Adam Pumps

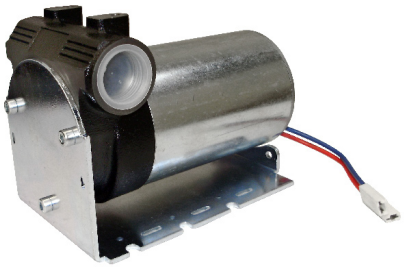
cabinets, meter, DC and AC pumps, accessories, repair kit

ENGLISH
ITALIANO
FRANÇAIS

USE AND MAINTENANCE MANUAL

O TECH 40
DC TECH 40
LIGHT TECH 40
EASY TECH 40
AC TECH 40
DRUM TECH 40

AC - DC TECH 40



O TECH 40

EASY TECH 40

LIGHT TECH 40

DRUM TECH 40

NOTE:

Questions?
Technical difficulties?

Don't worry!

CALL US!

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GENERAL DESCRIPTION
INSTALLATION & OPERATION
MAINTENANCE & REPAIR
PARTS LIST

Read and understand this Operating Manual before starting installation, maintenance or repair.

GENERAL DESCRIPTION AND ALLOWED USE

This diesel transfer system is designed for the delivery of diesel fuel (also for heating fuel and antifreeze) to vehicles and equipment from an open surface storage tank. The pump is a self priming, positive displacement, rotary vane machine which operates on 12V DC power (models for 24V DC power are available), and delivers a flow of approximately 40 litres per minute. The pump has a built-in bypass valve that keeps the operating pressure below 1.3 Bar (18 psi). The motor has a 30 minute duty cycle.

SAFETY PRECAUTIONS AND FORBIDDEN USE

Improper use or installation of this product can cause serious bodily injury or death!

- **Not for use with gasoline, alcohol, or other liquid with a flash point below 40°C (104°F)**
- **Not for use in hazardous locations.**
- **Not for use with fluids thicker than diesel fuel.**
- **Not for use to transfer fluids into an aircraft.**
- **Not for use with fluids for human consumption.**
- **Not for dispensing water.**
- **Not for continuous duty applications.**

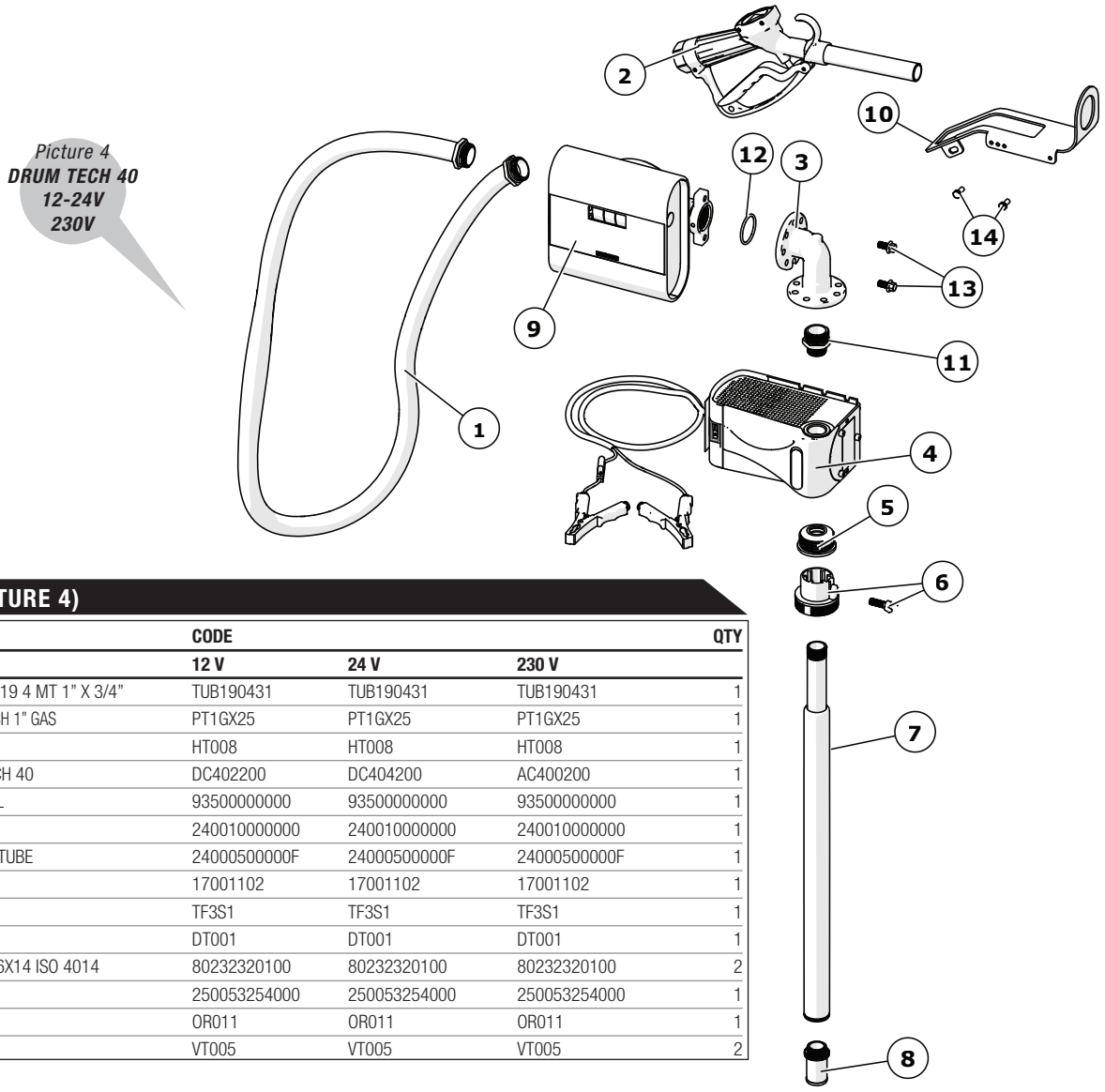
EC COMPLIANCE STATEMENT

ADAM PUMPS ITALIA SPA, Via della Resistenza, 46/48, 41011 Campogalliano (Modena) - Italy, states, taking full responsibility, that the following Pump Series Dc - tech 40 12/24-40, DC-TECH 40 12/24-40, Dc - tech 40 1 12/24-40 & WALLTECH 12/24-40, comply with the Directive for Machines 89/392/CEE (91/368/CEE, 93/44/CEE, 93/68/CEE), 89/336/CEE (93/68/CEE), 73/23/CEE, and with standards EN 60529, EN 60204-1, EN 55081-2, EN 55011C/.A, D.L. 277/91 and AC Tech 40, conforms to the harmonized EN 60529, EN 60204-1, EN 50081-2, EN 55011C/.A, DL 277/91.
This document has been signed by:
Mr. Bernard Gilson, Via della Resistenza, 46/48, 41011 Campogalliano (Modena) - Italy, Phone +39 059 528128, Fax +39 059 528437who has full legal authority to represent the firm in the European Community. Dated, 1st of February 2008.

Machine Identification - Label (typical example)

This Operating Manual should be considered as part of the machine. When the machine is sold, it must be transferred to the new owner.

Adam Pumps



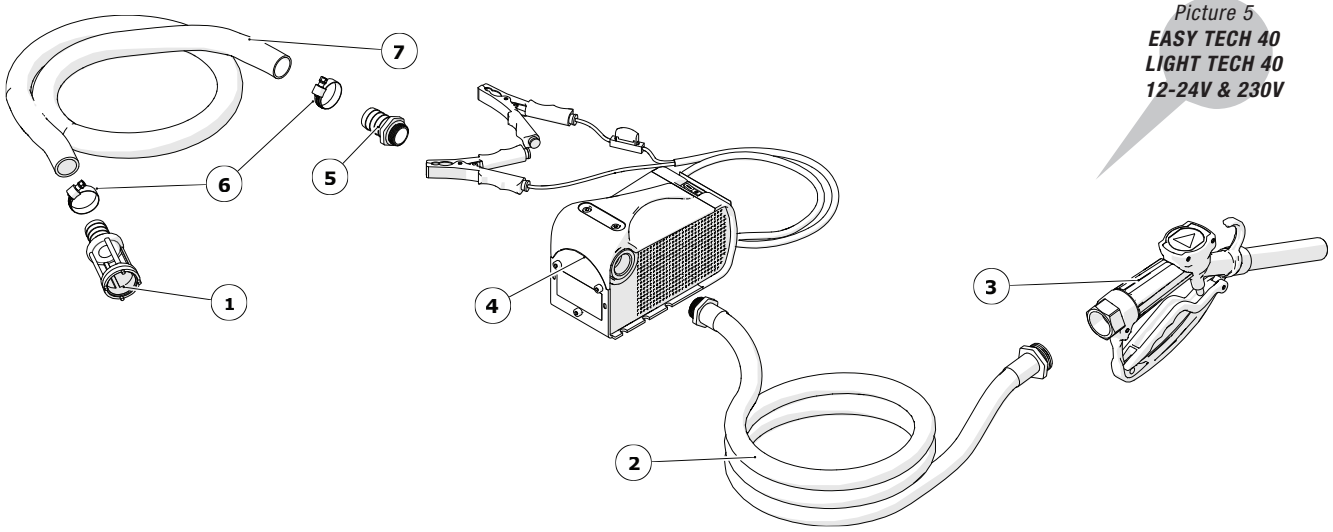
Picture 4
DRUM TECH 40
12-24V
230V

DRUM TECH 40 (PICTURE 4)

POS.	DESCRIPTION	CODE			QTY
		12 V	24 V	230 V	
1	DELI VERY ERY HOSE Ø19 4 MT 1" X 3/4"	TUB190431	TUB190431	TUB190431	1
2	MANUAL NOZZLE PIT TECH 1" GAS	PT1GX25	PT1GX25	PT1GX25	1
3	UNION 1"	HT008	HT008	HT008	1
4	ELECTRIC PUMP C-TECH 40	DC402200	DC404200	AC400200	1
5	RUBBER SUCTION SEAL	93500000000	93500000000	93500000000	1
6	DRUM ADAPTER TTM	240010000000	240010000000	240010000000	1
7	TELESCOPIC SUCTION TUBE	24000500000F	24000500000F	24000500000F	1
8	FILTER INOX 3/4"	17001102	17001102	17001102	1
9	METER TECH FLOW	TF3S1	TF3S1	TF3S1	1
10	HOLSTER PIT TECH	DT001	DT001	DT001	1
11	SCREW HOLSTER TEM6X14 ISO 4014	80232320100	80232320100	80232320100	2
12	REDUCTION	250053254000	250053254000	250053254000	1
13	O-RING	OR011	OR011	OR011	1
14	UNION SCREW	VT005	VT005	VT005	2

EASY TECH 40 - LIGHT TECH 40 (PICTURE 5)

POS.	DESCRIPTION			CODE			QTY
EASY TECH		LIGHT TECH	QTY	12 V	24 V	230 V	
1	FILTER Ø25	FILTER Ø25	1	121500700000	121500700000	121500700000	1
2	DELIVERY HOSE Ø19 4 MT 1" X 3/4"	DELIVERY HOSE Ø19 4 MT 1" X 3/4"	1	TUB190431	TUB190431	TUB190431	1
3	MANUAL NOZZLE PIT TECH 1" GAS	MANUAL NOZZLE PIT TECH 1" GAS	1	PT1GX25	PT1GX25	PT1GX25	1
4	ELECTRIC PUMP C-TECH 40	ELECTRIC PUMP C-TECH 40	1	DC402200	DC404200	AC400200	1
5	HOSE BAR B 3/4" X 25	-	-	240015016000	240015016000	240015016000	1
6	HOSE CLAM P 20X32	-	-	91505270000	91505270000	91505270000	2
7	SUCTION HOSE Ø25 2 MT	-	-	20132500000	20132500000	20132500000	1

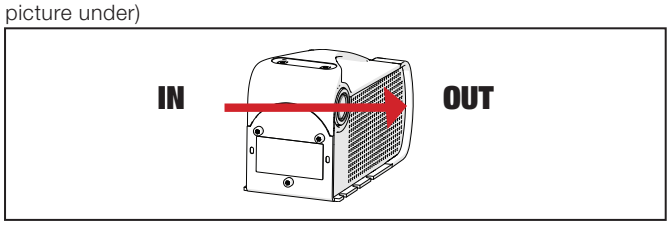


Picture 5
EASY TECH 40
LIGHT TECH 40
12-24V & 230V

MECHANICAL INSTALLATION

Do NOT install foot or check valves in the system unless they have pressure relief set at 3.5 Bar (50 psi) or less.

1. Use oil resistant pipe sealant or Teflon® tape on all pipe threads.
2. Note the direction of flow cast on to the front of the pump (see picture under)



3. Assemble model Dc - tech 40 1 12/24 – 40 as shown in Figure 7 (page 4).
4. For the Models Dc - tech 40 and DC-TECH 40 12/24 – 40 that includes the pump only:
   - Select hoses or pipes with an inside diameter of 19mm (3/4") that are compatible with diesel and rated for at least 3.5 Bar (50 psi). Pump fluid ports are ¾" BSPP.
   - Select a diesel compatible nozzle.
5. Install the strainer at the inlet to the suction hose or pipe to prevent debris from being drawn into the pump.
6. Tighten all threaded joints and hose clamps securely.
7. Position the assembled pump on a secure surface. Tanks or barrels should be anchored to prevent tipping in both the full and emptyconditions.

ELECTRICAL INSTALLATION DC

1. Connect the battery clips on the motor power cord to a suitable battery, capable of delivering the necessary voltage and current (see the Technical Data, back page of this manual)
   - The RED clip is attached to the positive (+) battery terminal.
   - The BLACK clip is attached to the negative (-) battery terminal or to the vehicle frame.
2. If the power cable provided is not long enough, have it replaced by an authorized electrician.

Avoid sparks that could cause a fire: Do NOT use a patch cord to extend the power cables.

ELECTRICAL POWER CONNECTION AC

The pump must be provided with a safety device of 30mA minimum Din standard. The plug must be connected to an earthed SHUKO socket. Do not cut or replace the provided plug.

Avoid sparks that could cause a fire: Do NOT use a patch cord to extend the power cables.

OPERATION

AVOID RUNNING PUMP DRY FOR MORE THAN 3 MINUTES.

1. Before use, wipe off any dirt or moisture that may have accumulated on the nozzle or hoses.
2. Insert nozzle into the container to be filled. Insert suction hose (if applicable) into the diesel storage tank.
3. Switch the motor on.
4. Operate the nozzle lever to dispense fluid.
5. When the desired amount of fluid has been dispensed, release nozzle lever to stop flow.
6. Immediately switch motor off.
7. Nozzle and hoses should be kept clean and dry when not in use.

MAINTENANCE (see Figures 5, 6 & 7)

1. Inspect and clean the strainer on the inlet hose or pipe monthly.
2. Clean the metal "mouth" portion of the battery clips with steel wool monthly to maintain good electrical connection to the battery.
3. Hoses should be inspected annually. Replace if cracked or worn.
4. Rotor and vanes will eventually wear, and should be replaced if pump performance degrades. See the "Operational Problems" section to determine if replacement is needed.
5. Drain hoses and pump and store in a clean, dry place when not in use.

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OPERATIONAL PROBLEMS (See Figures 5, 6 & 7)

Relieve pressure by opening the nozzle and draining the hose, and disconnect power before servicing pump.

PROBLEM	POSSIBLE CAUSE	SOLUTION
Pump won't prime.	1. Suction line problem.	Check for leaks or obstruction in suction hose or pipe.
	2. Outlet is blocked.	Check to make sure outlet hose and nozzle are clear and operating correctly.
	3. Debris in Bypass valve.	Inspect bypass valve.
	4. Vanes are sticking.	Inspect vanes and slots in rotor for nicks or burrs.
	5. Excessive rotor and/or vane wear.	Replace rotor and vanes.
Pump hums but won't dispense fluid.	1. Dirt or rust in pump cavity.	Clean pump cavity.
	2. Broken rotor key.	Clean pump cavity and replace rotor key.
Low Flow.	1. Plugged Strainer.	Clean or replace strainer.
	2. Restriction on the outlet or in the inlet.	Long and small ID hoses, filters, and automatic nozzles will reduce the flow rate. Use higher flow components.
	3. Excessive Roter and/or vane wear.	Replace rotor and vanes.
Motor surface temperature gets hotter than 100°C (212°F).	1. Fluid is too thick.	Fluid must not be thicker than diesel fuel.
	2. Motor ran more than 30 minutes before allowing to cool down.	Motor is designed for a maximum "on" time of 30 minutes. Motor must be allowed to cool down before using again.
Motor will not turn on.	1. Poor electrical connection.	Use steel wool to clean the "mouth" of the battery clips on the power cord.
	2. Battery dead or low.	Check battery.
	3. Fuse in power cord is blown.	A blown fuse often indicates a problem with the free rotation of the motor. Inspect for dirt or debris in pump cavity. Replace fuse with a standard 30 amp automotive fuse. If fuse blows again, replace pump.
	4. Switch failure.	Replace switch.
Leak at Weep hole.	1. Worn or torn shaft seal.	Replace shaft seal. Make sure shaft and seal pocket in pump housing are clean before installing new seal.
	2. Incompatible fluid.	Fluid must be compatible with HNBR and Cast Iron.

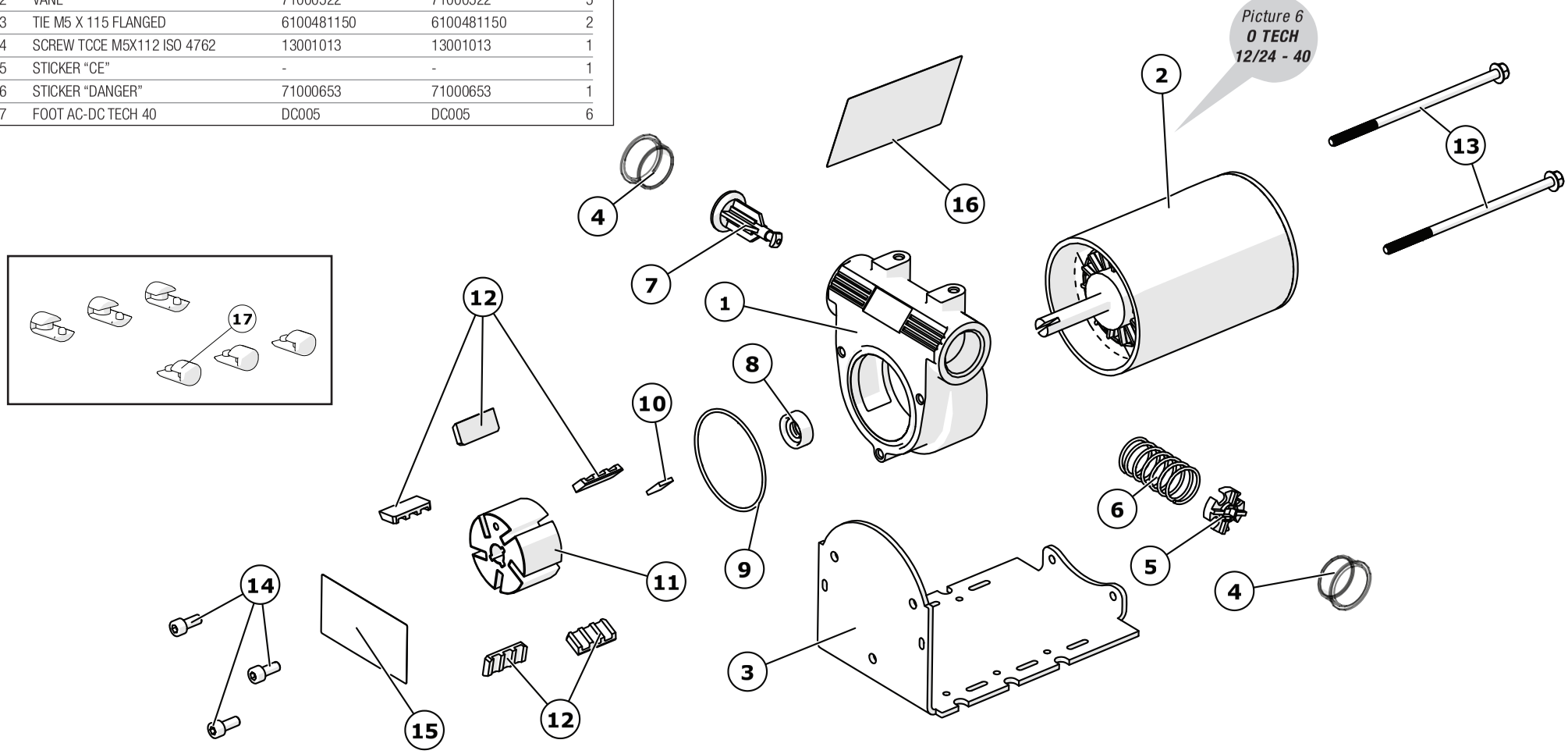
NOTICE: ANY MODIFICATION PERFORMED ON THE UNITS WITHOUT "ADAM PUMPS" WRITTEN PERMISSION WILL AUTOMATICALLY VOID ANY GUARANTEE AND FREE "ADAM PUMPS" FROM ANY KIND OF RESPONSIBILITY.

O TECH CC 40 FIG 6

POS.	DESCRIPTION	CODE		QTY
		12 V	24 V	
1	PUMP HOUSING 40L	CP001	CP001	1
2	ELECTRIC MOTOR Ø77	231501700000	231501700000	1
3	PLATE AC-DC TECH 40	DC006	DC006	1
4	SAVE CAP THREAD Ø25	163013300000	163013300000	2
5	BY PASS CAP	71000521	71000521	1
6	BY PASS SPRING Ø21, 4X42	71008006	190110000000	2
7	BY PASS VALVE	71000520	71000520	1
8	SEALING RING Ø19	12010031000	12010031000	1
9	O-RING 2212 NBR	18001014	18001014	1
10	PLASTIC KEY	71000517	71000517	1
11	ROTOR Ø45	61000003	61000003	1
12	VANE	71000522	71000522	5
13	TIE M5 X 115 FLANGED	6100481150	6100481150	2
14	SCREW TCCE M5X112 ISO 4762	13001013	13001013	1
15	STICKER "CE"	-	-	1
16	STICKER "DANGER"	71000653	71000653	1
17	FOOT AC-DC TECH 40	DC005	DC005	6

REPAIR KIT (see picture 6)

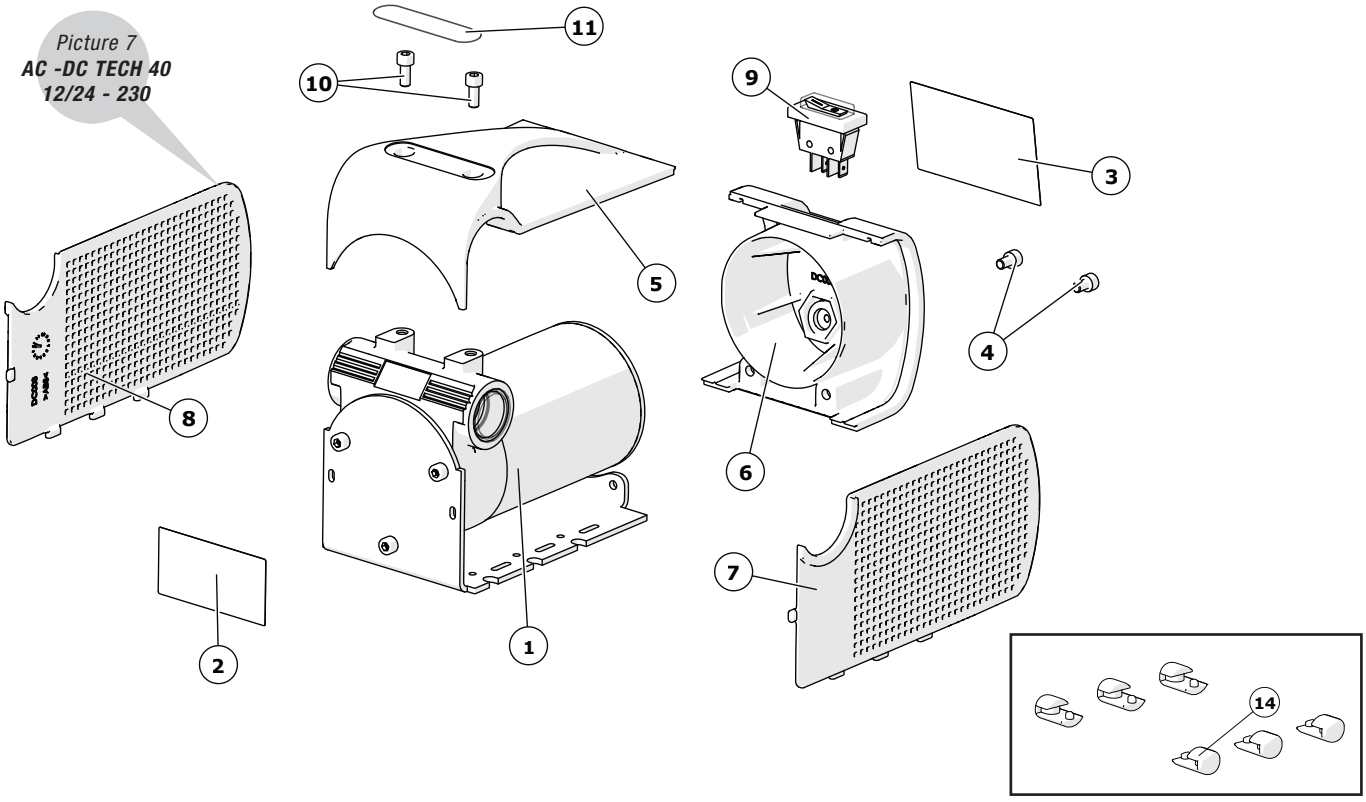
POS.	DESCRIPTION	CODE	QTY
KIT 40 LT		*KIT40*	
9	O-RING 2212		1
10	PLASTIC KEY		1
12	VANE		5
8	SEALING RING 10 X 19 X 7 HNBR		1
KIT BY PASS 40-45 LT		*41071000*	
7	VALVE		1
5	BY PASS CAP		1
6	BY PASS SPRING		1



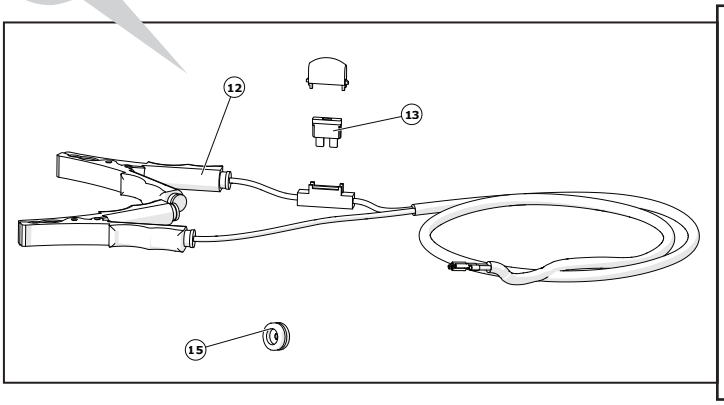
AC-DC TECH 40 FIG 7

POS.	DESCRIPTION	CODE			QTY
		12 V	24 V	230V	
1	PUMP O-TECH 40	OT40200	OT40400	OT400000	1
2	STICKER "CE"	-	-	-	1
3	STICKER "DANGER"	71000653	71000653	71000653	1
4	SCREW TCCE M5X8 TRILOBATE DIN 7500 E	VT002	VT002	VT002	2
5	HANDLE AC-DC TECH 40	DC001	DC001	DC001	1
6	SWITCH HOLDER AC-DC TECH 40	DC002	DC002	DC002	1
7	RIGHT SIDE AC-DC TECH 40	DC004	DC004	DC004	1
8	LEFT SIDE AC-DC TECH 40	DC003	DC003	DC003	1
9	SWITCH ON/OFF 11X30	190050070000	190050070000	190050070000	1
10	SCREW TCCE M5X12 ISO 4762	13001013	13001013	13001013	2
11	FACEPLATE AC-DC TECH 40	MA022	MA022	MA023	1
12	CABLE WITH CLAMP 2M (FIG 8)	17001010	17001010	-	1
13	FUSIBLE 30A (FIG 8)	190170150000	190170150000	-	1
14	FOOT AC-DC TECH 40	DC005	DC005	DC005	6
15	CABLE GROMMET (FIG 8)	190100100000	190100100000	-	1
16	CABLE GROMMET (FIG 9)	-	-	AC001	1
17	CABLE WITH SCHUKO PLUG (FIG 9)	-	-	19000000000	1

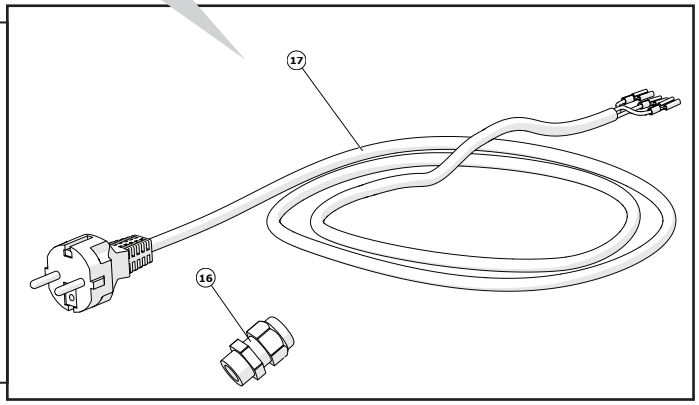
Picture 7
AC -DC TECH 40
12/24 - 230



Picture 8
DC TECH
12/24 - 40



Picture 9
AC TECH
230 - 40



TECHNICAL DATA

MODEL	O TECH 12/24 40	DC TECH 12/24 - 40	AC TECH 40 230V	LIGHT TECH 12/24 - 40	EASY TECH 12/24 40	DRUM TECH 40
Flow rate-Max	40 lpm	40 lpm	40 lpm	40 lpm	40 lpm	40 lpm
Pressure-Max	1,3 bar	1,3 bar	1,3 bar	1,3 bar	1,3 bar	1,3 bar
By-pass valve	SI	SI	yes	SI	SI	SI
Voltage	12V DC (Available 24V DC)	12V DC (Available 24V DC)	230V AC	12V DC (Available 24V DC)	12V DC (Available 24V DC)	12V DC (Available 24V DC)
Current-max	18 A (12A)	18 A (12A)	1, 4 A	18 A (12A)	18 A (12A)	18 A (12A)
Duty cycle [(S2)	30 Min	30 Min	30 Min	30 Min	30 Min	30 Min
Fuse in cable	NO	30 A (15A)	na	30 A (15A)	30 A (15A)	30 A (15A)
In/out	3/4” BSPP	3/4” BSPP	3/4” BSPP	3/4” BSPP	3/4” BSPP	3/4” BSPP
Temperature	-20°C/+50°C	-20°C/+50°C	-20°C/+50°C	-20°C/+50°C	-20°C/+50°C	-20°C/+50°C
Material pump housing	Cast iron	Cast iron	Cast iron	Cast iron	Cast iron	Cast iron
Material rotor	Sintered steel	Sintered steel	Sintered steel	Sintered steel	Sintered steel	Sintered steel
Material vane	POM	POM	POM	POM	POM	POM
Material seal	NBR	NBR	HNBR	NBR	NBR	NBR
Delivery hose	no	no	no	SI	yes	yes
Nozzle	no	no	no	SI	yes	yes
Suction hose	no	no	no	SI	no	-
Telescopic suction hose	no	no	no	no	yes	yes
Filter	Yes	SI	yes	SI	yes	yes