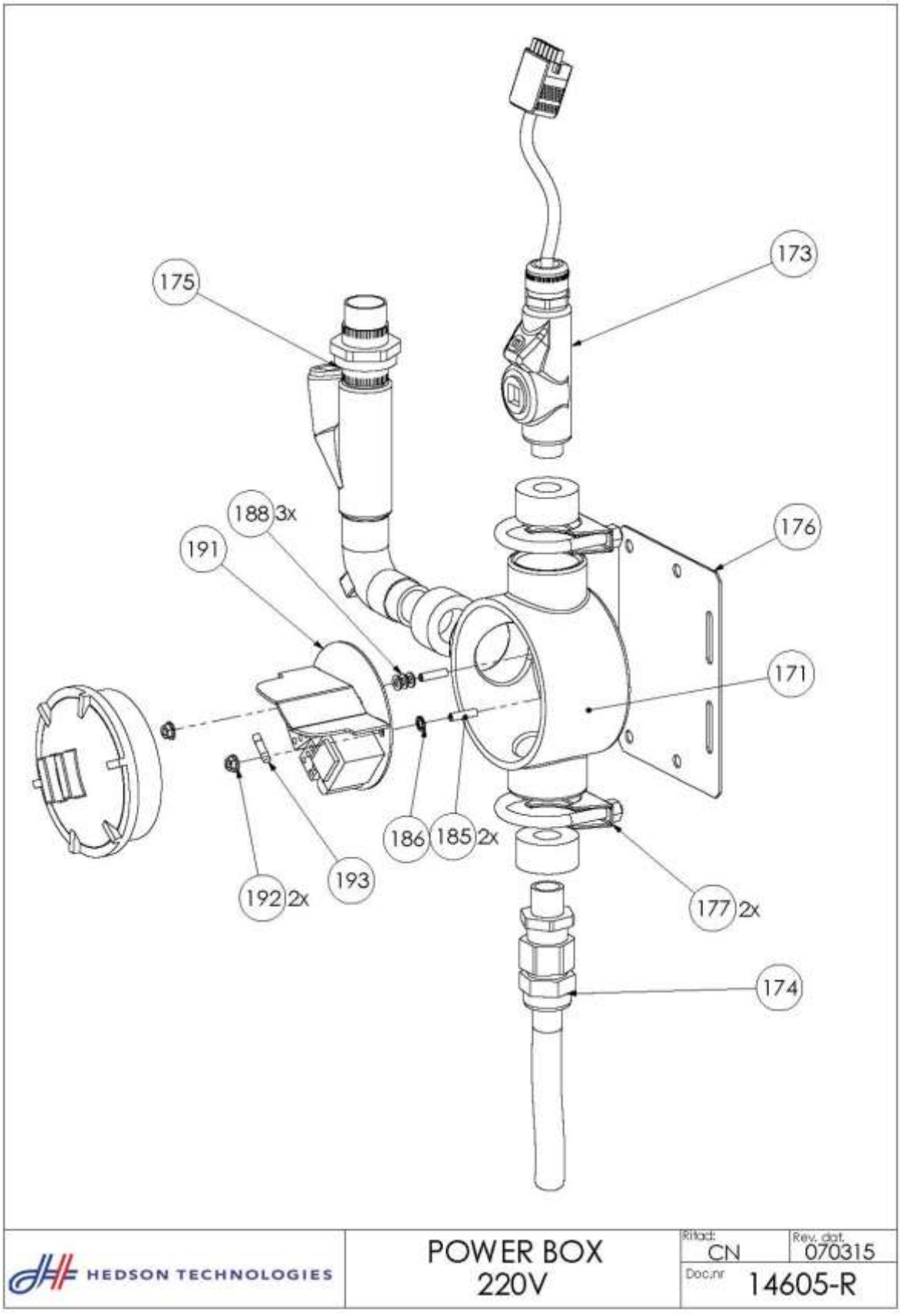
6.8 Collection Drum Assembly



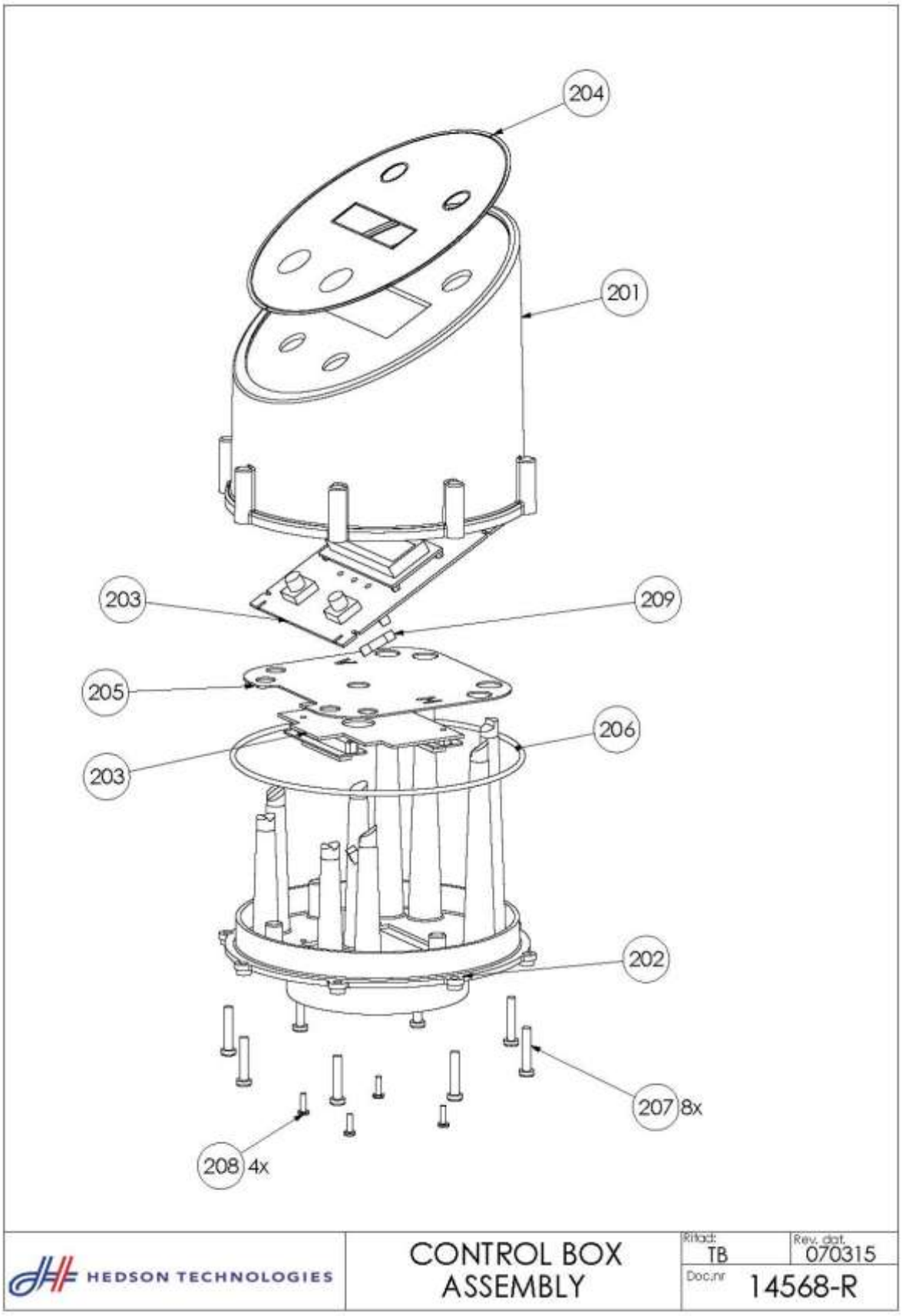
6.9 110V Power Box Assembly



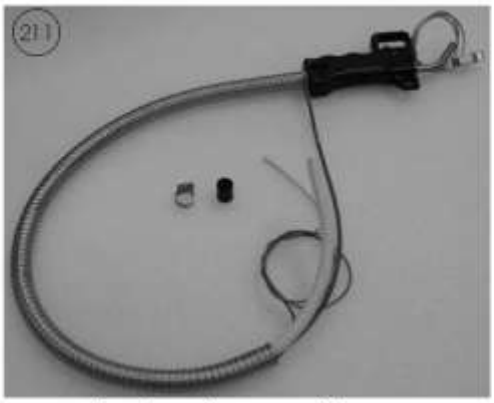
6.10 220V Power Box Assembly



6.11 Control Box Assembly



6.12 SPARE PARTS

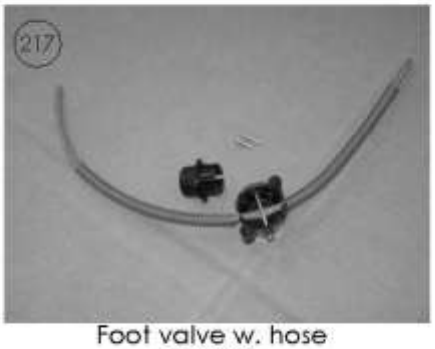


Tap handle assembly
R14620

110V Fuse Kit
R14630

220V Fuse Kit
R13990

Temperature probe kit
R13980



Foot valve w. hose
R14640

213
214

Power box assembly
110V: R13380
220V: R13390

218

Control box
R11188

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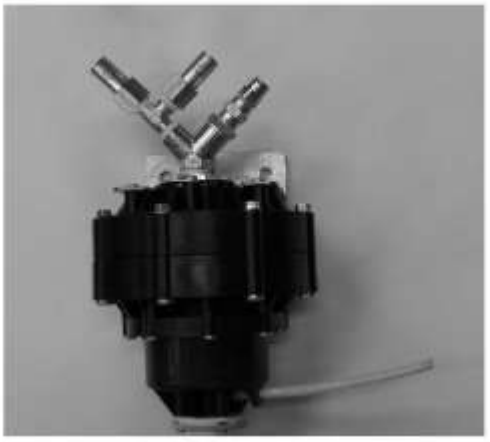
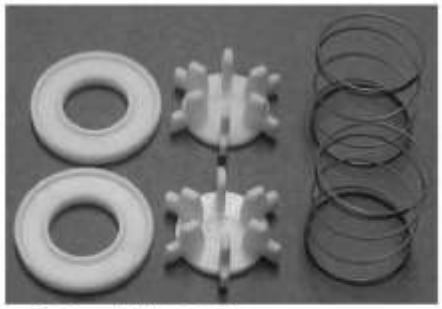
HEDSON TECHNOLOGIES	SPARE PARTS	Rittad: CN	Rev. dat: 070515
		Doc.nr	14613-R

(219) Load Pump Assembly
R14070

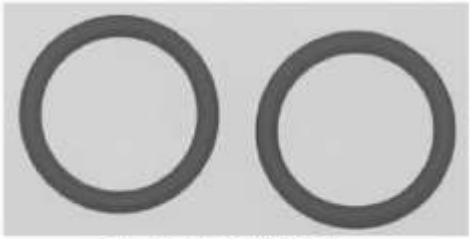


(220) Discharge Pump Assembly
R14080

(236) Vapour Hose Kit



(221) Valve-set
R9178



(222) O-ring (2 Pcs)
R6336

(229) Check-valve
R13929

(230) Docking valve
R14610

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HEDSON TECHNOLOGIES

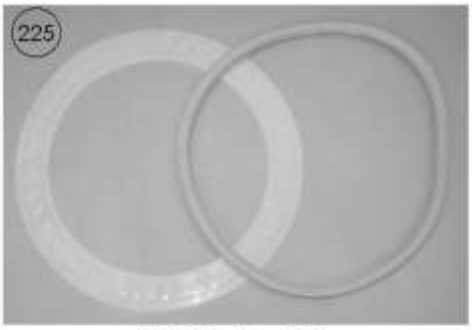
SPARE PARTS

Rittad: CN | Rev. dat. 080218

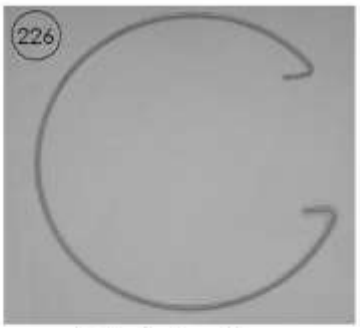
Doc.nr 14613-R

Panel Accessories
R14660

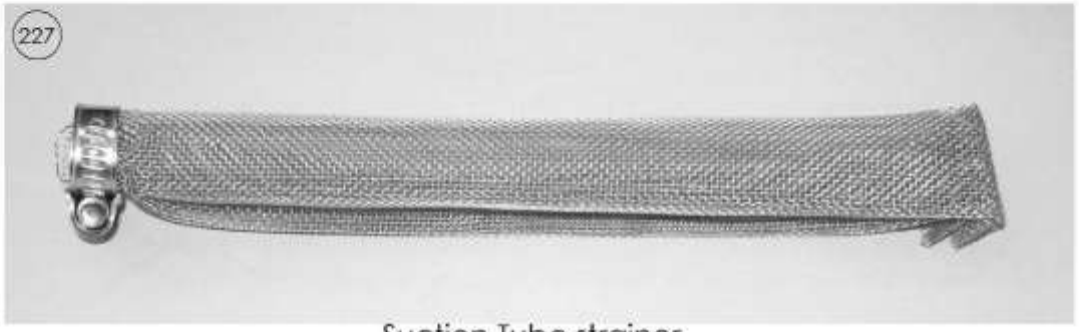
Air Regulator-set
13474



Lid Gasket kit
R14650



Retaining Ring
13603



Suction Tube strainer
R10760

Recycler Bags (20 pcs)
R10750

HEDSON TECHNOLOGIES

SPARE PARTS

Ritad: CN
Rev. dat. 080218
Doc.nr 14613-R

7 REPLACEMENT PARTS LIST

10500 & 10600 Parts List			Rev 2 / 080218 / CN
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No.		**Hedson Part No.**	**Part Description**
1		14241	HOSE CLAMP
2		5355	PIECE OF HOSE
3		10212	NIPPLE
4		13531	HOSE CLAMP-REPLACED BY NO.1
5		11278	NIPPLE
6		11242	T-PIECE
7		12624	COUPLING
8		4642	BUSHING
9		2827	PLUG
10		13528 ;0,1m	HOSE Ø16- REPLACED BY NO.54
11		11809	STEAM PIPE
12		13528 ;0,15m	HOSE Ø16- REPLACED BY NO.54
13		13528 ;0,2m	HOSE Ø16- REPLACED BY NO.55
14		10216 ;1,15m	HOSE Ø17 WHITE
15		13529 ;1,15m	SILICONE HOSE Ø12
16		5042 ;0,78m	HOSE Ø17 BLACK
17		10216 ;0,7m	HOSE Ø17 WHITE
18		5042 ;0,67m	HOSE Ø17 BLACK
19		3517 ;0,6m	HOSE Ø6 BLACK
20		10555	T-PIECE
21		5101-1 ;0,07m	HOSE Ø6 BLUE
22		5101-1 ;0,47m	HOSE Ø6 BLUE
23		6990	T-PIECE
24		13738	Y-COUPLING
25		8363	COUPLING, DRILLED
26		2164-1 ;0,12m	HOSE Ø6 BLACK
27		6944 ;0,12m	HOSE Ø6 YELLOW
28		6160-M	PUMP
29		8272	COUPLING
30		2366	FOOT-VALVE

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No.		**Hedson Part No.**	**Part Description**
31		13929	CHECK VALVE
32		6944 ;1,52m	HOSE Ø6 YELLOW
33		5101-1 ;1,76m	HOSE Ø6 BLUE
34		9197	T-COUPLING
35		10267	COUPLING
36		9598	AIR REGULATOR
37		4270	ELBOW COUPLING
38		2018	FILTER
39		2984	COUPLING
40		10216 ;1,34m	HOSE Ø17 WHITE
41		13479	COUPLING, DRILLED
42		8262	VALVE
43		13607	SUCTION PIPE
44		5042 ;2,15m	HOSE Ø17 BLACK
45		5042 ;0,66m	HOSE Ø17 BLACK
46		11811	TAP PIPE
47		3926	NIPPLE
48		8257	COUPLING
49		10216 ;0,7m	HOSE Ø17 WHITE
50		13717	JACKET
51		13482	JACKET
52		6871	JACKET
53		10760	STRAINER
54		14805; 0,21m	CORRUGATED TEFLON HOSE
55		14805; 0,42m	CORRUGATED TEFLON HOSE
56		14847	PIECE OF HOSE

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No.		**Hedson Part No.**	**Part Description**
61		10968	FLOOR PLATE
62		10963	LEFT SIDE
63		10966	REAR LEFT SIDE
64		10967	RIGHT SIDE
65		10981	REAR DOOR
66		11125	ISOLATION PLATE
67		10988	HOSE GUIDE
68		6276	PUMP BRACKET
69		13413	FRONT PLATE
70		10989	SUPPORT BAR
71		10979	HANDEL BAR
72		8561-E	FOOT-PEDAL PLATE
73		4448	CLIP
74		10972	BOX BRACKET
75		5030	SCREW RXK 4,2 x 6,5
76		8414	LOCKING NUT M6
77		9429	SCREW M6 x 10
78			
79			
80			
81		10977	CONDENSER
82		9619	RIVET
83		13585	LABEL "GENERAL WARNING"
84		13574	LABEL "USER GUIDE"
85		13591	LABEL "HAZARDOUS VOLTAGE"
86		13521	PLUG
87			
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No.		**Hedson Part No.**	**Part Description**
91		11079	BOILER
92		13523	SCREW M6 x 65
93		6596	SCREW M6 x 50
94		13526	SCREW M5 x 65
95		13206	SCREW M8 x 20
96		11578	SPRING NUT
97		13633	SPRING
98		6588	SCREW M8 x 90
99		8307	LOCKING NUT M5
100		5363	LOCKING NUT M6
101		10961	TOP PLATE
102		13417	BOILER SUPPORT
103		11282	LID BRACKET
104		11281	LOCKING HANDLE
105		11283	HANDLE BRACKET
106		13524	LID ASSEMBLY
107		13513	WASHER 8 x 22 x 1,5
108		11289	SPACER
109		8984	PLUG
110		4246	ALUMINUM WASHER
111			
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No.		**Hedson Part No.**	**Part Description**
121		11279	LOCKING BAR
122		13473	LID
123		11284	LOCKING ROLL
124		11285	SHAFT
125		13525	CLIP
126		3130	SCREW M8 x 50
127		6552	LOCKING NUT M8
128		11199	RUBBER SEAL
129		13778	COVER
130		13893	SPACER SCREW
131		13742	TEFLON SHEET
132		13104	DOMED NUT M6
133			
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139			
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141		11732	DESTILLATE CONTAINER
142		11733	DESTILLATE CONTAINER LID
143		11554	LEVEL INDICATOR
144		10169	TAPERED PLUG
145		8124	DRUM ADAPTER
146		10203	HOSE ADAPTER
147		13435	SUCTION PIPE
148		2657	SCREW PLASTITE 4,2 x 16
149		2157	WASHER 5,5 x 12
150		2445	LOCK WASHER

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No.		**Hedson Part No.**	**Part Description**
151		5100	SCREW 4,2 x 16
152		11292	DESTILLATE PIPE
153		14471	LEVEL INDICATOR ADAPTER
154		14472	INDICATOR HOOD
155		10533	RETAINING RING SGA 13
156		6836	RETAINING RING SGA 16
157		11133	LID CLIPS
158		3221	BRASS PIPE
159		8349	STARLOCK WASHER
160		3514	SCREW M5 x 10
161		5119	CABLE CLAMP
162			
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164			
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171		11741	EX-BOX
172		13340	POWER CARD
173		13483	SIGNAL CABEL ASSEMBLY
174		13475	POWER CABEL ASSEMBLY
175		13484	HEATER CABEL ASSEMBLY
176		10971	BOX PLATE
177		13488	CLAMP
178		14202	POWER CARD SPACER
179		14203	FUSE BRIDGE
180		14505	FUSE 20A TYPE KLK (ETL APPR.)

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No.		**Hedson Part No.**	**Part Description**
181		5054	SCREW M4 x 10 FZB
182		9973	SCREW M4 x 16 FZB
183		8307	LÅSMUTTER NYLON M5 FZB
184		13297	LÅSMUTTER NYLON M4 FZB
185		13486	SET SCREW M5 x 20
186		2445	LOCK WASHER 5.3x10 fzb
187		5387	SCREW M5 x 10 FZB
188		13487	WASHER 5,3 x 10 x 1 FZB
189		14204	FUSE CLIP
190		14206	FUSE PLATE
191		13320	POWER CARD
192		6923	FLANGE NUT M5
193		13984	FUSE 10A 5x20 SLOW
194		14214	MYLAR SHEET
195			
196			
197			
198			
199			
200			
201		11186	HOOD CONTROL BOX
202		11187	BOTTOM CONTROL BOX
203		13371	CONTROL CARD
204		11268	OVERLAY
205		11575	GUIDE PLATE
206		13527	O-RING
207		6341	SCREW PLASTITE Z 8-16x25
208		6935	SCREW M3x10
209		13985	FUSE 200mA 5x20 FAST
210			

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No.		**Hedson Part No.**	**Part Description**
211		R14620	TAP HANDLE ASSEMBLY
212		R13980	TEMPERATURE PROBE KIT
213		R13380	POWER BOX ASSEMBLY 110V
214		R13390	POWER BOX ASSEMBLY 220V
215		R14630	110V FUSE KIT
216		R13990	220V FUSE KIT
217		R14640	FOOT VALVE WITH HOSE
218		R11188	CONTROL BOX
219		R14070	LOAD PUMP ASSEMBLY
220		R14080	DISCHARGE PUMP ASSEMBLY
221		R9178	VALVE-SET
222		R6336	O-RING (2 Pcs)
223		R14660	PANEL ACCESSORIES
224		13474	AIR REGULATOR-SET
225		R14650	LID GASKET KIT
226		13602	RETAINING RING
227		R10760	SUCTION TUBE STRAINER
228		R10750	RECYCLER BAGS (20 Pcs)
229		R13929	CHECK-VALVE
230		R14610	DOCKING VALVE
231		14158	HEATER 128V 1700W
232		11734	HEATER 240V 1800W
233		13470	LEVEL INDICATOR CABLING
234		13718	TEMPERATURE PROBE WHITE
235		13719	TEMPERATURE PROBE GREY
236		R10780	VAPOUR HOSE KIT (TEFLON)