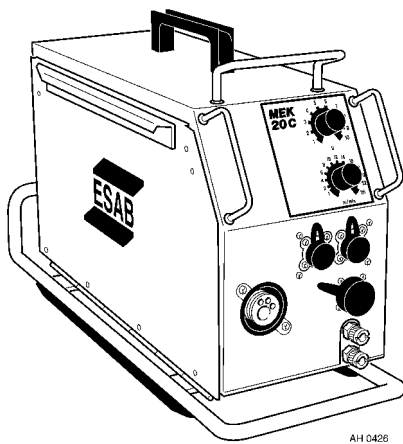


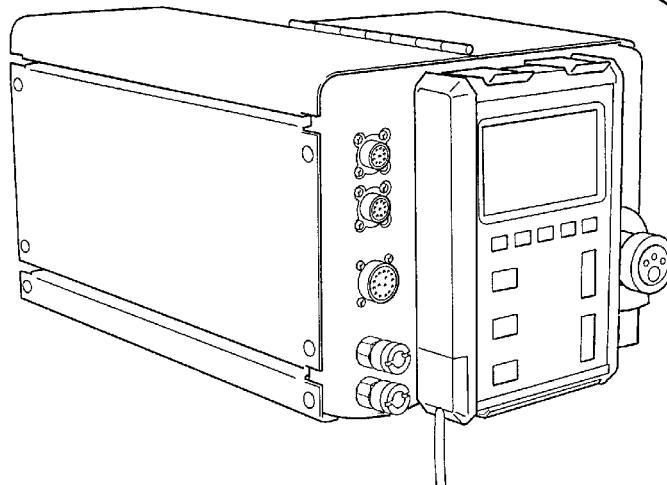
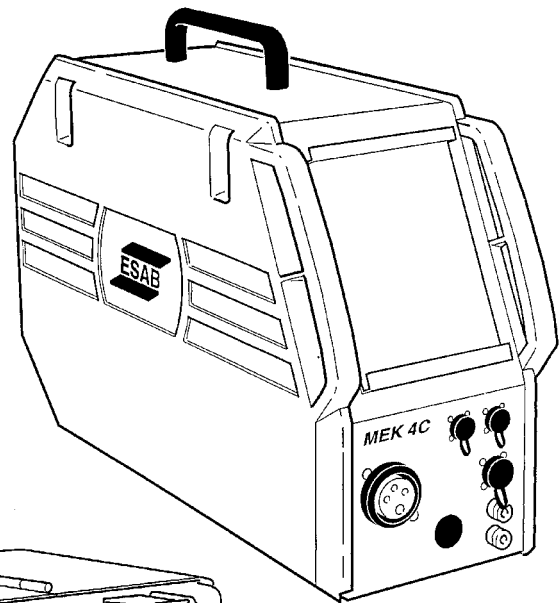
MEK 4C

MEK 20C

MEK 44C



AH 0426



Service manual

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Rights reserved to alter specifications without notice.

READ THIS FIRST

Maintenance and repair work should be performed by an experienced person, and electrical work only by a trained electrician. Use only recommended replacement parts.

This service manual is intended for use by technicians with electrical/electronic training for help in connection with fault-tracing and repair.

Use the connection diagram as a form of index for the description of operation. The circuit board is divided into numbered blocks, which are described individually in more detail in the description of operation. All component names in the connection diagram are listed in the component description.

This manual contains details of all design changes that have been made up to and including February 2003.

The MEK 4C, MEK 20C and MEK 44C are designed and tested in accordance with international and European standard IEC/EN 60974-1 and EN 50199. On completion of service or repair work, it is the responsibility of the person(s) etc. performing the work to ensure that the product does not depart from the requirements of the above standard.



WARNING



ARC WELDING AND CUTTING CAN BE INJURIOUS TO YOURSELF AND OTHERS. TAKE PRECAUTIONS WHEN WELDING. ASK FOR YOUR EMPLOYER'S SAFETY PRACTICES WHICH SHOULD BE BASED ON MANUFACTURERS' HAZARD DATA.

ELECTRIC SHOCK - Can kill

- Install and earth the welding unit in accordance with applicable standards.
- Do not touch live electrical parts or electrodes with bare skin, wet gloves or wet clothing.
- Insulate yourself from earth and the workpiece.
- Ensure your working stance is safe.

FUMES AND GASES - Can be dangerous to health

- Keep your head out of the fumes.
- Use ventilation, extraction at the arc, or both, to keep fumes and gases from your breathing zone and the general area.

ARC RAYS - Can injure eyes and burn skin.

- Protect your eyes and body. Use the correct welding screen and filter lens and wear protective clothing.
- Protect bystanders with suitable screens or curtains.

FIRE HAZARD

- Sparks (spatter) can cause fire. Make sure therefore that there are no inflammable materials nearby.

NOISE - Excessive noise can damage hearing

- Protect your ears. Use ear defenders or other hearing protection.
- Warn bystanders of the risk.

MALFUNCTION - Call for expert assistance in the event of malfunction.

READ AND UNDERSTAND THE INSTRUCTION MANUAL BEFORE INSTALLING OR OPERATING.

PROTECT YOURSELF AND OTHERS!

TECHNICAL DATA

The MEK 4C, MEK 20C and MEK 44C wire feed units are intended to be used with the LUD 320 and LUD 450 power units.

	MEK 4C	MEK 20C	MEK 44C
Power supply	42 V 50 - 60 Hz	42 V 50 - 60 Hz	42 V 50 - 60 Hz
Power requirement	300 VA	300 VA	430 VA
Feed speed	1,9 - 25 m/min	1,9 - 25 m/min	1,5 - 25 m/min
Gun connection	EURO	EURO	EURO
Max. diameter of wire bobbin	300 mm	200 mm	440 mm
Weight	17 kg	14 kg	22 kg
Dimensions (l x b x h)	645 x 240 x 480 mm	500 x 195 x 300 mm	493 x 336 x 268 mm



WARNING

There is a risk of tipping if the MEK 4C and MEK 44C are fitted with a counterbalance arm. Secure the equipment, especially if used on an uneven or sloping surface.

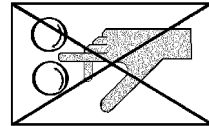
Limit the angle of rotation of the wire feed cabinet using the straps supplied.

When moving the equipment, do **NOT** pull on the gun.



WARNING!

Rotating parts can cause injury, take great care



COMPONENT DESCRIPTION



WARNING !

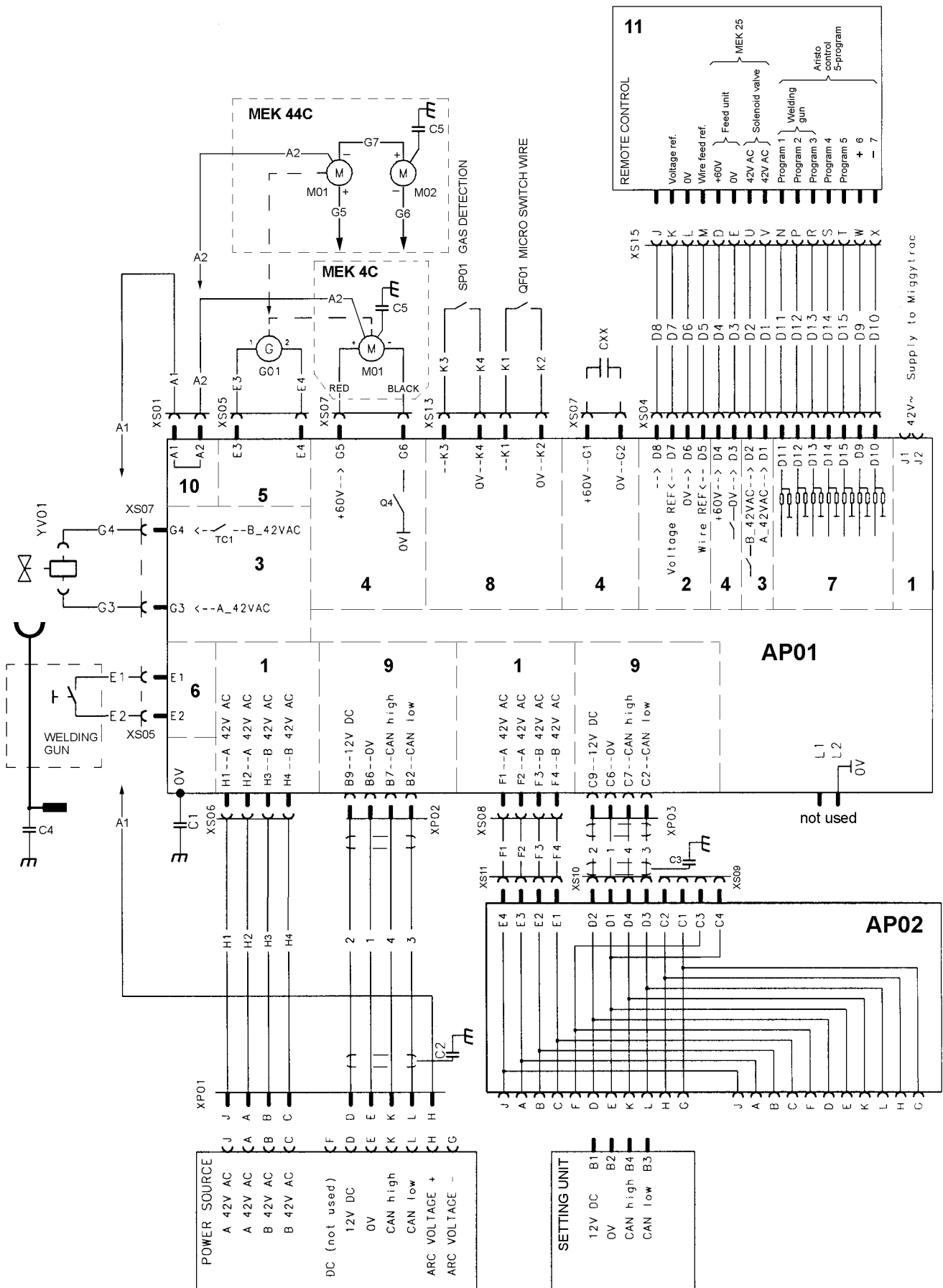
STATIC ELECTRICITY can damage circuit boards and electronic components.

- **Observe precautions for handling electrostatic sensitive devices.**
- **Use proper static-proof bags and boxes.**

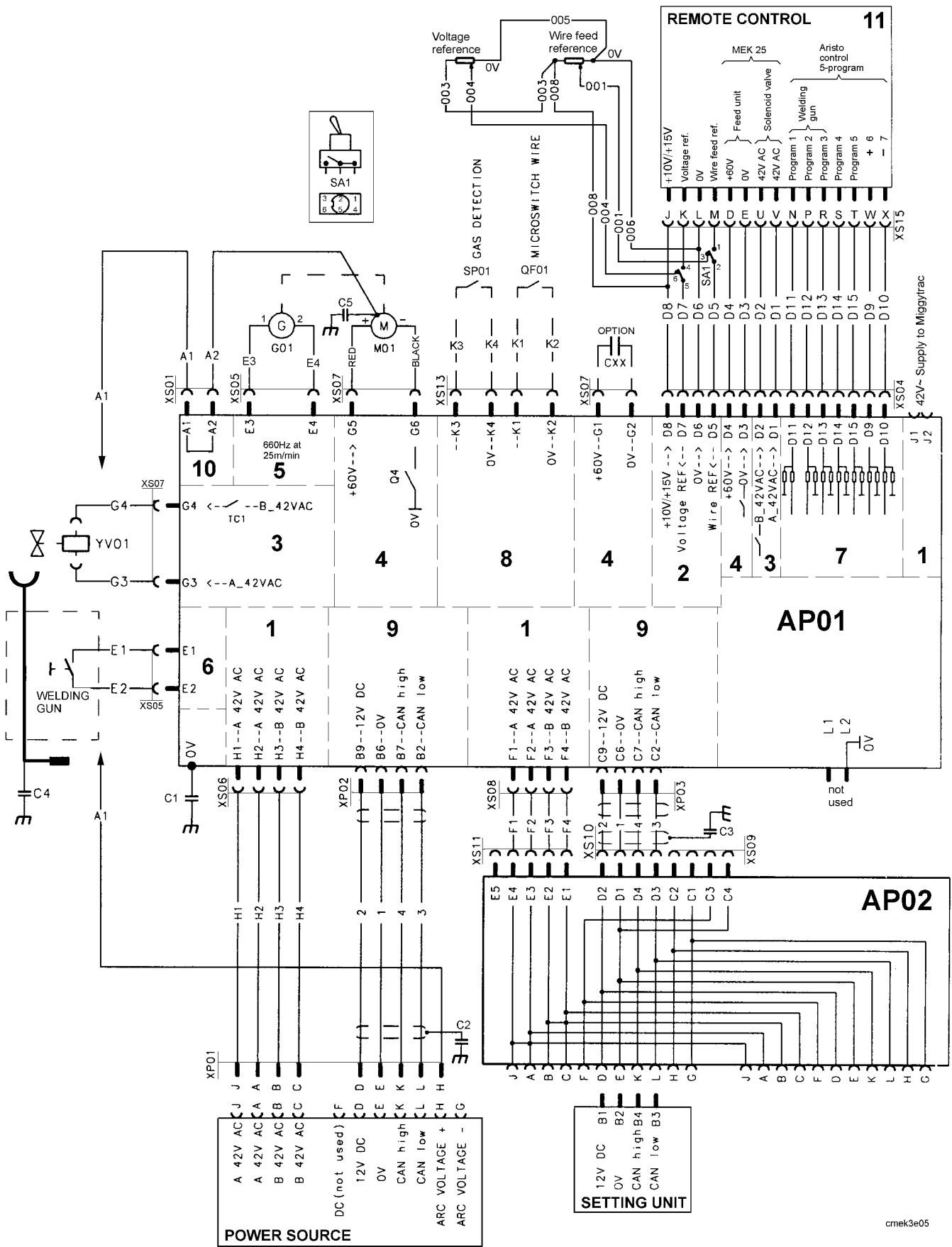
This component description refers to the connection diagram. The Function Description provides a more detailed description of what the components do.

AP01	The main circuit board, with control electronics. See the description on page 8.
AP02	Circuit board, contact interfacing.
C1 - C5	Capacitor, 0,1 μ F
CXX	Capacitor, 4700 μ F. Must be fitted when the wire feed unit is being used with a MEK 25 power unit in extreme operating conditions (low mains voltage, long cables).
G01	Tachometer, incorporated in motor M01.
M01	<i>MEK 4C / MEK 20C:</i> Motor, rated voltage 42V. <i>MEK 44C:</i> Motor, rated voltage 12V.
M02	<i>MEK 44C:</i> Motor, rated voltage 12V.
QF01	Microswitch for wire monitoring. Future accessories.
SA1	<i>MEK 20C:</i> Selector switch for remote control, see: REFERENCE FROM THE REMOTE CONTROL UNIT on page 13.
SP01	Gas monitor. Future accessories.
XP01	12-pole connector, for connection to the power unit.
XP02, XP03	D-SUB connector.
XS01 - XS15	Sleeve connector.
YV01	Solenoid valve.

CONNECTION DIAGRAM MEK 4C / MEK 44C



CONNECTION DIAGRAM MEK 20C



DESCRIPTION OF OPERATION

Discharging the filter capacitor on circuit board AP01

Discharge the filter capacitor for the +60V supply before removing the screening box from the circuit board. If the capacitor is charged the circuit board might be destroyed. Also make sure that the capacitor is discharged before the screening box is fitted on the circuit board.

CIRCUIT BOARD AP01 VERSION -880

See the principal diagram for motor drive circuits on page 14.

Switch off the power to the wire feed unit and connect a 1k Ω resistor between the outputs G1 and G2. Remove the resistor and check that there is no remaining voltage on the outputs.

CIRCUIT BOARD AP01 VERSION -885

This version has an inbuilt discharge circuit for the filter capacitor, the discharge time is about one minute.

The different versions of circuit board AP01

There are different variants of the circuit boards for the wire feeders. The board has a basic version, on delivery the soft ware is set up for the wire feed unit where it is to be used. The hard ware is the same for the different variants. The description of operation is always referring to the basic version.

BASIC VERSION -880

The first delivered version of circuit board AP01 has the following article numbers:

MEK 4C: 0486 384 881 *MEK 20C*: 0486 384 883 *MEK 44C*: 0486 384 882

BASIC VERSION -885

From serial number 815-xxx-xxxx the circuit boards have the following article numbers:

MEK 4C / MEK 20C: 0486 384 885 *MEK 44C*: 0486 384 886

This new version may be used as a spare part in all wire feeders.

The following functions have been added or changed:

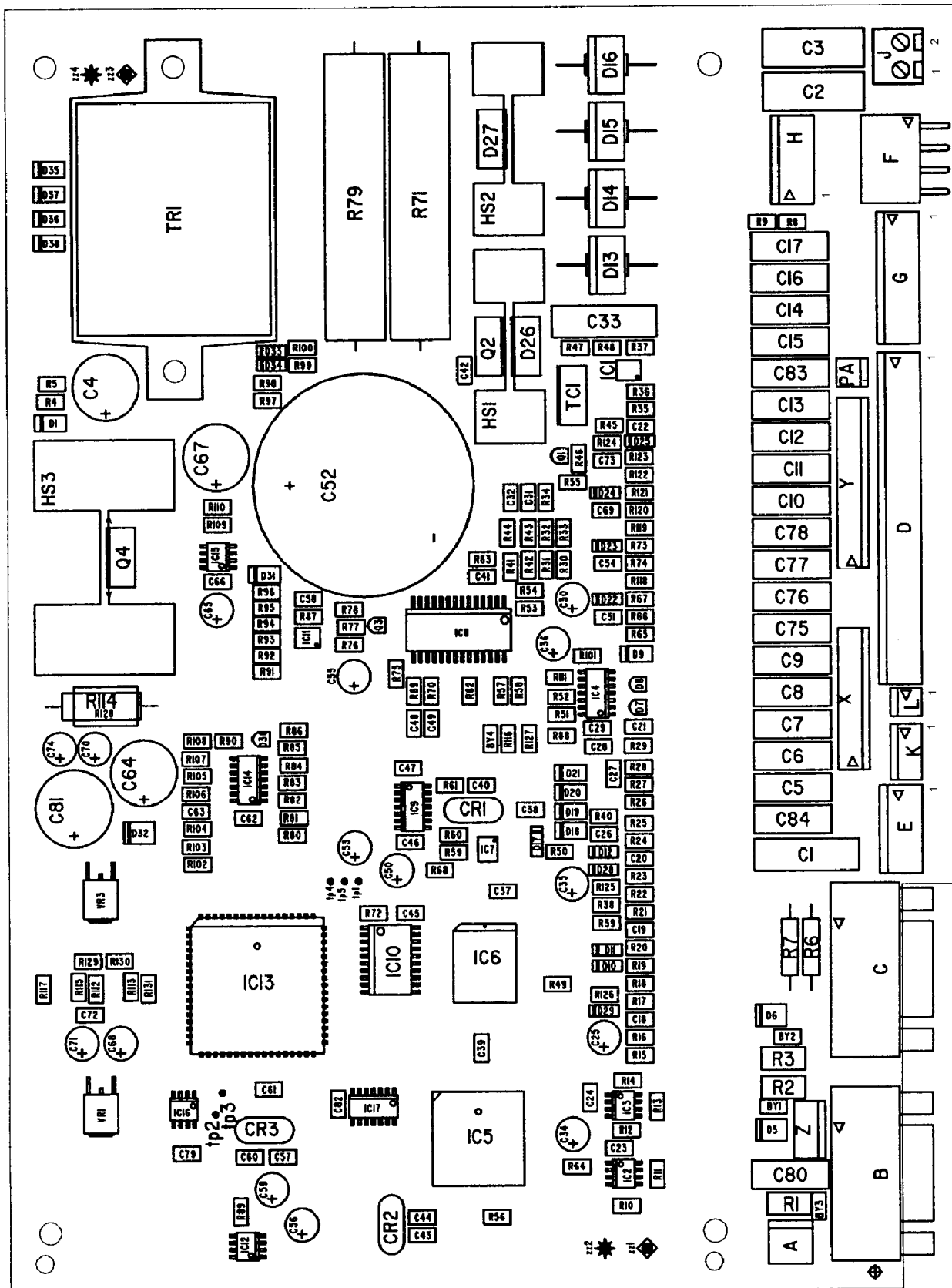
- Pulse generator input for motors with pulse generator, see page 16.
- Possibility to upgrade the software on the circuit board by using a PC card.
- LEDs which are indicating software state, see page 21.
- Software controlled current limit, see page 14.
- Inbuilt discharge circuit for the filter capacitor.
- Circuit board contact L, which is not used, is removed.

BASIC VERSION -890

From serial no. 918-xxx-xxxx version 885 is replaced by version 890. The voltage supply to the remote control is changed from +15V to +10V, see **Power supply** on page 12.

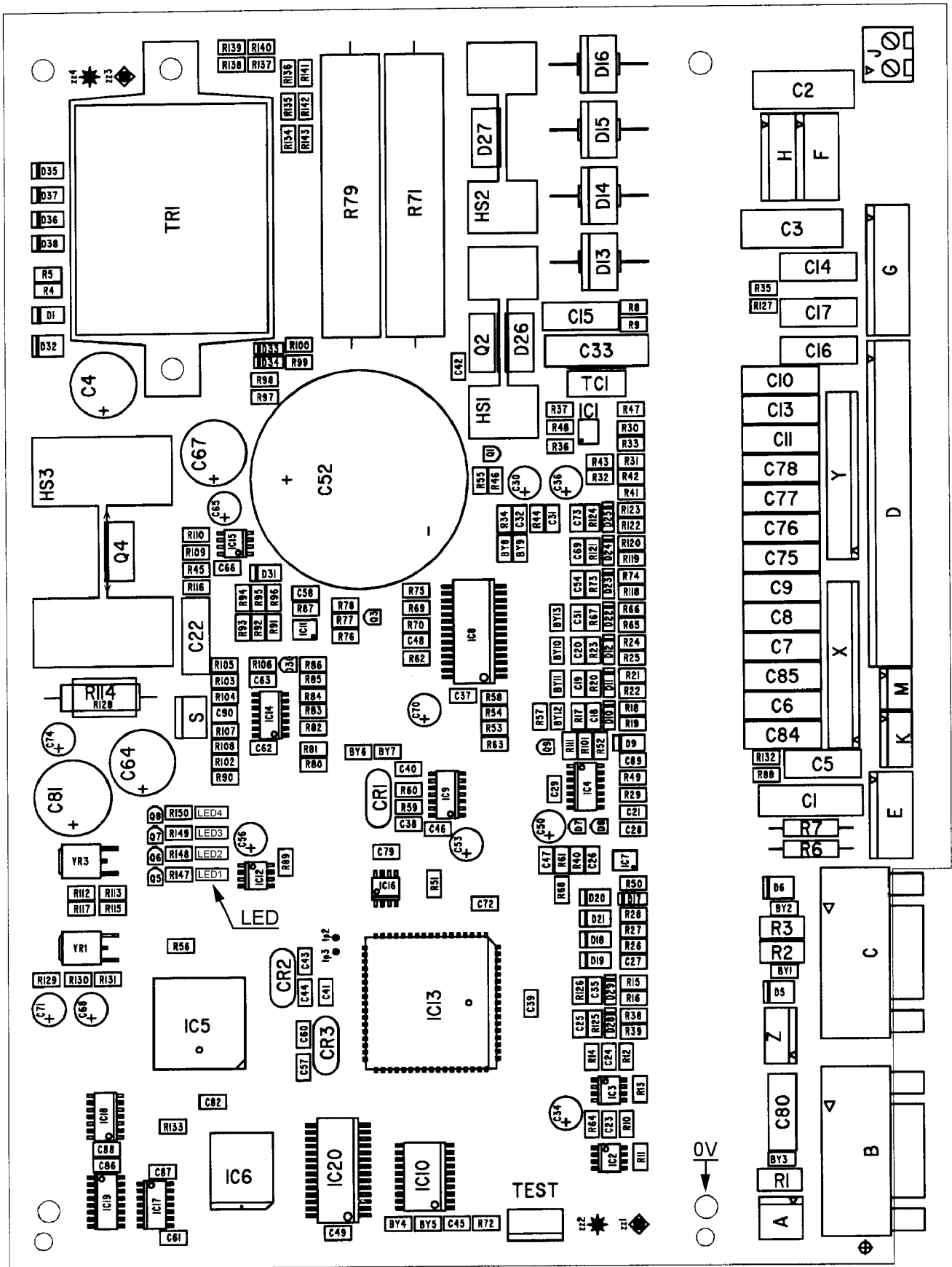
The circuit boards have the following article numbers:

MEK 4C / MEK 20C: 0486 384 891 *MEK 44C*: 0486 384 892



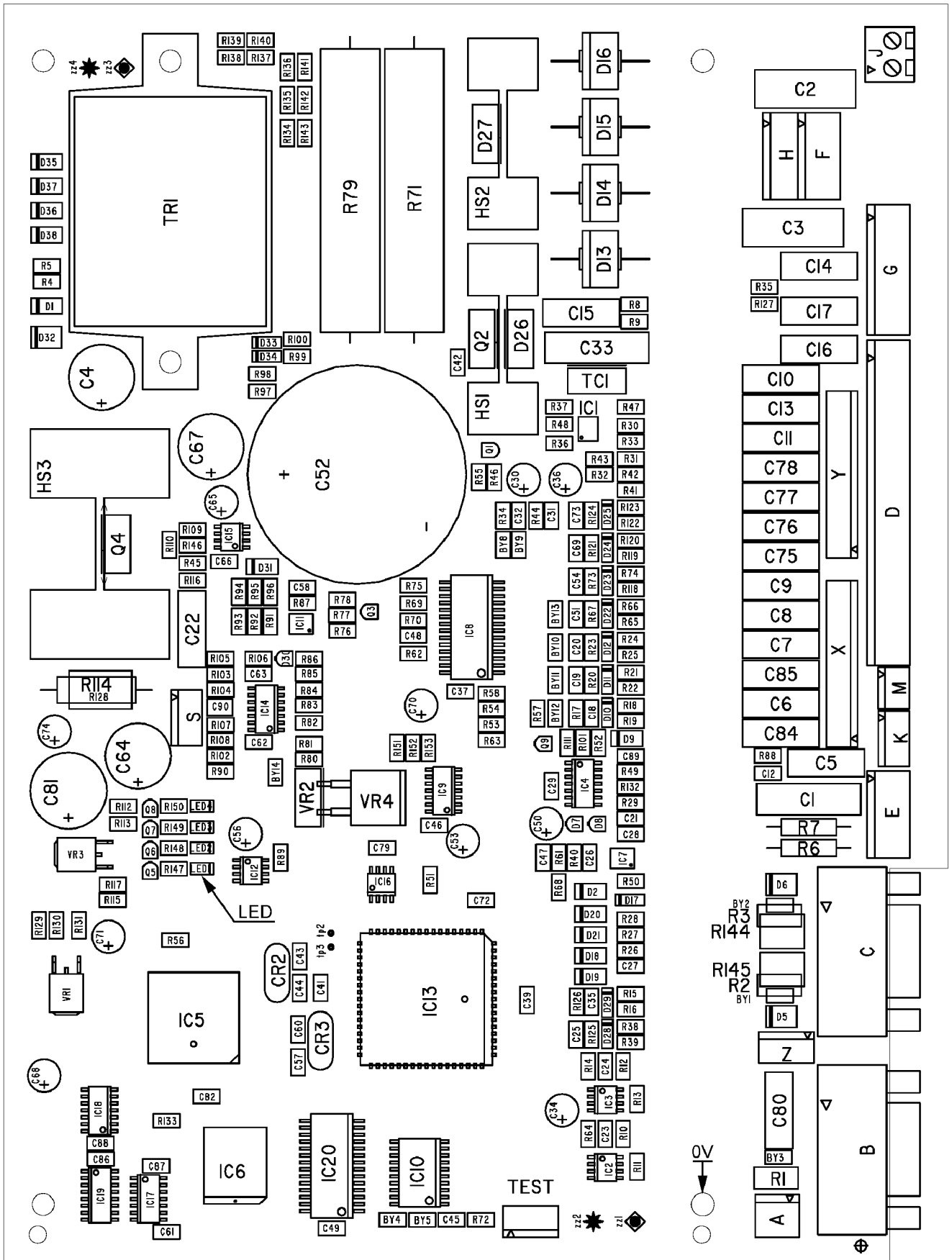
cmek3e02

Component positions circuit board AP01, version -880



cmek3e03

Component positions circuit board AP01, version -885

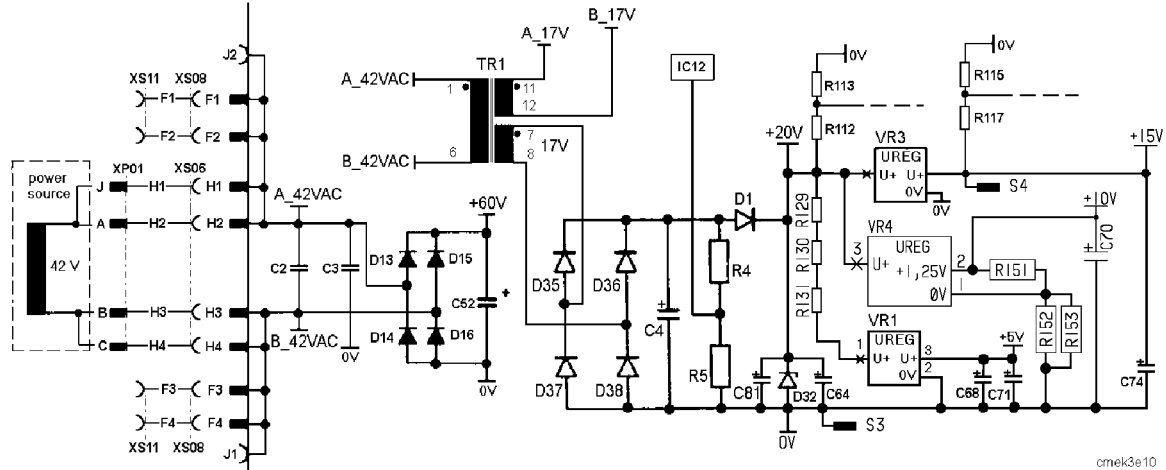


cmek3e06

Component positions circuit board AP01, version -890

Sections 1-11 below refer to the connection diagrams on page 6 and 7.
 Circuit board AP01 is screened by a can that is connected to 0V in the wire feed unit.
 Read the instruction on page 8 before removing the can.

1 Power supply



The wire feed unit receives a 42V supply from the control power supply transformer in the power unit via contact XP01. At full load, it consumes about 5A.

- **AC power supplies**

The 42V AC supply powers transformer TR1 and is used as the power supply to the gas valve. In addition, 42V is available at terminals J1 and J2 for the Miggytrac when this is used with the MEK 4C/44C.

Transformer TR1 has two secondary windings, each of which supplies 17V. The two supplies, A_17V and B_17V, supply the welding gun contact.

- **DC power supplies**

Diodes D13 - D16 rectify the 42V supply to 60V. Capacitor C52 smooths the supply, which is then used to power the wire feed motor. This voltage must be discharged before the screening box is removed, see page 8: Discharging the filter capacitor on circuit board AP01.

Diodes D35 - D38 rectify the 17V supply. Voltage regulators VR1 and VR3 regulate the 20V supply to 5V and 15V respectively. From circuit board version -890 the voltage supply to the remote control is changed from +15V to +10V. Voltage regulator VR4 and resistors R151 - R153 are new components on circuit board version -890.

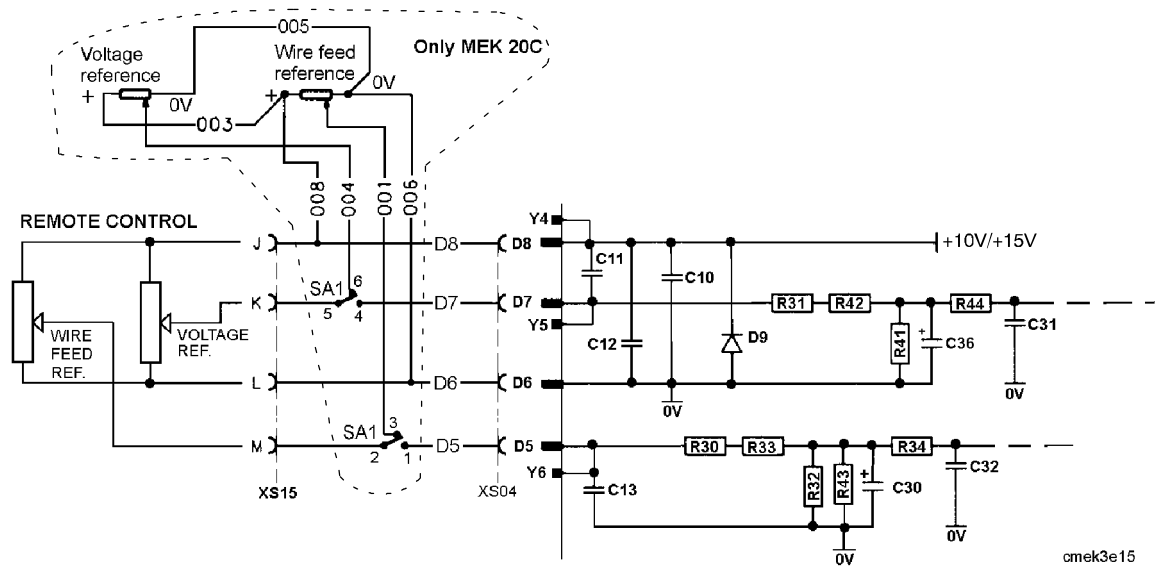
- **Power supply monitoring**

Potential divider R4/R5 monitors the voltage from transformer TR1. The voltage across R5 is normally about 1.8V. If the voltage drops by 30% or more, then the voltage across R5 drops to 1.25V or less. The reset circuit (IC12) supplies a warning signal to the processor, which stops the wire feed and then all communication on the bus. The display of the setting unit shows error code 4.

If the 20V supply drops below 15V (11V) or rises above 25V (26V), the display shows error code 9, but no functions are turned off or blocked. Voltage values in brackets are referring to circuit board version -880.

If the 15V supply drops below 13V or rises above 17V, the display shows error code 8, but no functions are turned off or blocked.

2 Reference from the remote control unit



Selecting remote control from the setting unit makes the voltage and wire speed reference settings on the setting unit inactive. If no remote control unit is actually connected, the reference signals will be held at zero by means of resistors R41 and R32/R43.

The remote control potentiometers for wire feed and voltage reference are energised in parallel. From circuit board version -890 the voltage supply to the remote control is changed from +15V to +10V.

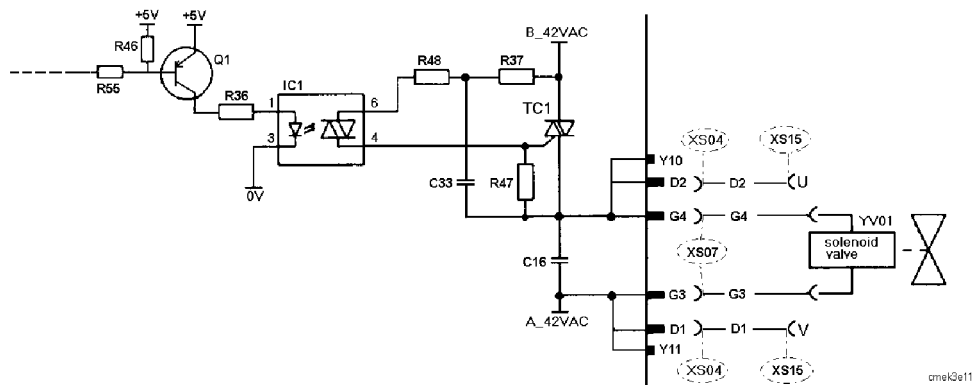
The arc voltage and wire feed speed reference signals are first converted to a CAN message. This is sent via the data bus to the setting unit, from which it is forwarded to the power unit and wire feed unit.

See also REMOTE CONTROL INPUT on page 22.

MEK 4C / 20C: The setting range for the feed speed is 1.9 to 25 meters per minute.

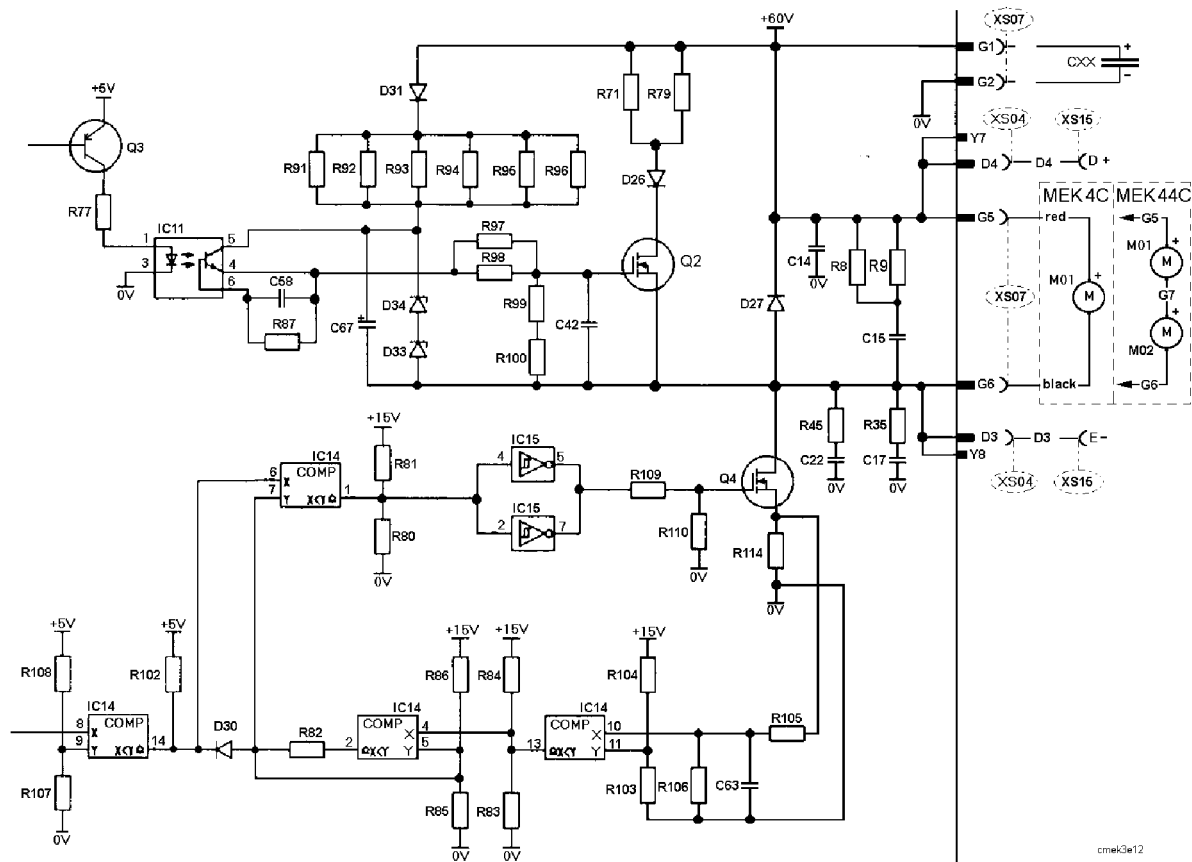
MEK 44C: The setting range for the feed speed is 1.5 to 25 meters per minute.

3 Gas valve



The gas valve is connected to board contacts G3 and G4. If an intermediate wire feed unit is being used, its gas valve is connected to outlet XS15, pins V and U.

4 Motor driving / braking



Principal diagram for motor drive circuits with hard ware current limit

- **Driving**

The motor is powered by the smoothed +60V supply. Pulse width modulation of transistor Q4 varies the effective motor voltage. The pulse frequency is 15.6kHz. The maximum pulse conduction time is 97% of the pulse cycle time. During the pulse off periods, the motor freewheels through freewheel diode D27.

MEK 4C / MEK 20C: The feed rollers' speed at the maximum wire feed speed of 25 m/min is 266 r/min.

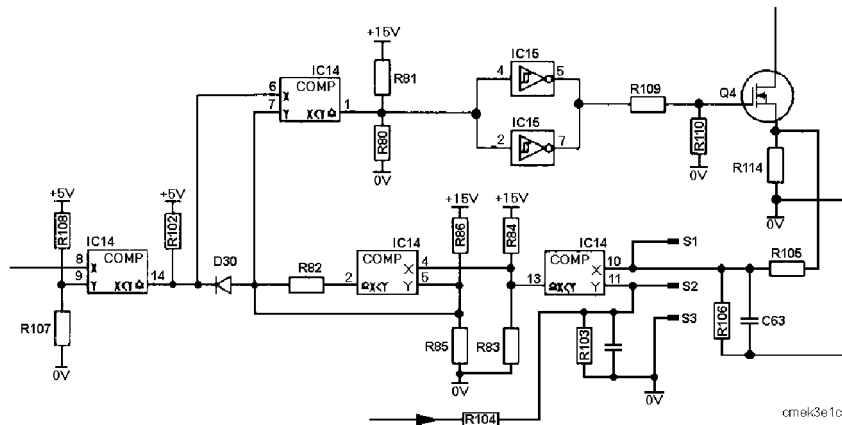
MEK 44C: The feed rollers' speed at the maximum wire feed speed of 25 m/min is 166 r/min.

- **Current monitoring**

Resistor R114 provides a signal that is proportional to the motor current.

On circuit board version -880 the current limit is set by the voltage divider R103-R104, see the diagram above. On circuit board version -886 the current limit is set by a reference voltage from the microprocessor (soft ware current limit), see the diagram below. The current limit is the same for the both circuit board versions.

When the current exceeds 15.4 A, IC14:2 turns off the gate pulses to Q4. When the current falls, Q4 conducts again at the next gate pulse.



Principal diagram for the software current limit

- **Speed monitoring**

The wire feed speed is monitored by the microprocessor on the circuit board.

If the wire speed deviates from the set value by more than 1.5 m/minute for more than 5.1 seconds, the setting unit displays error code 11. No functions are turned off or blocked by this error.

- **Braking**

When the motor starts, capacitor C67 is charged via diode D31, although the voltage is limited to 15V by zener diodes D33 and D34.

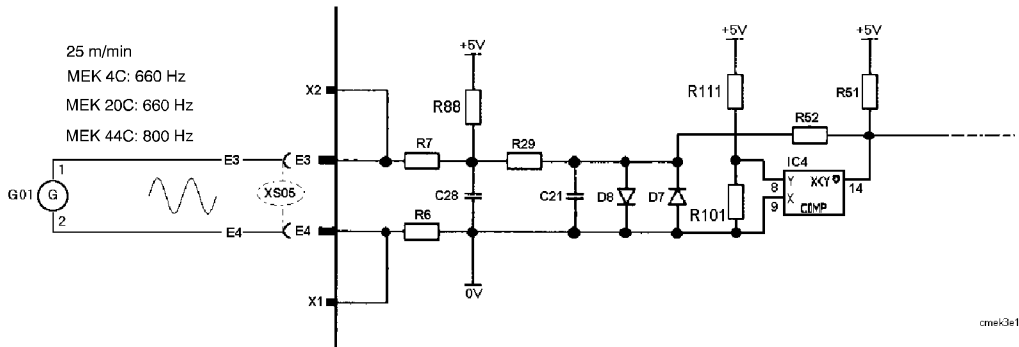
When the motor is to brake, optocoupler conducts and connects capacitor C67 (at 15V) to the gate of transistor Q2. This conducts and short-circuits the motor supply via resistors R71 and R79, which limit the current to about 20A.

- **Intermediate wire feeder**

Pins D and E in remote control unit connector XS15 are intended for powering the motor in an intermediate wire feed unit or in a PKE (push/pull) gun.

When using an intermediate wire feed unit under difficult conditions (low mains supply voltage or long cables), it is necessary to fit an additional smoothing capacitor CXX, 4700 μ F.

5 Tachometer input

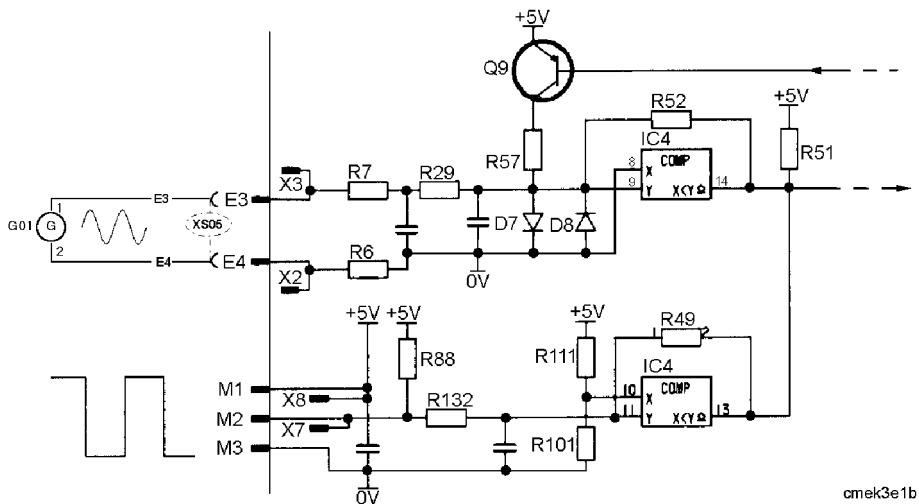


Tachometer input, circuit board version -880

Tachometer G01 is fitted inside the case of motor M01.

At a wire feed speed of 25 meter/minute, the tachometer frequency is 660Hz in the MEK 4C and 800Hz in the MEK 44C.

Comparator IC4;14 converts the sine wave from the tachometer to a square wave at the same frequency.



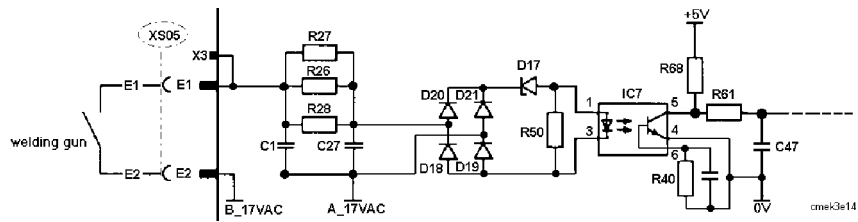
Tachometer and pulse generator input, circuit board version -885

An input for pulse generator feedback is added to version -885 of the circuit board. This input is not used by the present standard wire feeders.

When the pulse generator input is used pin 9 of IC4 is pulled to a high level (+5V) by transistor Q9.

The tachometer input of this circuit board version operates as described above.

6 Start / Stop

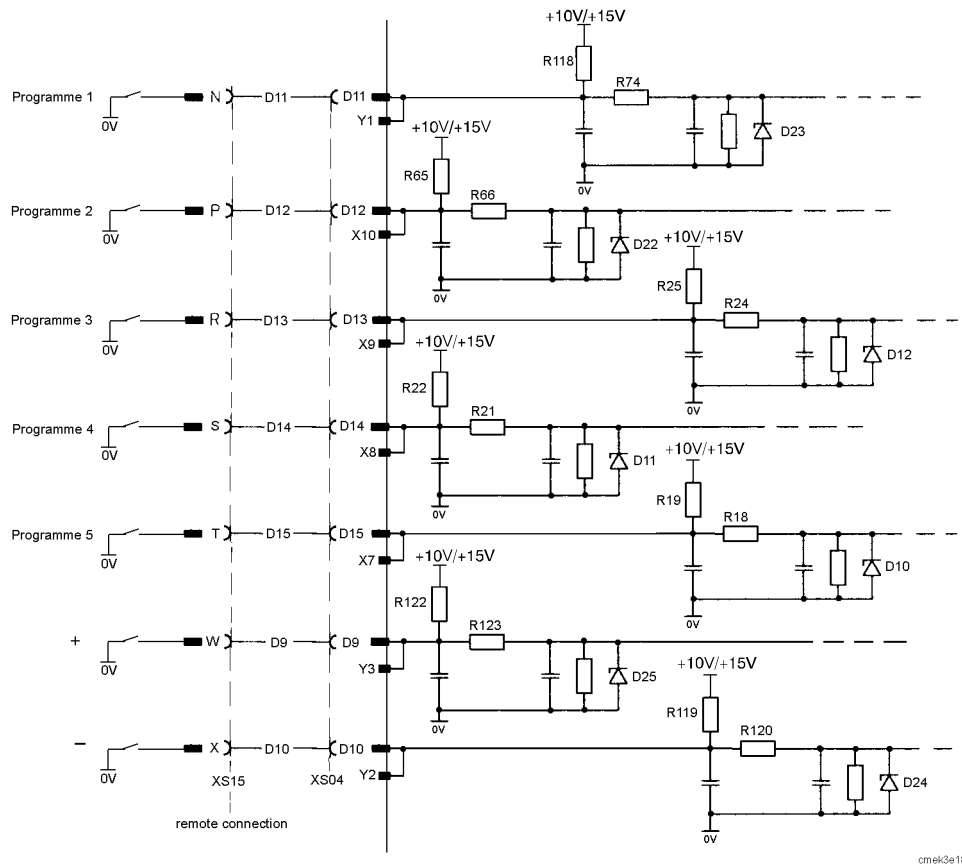


The welding gun contact is supplied at 17V AC from transformer TR1.

Closing the gun contact activates optocoupler IC7, pulling down the voltage across C47.

When the pre-flow time has ended, the wire feed start and the power source gives output voltage. If welding does not commence within three seconds from the start of wire feed the power source switches off the voltage. The wire feeding continues until the gun contact is released.

7 Program selection from the gun / remote control unit



A welding gun or a remote control unit with program selector can be connected to pins N, P, R, S and T in remote control connector socket XS15.

Pins W and X are intended for use with remote control devices having Raise/Lower pushbuttons.

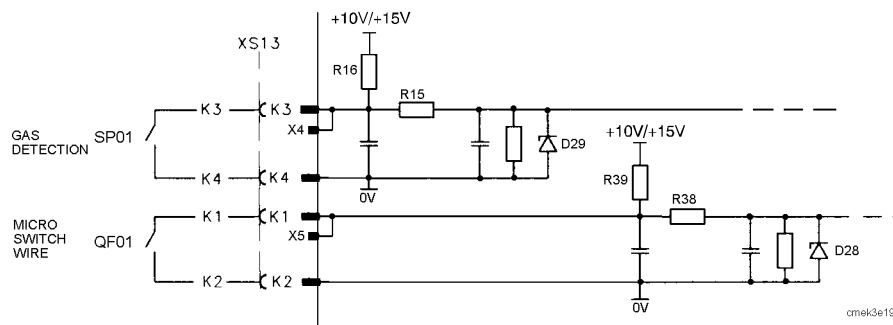
The resistors on the circuit board's input form a potential divider to reduce the +15V signal to provide +6,5V to an open input. From circuit board version -890 the voltage supply is changed from +15V to +10V, on this board version the open input voltage is +6V.

The status of the program selection inputs is sent via the data bus to the setting unit: see REMOTE CONTROL INPUT on page 22.

- Program selection from the gun / remote control unit.

Program	XS15;N (D11)	XS15;P (D12)	XS15;R (D13)	XS15;S (D14)	XS15;T (D15)
1	0 V	+6,5 V	+6,5 V	+6,5 V	+6,5 V
2	+6,5 V	0 V	+6,5 V	+6,5 V	+6,5 V
3	+6,5 V	+6,5 V	0 V	+6,5 V	+6,5 V
4	+6,5 V	+6,5 V	+6,5 V	0 V	+6,5 V
5	+6,5 V	+6,5 V	+6,5 V	+6,5 V	0 V

8 Wire feed and gas monitoring

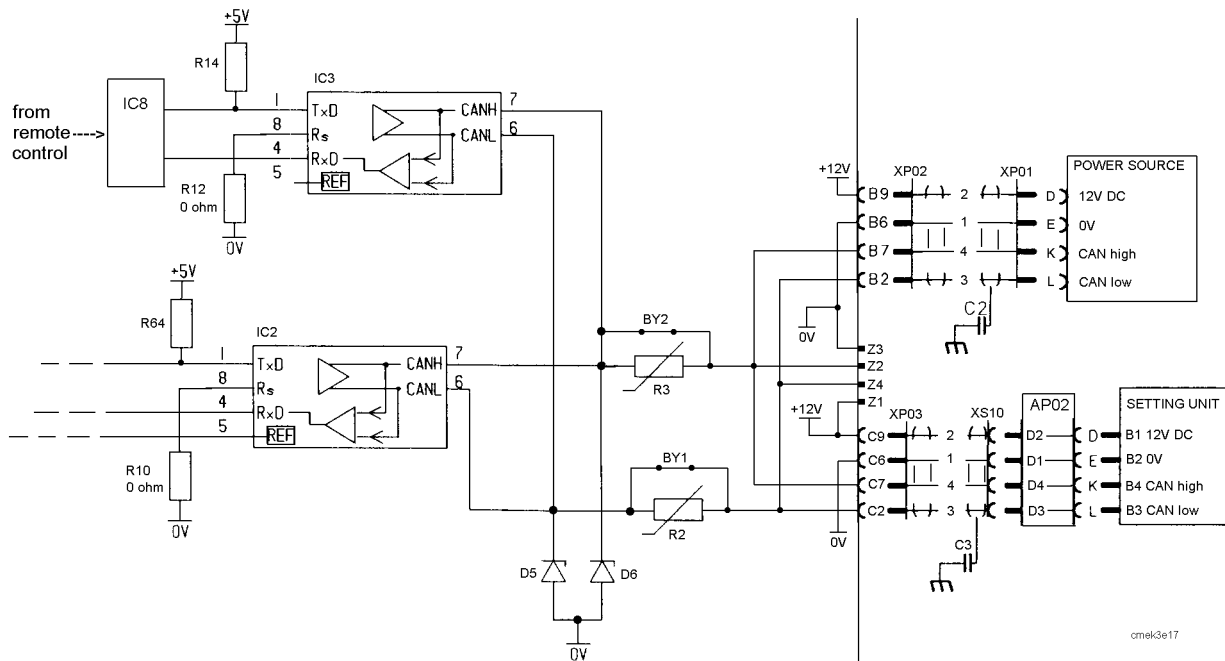


The circuit board in the wire fed unit is prepared for incorporation of wire and gas monitoring functions. A fault message appears on the display if any of the inputs is closed.

Fault code 27 = Out of wire. Fault code 32 = No gas flow.

Wire feed and gas monitoring are future accessories.

9 CAN bus



The circuit board carries two drive circuits for the CAN bus, IC3 and IC2.

IC3 manages communication with the SLIO unit, IC8. See also REMOTE CONTROL INPUT on page 22.

IC2 manages communication for the other electronics on the feed unit circuit board.

If the PTC resistors R2 and R3 not are fitted the links BY1 and BY2 replaces them.

The +12V supply is the power supply from the power unit to the setting unit, and is not used on the wire feed unit circuit board. 0V on the wire feed unit circuit board is connected to 0V on the setting unit.

Start sequence

The circuit board carried an EEPROM, IC16. (EEPROM = Electrically Erasable Programmable Read-Only Memory.) IC16 is the key to operation of the board.

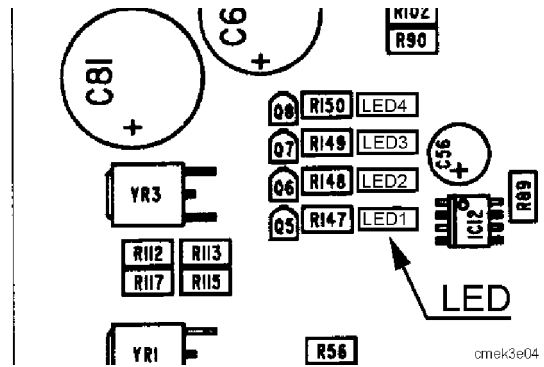
On power-up, the circuit board's CAN controller reads in the following parameters from IC16: The bus speed (400 kbit/s), the node address (3 for the wire feed unit) and the machine identification (1 = MEK 4C and MEK 20C, 2 = MEK 44C).

The bus speed, the node address and the machine ID are programmed into IC16 during testing of the board.

Circuit board version -885 gives the possibility to follow the start sequence when powering up the unit. LED1 is lit first, then LED2, after that both LEDs are switched off. When all LEDs are off the board is initiated and the application programme runs.

During upgrading the software with a PC card LED3 and LED4 are lit.

At normal operation all four LEDs are switched off.



LEDs on circuit board AP01

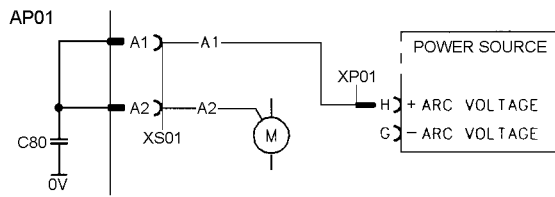
Problems with CAN communication

The setting unit displays fault code 17 if communication between it and the wire feed unit is not working.

Check the following in the event of problems with CAN communication:

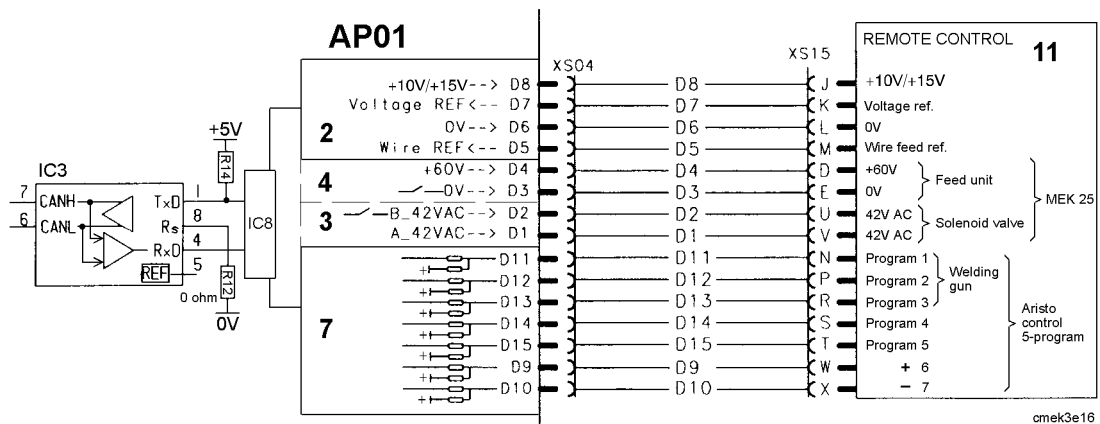
- The terminating resistance: see instructions on page 23.
- The control cable:
 - Check that the right type of cable is used. This must be the same type as on the setting unit and between the power unit and the wire feed unit when delivered.
 - Check that each signal is connected to the correct wire. CAN high and CAN low must run on the twisted pair.
- All Screen connection must make good electrical contact.
- MEK: Good contact at the connections to capacitors C1, C2 and C3. See the main circuit diagram on page 6 and 7.
- LUD: Good contact at the connections to capacitors C1, C2, C5 and C8 as well as the chassis connection of circuit board AP2. See the main circuit diagram for the LUD.
- The power supplies to the feeder unit circuit board AP01.
- If none of the points above solves the problem, replace AP01.

10 Arc voltage sensing



To avoid the voltage drop in the main welding current cables, the power unit senses the arc voltage via the welding wire and the wire feed unit motor. The arc voltage is filtered by capacitor C80 on circuit board AP01.

11 Remote control unit input



The SLIO unit, IC8 (SLIO = Serial Linked Input/Output), scans all the remote control device inputs, reading both analogue and digital inputs, and converts them to CAN messages which are read by the setting unit.

IC8 works independently of the rest of the board. It is controlled by the setting unit, which transmits calibration messages every ten milliseconds. It then sends a question asking for the value of the signal on, say, an analogue input, to which IC8 replies with the value of the voltage at the input.

Without a setting unit, IC8 does nothing.

IC3 looks after communication with the setting unit.

The following can be connected to the remote control unit input:

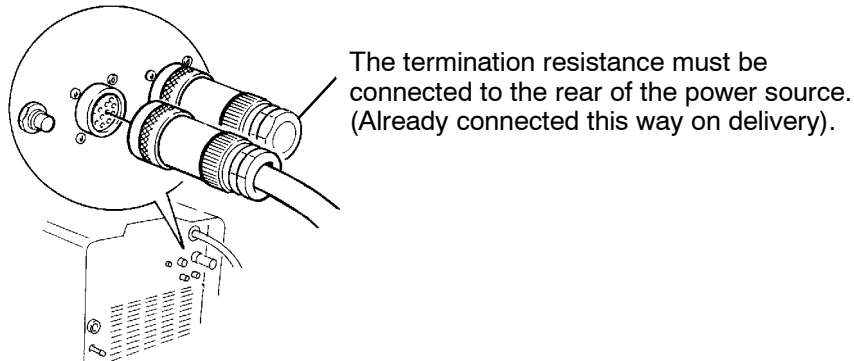
- Wire feed speed remote control unit. Socket XS15: pins M, J and L.
- Arc voltage remote control unit. Socket XS15: pins J, K and L.
- Suitable control units are ESAB's combination remote control units for wire feed speed and arc voltage: "Aristo Control Synergic Torch" and "Aristo Control Synergic Box"
- Program selection remote control unit, "Aristo Control 5-program". With this remote control weld data can be recalled from memory positions 1 to 5. If the power source is equipped with two wire feeders, weld data from memory positions 6 to 10 are recalled to the second feeder.
- MEK 25 intermediate wire feed unit.

TERMINATION RESISTANCE

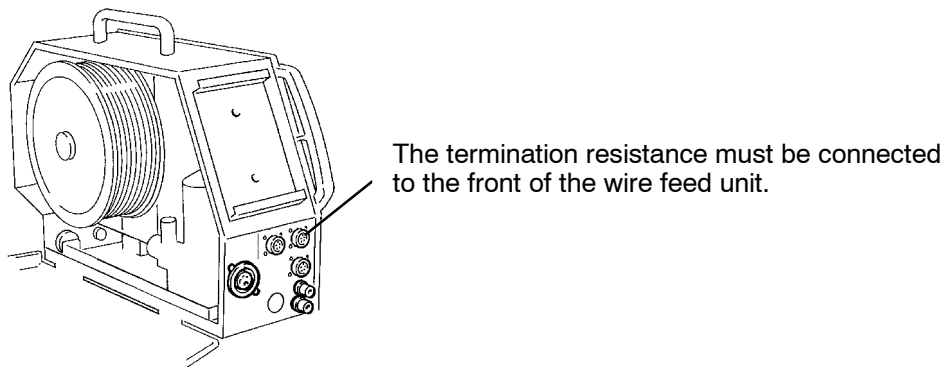
The termination resistance **must** be connected to the ends of the CAN bus to prevent communication problem. The setting unit has a built-in terminator, but the power source and wire feed unit do not.

The terminator **must** be fitted as follows depending on how the units are connected:

Setting unit connected to the wire feed unit



Setting unit connected to the power source



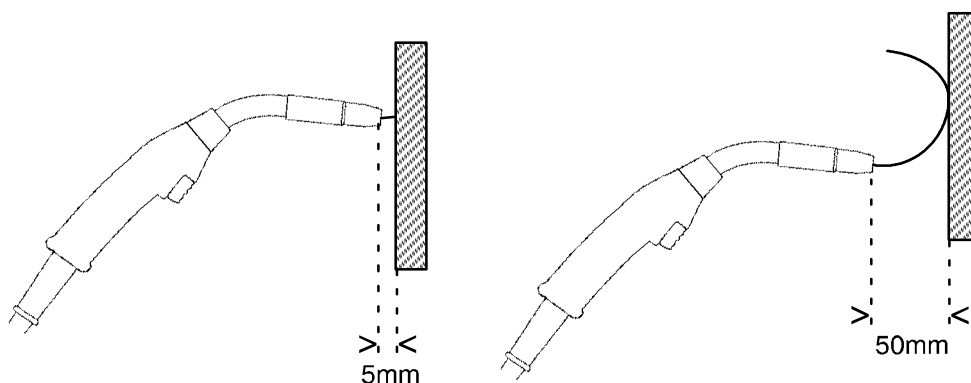
MAINTENANCE

Regular maintenance is important in ensuring safe and reliable operation.

- **The feed unit**
Clean and replace the wearing parts in the feed mechanism at regular intervals.
Do not set too high a pressure on the pressure rollers, as this can cause abnormal wear of the pressure rollers, the feed rollers and wire guide. Instructions for setting of the wire feed pressure are on page 24.
- **The gun**
Blow the wire guide clean with compressed air at regular intervals and clean the gas nozzle.

SETTING THE WIRE FEED PRESSURE

Start by checking that the wire can run freely through the wire liner, and then adjust the pressure of the wire feed rollers. It is important that the pressure is not too high.



cmek0p10

Figure 1

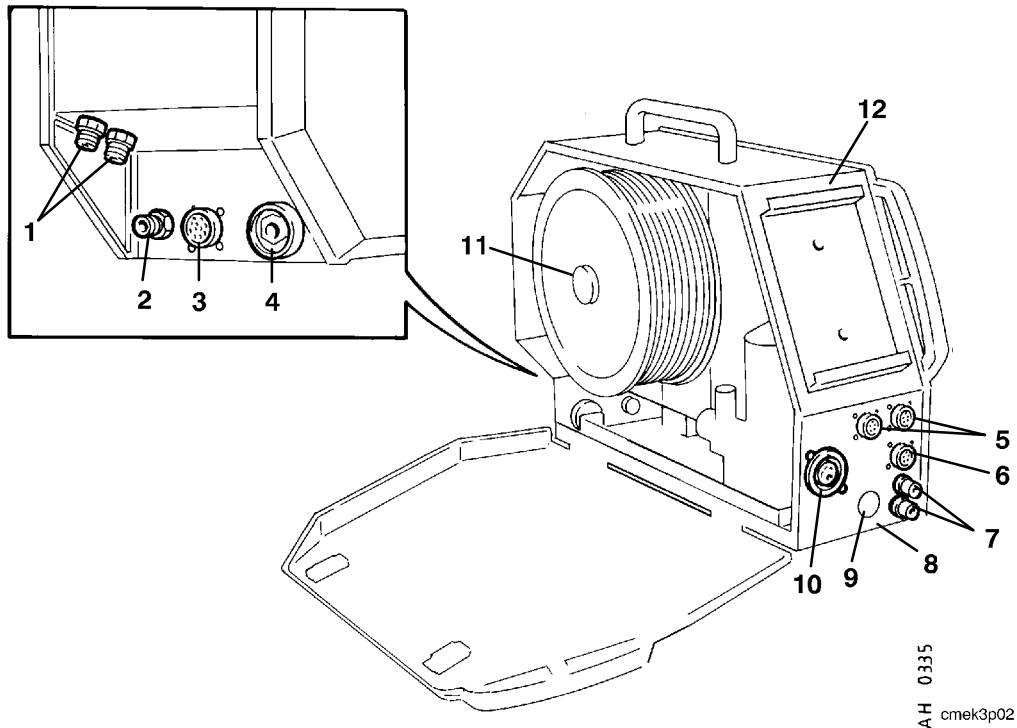
Figure 2

To check for correct feed pressure, feed the wire out against a piece of insulating material, such as a piece of wood.

With the gun held about 5 mm from the wood (Figure 1), the drive rollers should slip.

With the gun held further away from the wood (about 50 mm, as shown in Figure 2), the wire should continue to feed out, bending as it does so.

CONTROL PANEL AND CONNECTIONS MEK 4C

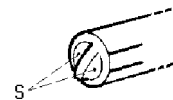


AH 0335
cmek3p02

- | | |
|---|---|
| 1. Nipples for cooling water to/from water cooler (Model -881 only). | 2. Nipple for gas connection. |
| 3. Connector for control cable. | 4. Connector for welding current. |
| 5. Connector for the setting unit PUA 1. | 6. Connector for remote control unit / intermediate feeder. |
| 7. Nipples, cooling water to/from the welding gun (Model -881 only). | 8. Fixing point for the securing belt, used to hold the wire feed unit to the power unit for transport. |
| 9. Hole for fitting the connector for a PKE welding gun (having its own integral feeder motor). | 10. Connection for welding gun. |
| 11. Brake hub. The brake hub is correctly adjusted when the unit is delivered. If subsequent adjustment is needed, follow the instructions below. | 12. Holder for the setting unit. |

Adjustment of the brake hub

The brake force can be adjusted by the two screws (springs) inside the hub. Turn the screws clockwise to reduce the braking effect. Adjust the brake hub so that the wire is slightly slack when wire feed stops.



S = Adjusting screws

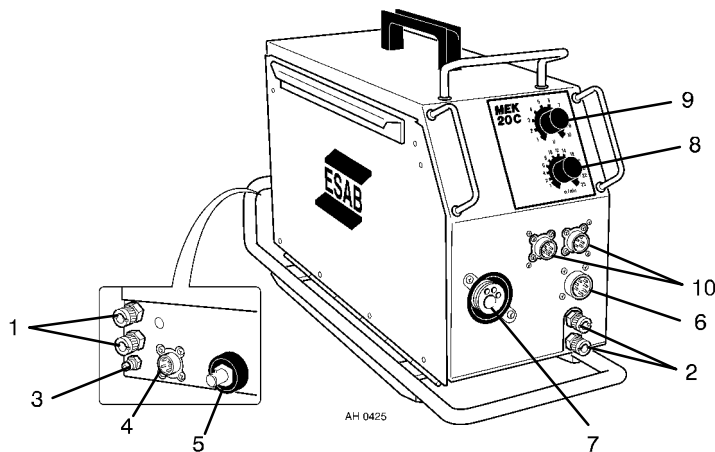
Control panel

The feed unit has no control panel, all settings are made from the setting unit PUA 1.

Inching

See Inching on page 27.

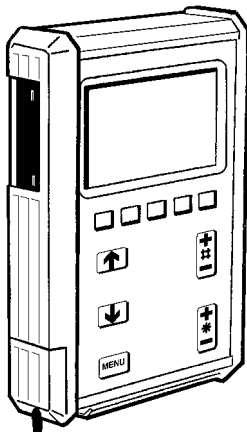
CONTROL PANEL AND CONNECTIONS MEK 20C



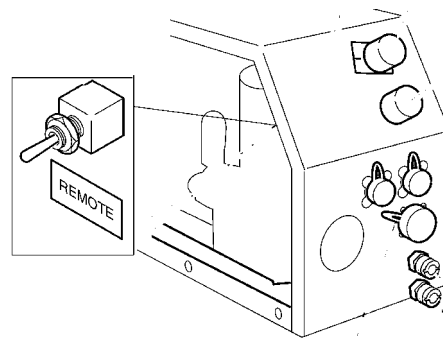
- | | |
|--|---|
| 1. Nipple, cooling water to/from water cooler (only certain models). | 2. Nipple, cooling water to/from the welding gun (only certain models). |
| 3. Nipple for gas connection. | 4. Connector for control cable. |
| 5. Connector for welding current. | 6. Connector for remote control. |
| 7. Connector for welding gun. | 8. Potentiometer for wire feed speed. |
| 9. Potentiometer for welding voltage. | 10. Connector for the setting unit PUA 1. |

The wire feed speed and voltage

The wire feed speed and voltage can be adjusted using the PUA 1 setting unit in set and measure modes. If you want to use the potentiometers on the front of the wire feed unit then the toggle switch inside the wire feed unit must be in the upper position and the PUA 1 must be set for remote operation.



Setting unit PUA 1



Toggle switch for selection of remote operation

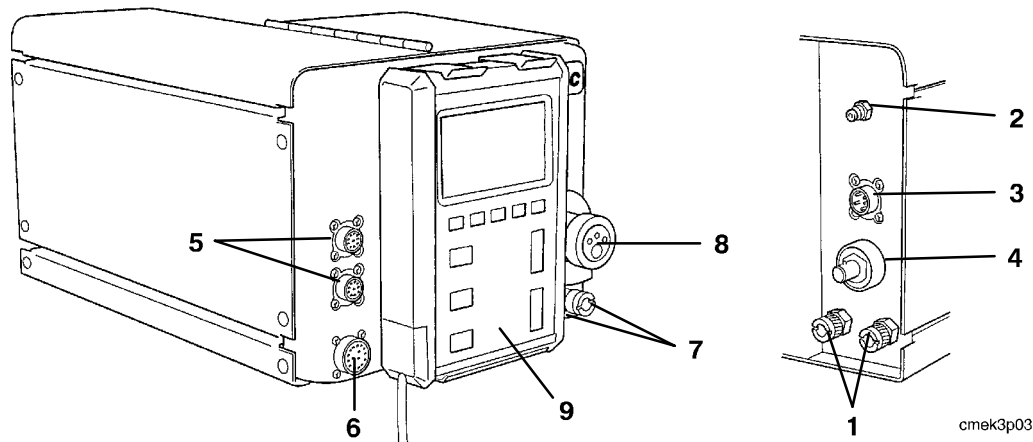
Remote control

To use a remote control, the toggle switch inside the wire feed unit must be switched to remote (the lower position), and the PUA 1 must also be set to remote, as above. If you want to change the wire feed and voltage parameters using the PUA 1, you must switch from “remote“ to measure mode or set mode.

Inching

See Inching on page 27.

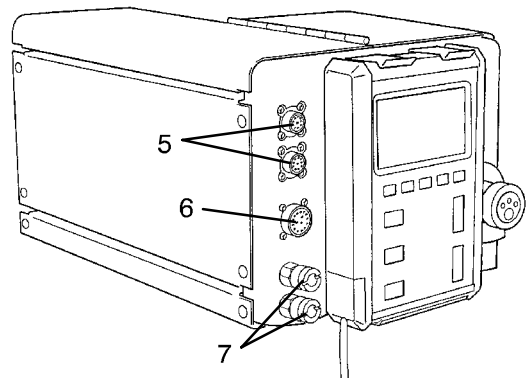
CONTROL PANEL AND CONNECTIONS MEK 44C



1. Nipples for cooling water to/from the water cooler. (Model -881 only).
2. Nipple for gas connection.
3. Connector for control cable from the power unit.
4. Connector for welding current from the power unit.
5. Connector for the setting unit PUA 1.
6. Connector for remote control unit / intermediate feeder.
7. Nipples, cooling water to/from the welding gun (Model -881 only).
8. Connection for welding gun.
9. Setting unit PUA 1.

New location of the water nipples

From machine number 827-xxx-xxxx the nipples on the front are moved to the left side.



New location of the water nipples

Control panel

The feed unit has no control panel, all settings are made from the setting unit.

Inching

If the gun switch is depressed, the gas valve opens, the wire feed start and the power source gives output voltage. If the wire doesn't make contact to the workpiece, the output voltage and the gas will be turned off after about three seconds. The wire feed continues until the gun switch is released.

ACCESSORIES

Connection sets

The connection set between the power unit and the feed unit is the same for the MEK 4C, MEK 20C and MEK 44C. The sets are available with or without connection for water cooling.

	Ordering no. without water	Ordering no. with water
Connection set, 1.7 metre	0456 528 880	0456 528 885
Connection set, 8 metre	0456 528 881	0456 528 886
Connection set, 16 metre	0456 528 882	0456 528 887
Connection set, 25 metre	0456 528 883	0456 528 888
Connection set, 35 metre	0456 528 884	0456 528 889

Spare parts list for the connection sets are listed on page 30.

Remote controls

Only remote controls with 23-pole connection may be used.

Wire feed speed and welding voltage

Aristo Control Synergic Torch Ordering number: 0466 515 880

Aristo Control Synergic Box Ordering number: 0466 801 880

Program selection

Aristo Control 5-program Ordering number: 0466 801 881

TIG

FS002 foot pedal for Aristo 2000 Ordering number: 0349 090 887

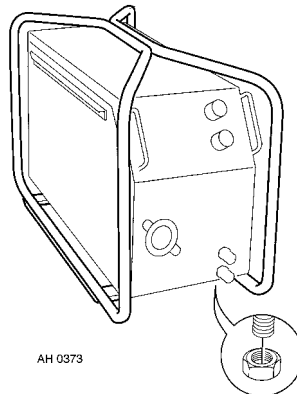
Intermediate wire feeder MEK 25

Ordering number: 0455 295 880

Accessories, MEK 20C

Protection frame

Ordering number: 0457 203 880

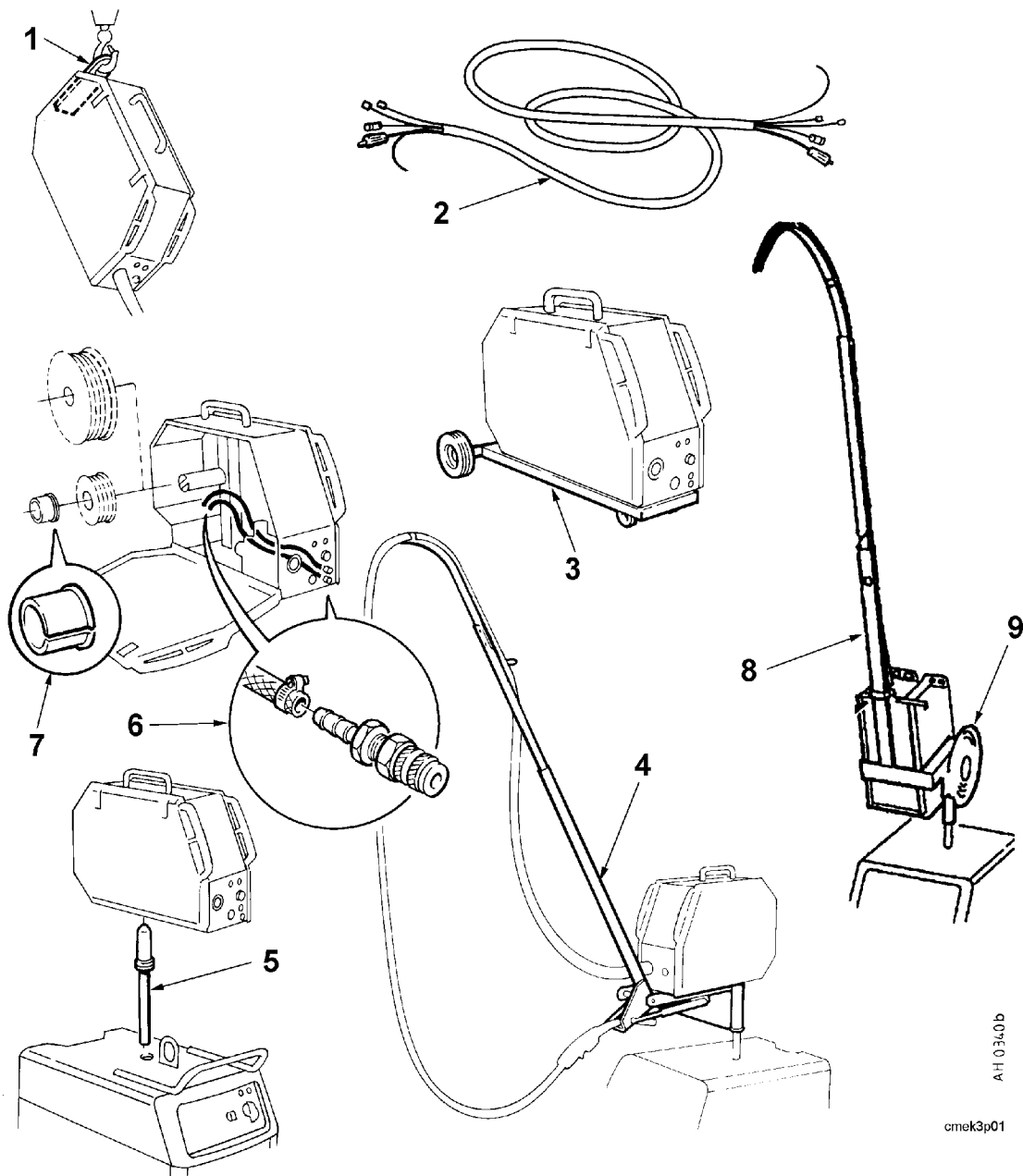
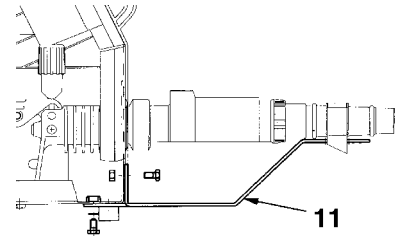


Accessories, MEK 44C

The accessories are described in the spare parts list starting on page 60.

Accessories, MEK 4C

Item no	Ordering no.	Designation
1	0469 789 880	Lifting eye
2	-	Connection sets, see previous page
3	0469 786 880	Trolley
4	0469 792 881	Counter balance device and mast
5	0156 654 893	Guide pin (delivered with LUD)
6	0469 967 880	Water connection set
7	0455 410 001	Adapter for 5 kg bobbin
8	0156 746 880	Mast
9	0456 693 880	Counter balance device, sprung coil
10	0457 341 880	Hose reinforcement bracket

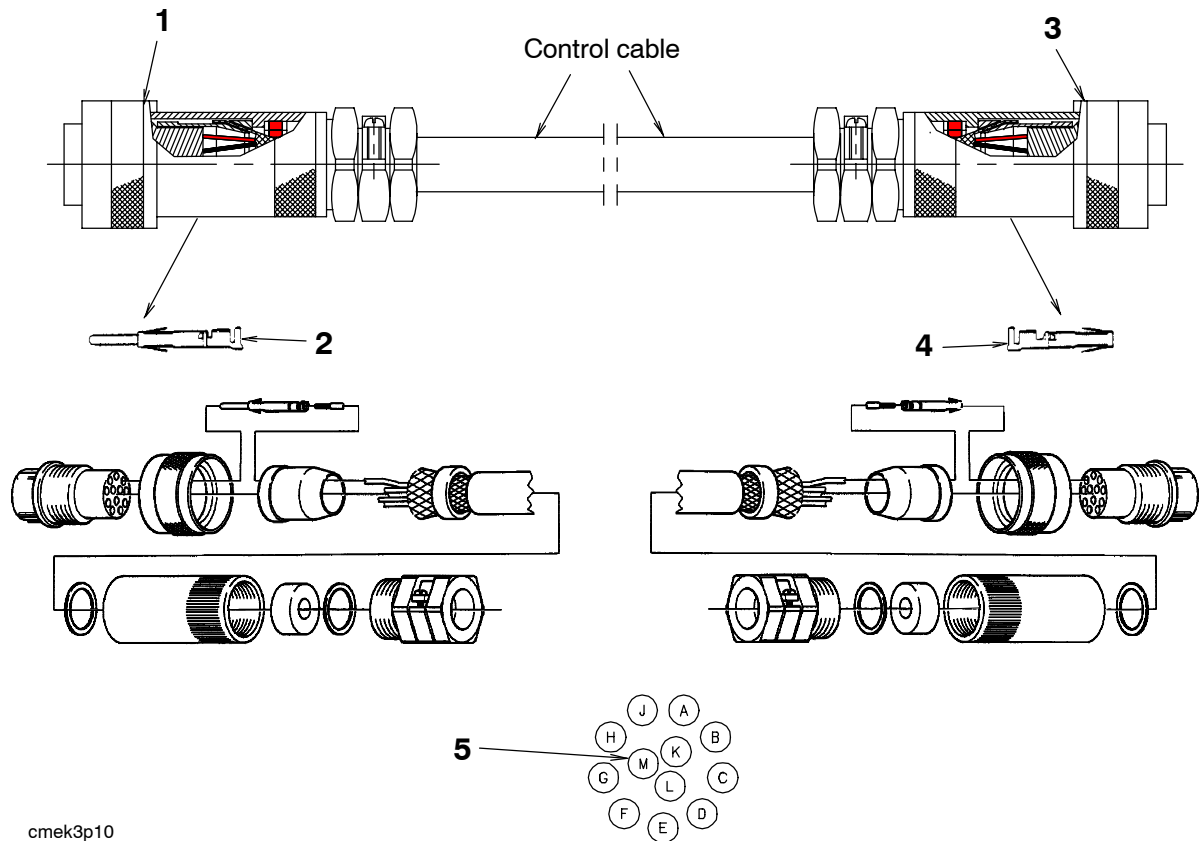


AH 0340b

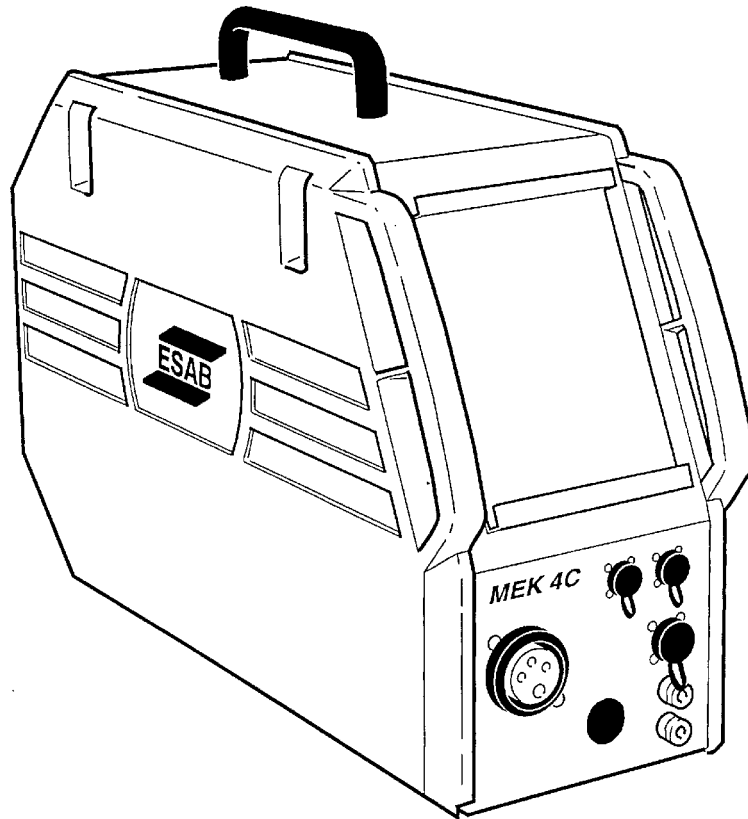
cmek3p01

Spare parts for connection sets

Item	Qty	Ordering no.	Denomination	Notes
-	4	0365 803 010	Quick connector, male	For 1.7 metre connection set (water)
-	4	0365 803 013	Quick connector, male	With nonreturn valve, for 8 - 35 metre connection sets (water)
-	1	0365 803 002	Quick connector, female	For gas connection to the wire feeder
1	1	0368 541 103	Pin plug (Burndy)	12 pole, pins not included
2	4	0193 513 003	Pin contact	For 0.35 - 0.5 mm ² wire
2	7	0193 513 005	Pin contact	For 0.8 - 1.5 mm ² wire
3	1	0368 542 103	Sleeve plug (Burndy)	12 pole, sleeves not included
4	4	0193 513 103	Sleeve contact	For 0.35 - 0.5 mm ² wire
4	7	0193 513 105	Sleeve contact	For 0.8 - 1.5 mm ² wire
5	2	0193 553 101	Polarisation pin	One in each plug



cmek3p10

Spare parts list

AH0342/cmek3p00

Valid for serial no. 623-xxx-xxxx to serial no. 918-xxx-xxxx

Ordering numbers for MEK 4C

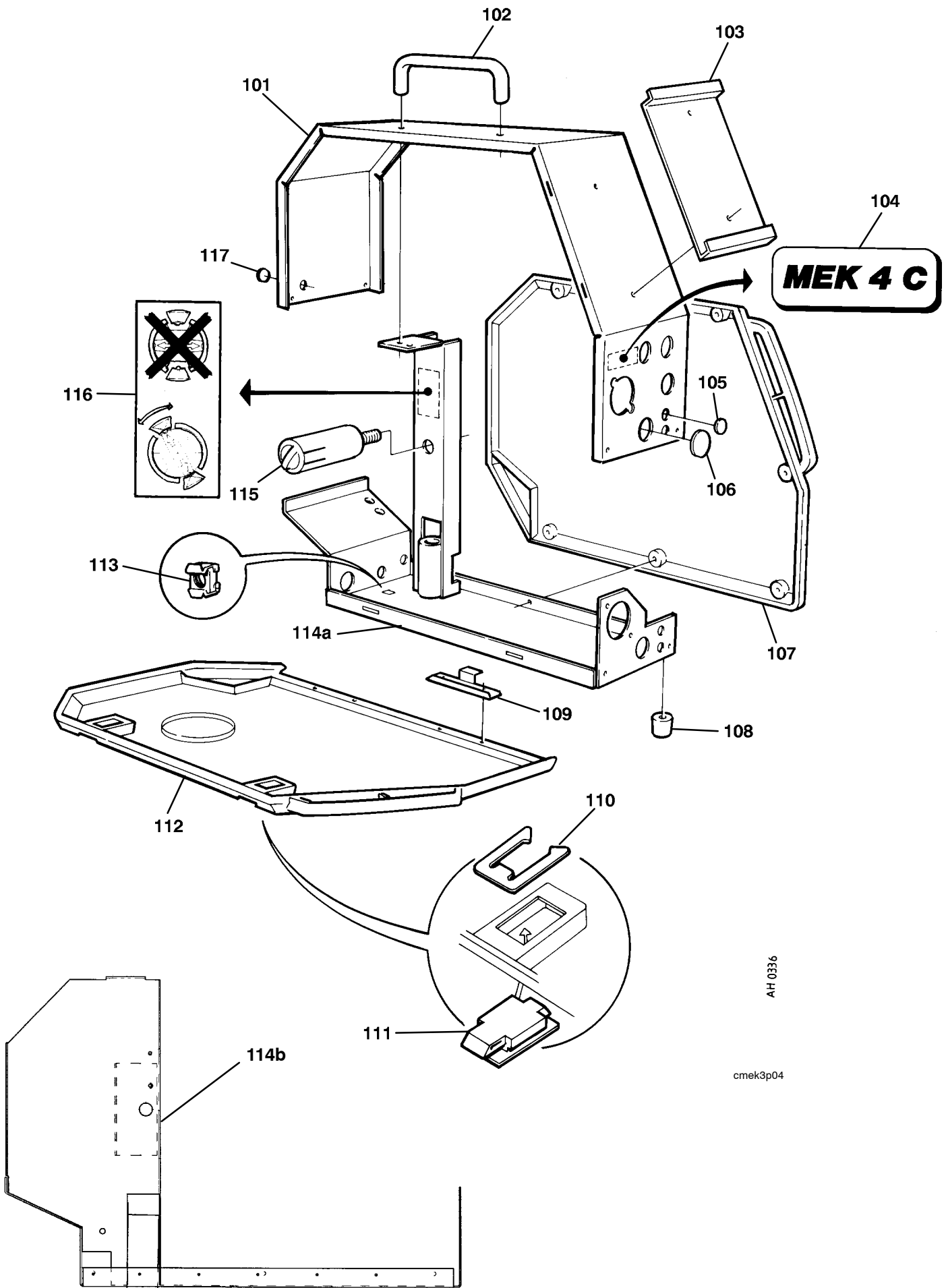
0456 400 880 MEK 4C without water connection

0456 400 881 MEK 4C with water connection

Spare parts are to be ordered through the nearest ESAB agency as per the list on the back of the cover. Kindly indicate type of unit, serial number, denominations and ordering numbers according to the spare parts list.

Maintenance and repair work should be performed by an experienced person, and electrical work only by a trained electrician. Use only recommended spare parts.

Item no.	Qty	Ordering no.	Denomination	Notes
101	1	0456 395 001	Cover	New design from the first half year 1999. If item 221b is fitted to the machine it must be replaced by item 221a when the cover is replaced.
102	1	0467 176 001	Handle	
103	1	0456 618 001	Attachment	
104	1	0456 394 001	Sticker	With text
105	4	0192 230 105	Cover	
106	1	0192 230 112	Cover	
107	1	0469 959 001	Side cover	Right
108	4	0467 695 001	Rubber foot	
109	2	0469 823 001	Hook	
110	2	0369 561 002	Clamp	
111	2	0369 561 001	Lock	
112	1	0469 960 001	Side cover	Left
113	2	0192 562 104	Cage nut	M5
114a	-	0456 388 880	Chassis	Replaced by item 114b
114b	1	0469 779 880	Chassis	New design, fits in all versions of MEK 4 Changed design from the first half year 1999. If item 214b is fitted to the machine it must be replaced by item 214a when the chassis is replaced.
115	1	0146 967 881	Brake hub	
116	1	0416 236 001	Sticker	
117	1	0192 230 104	Cover	

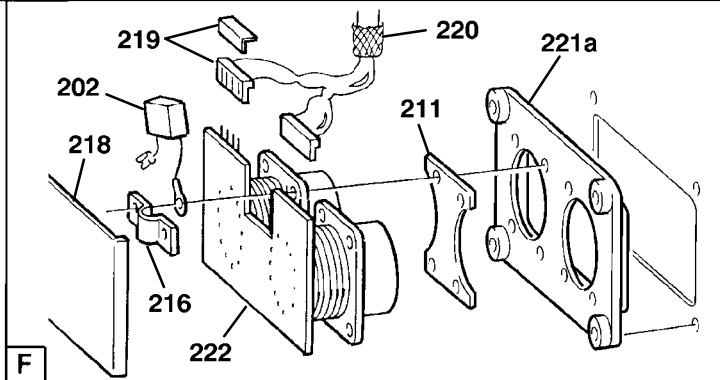
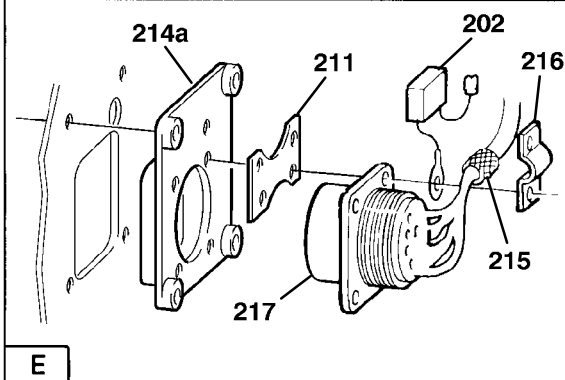
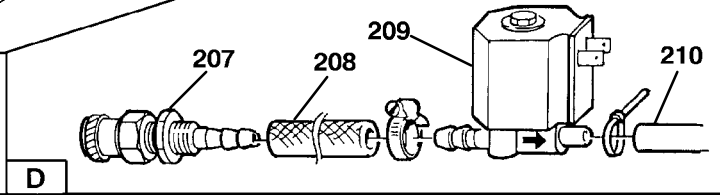
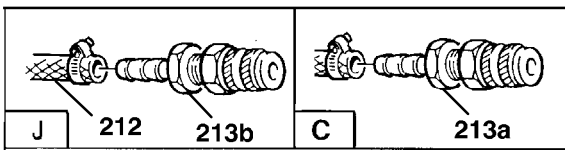
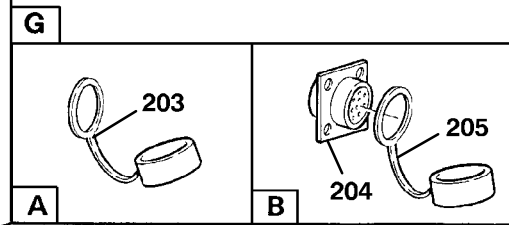
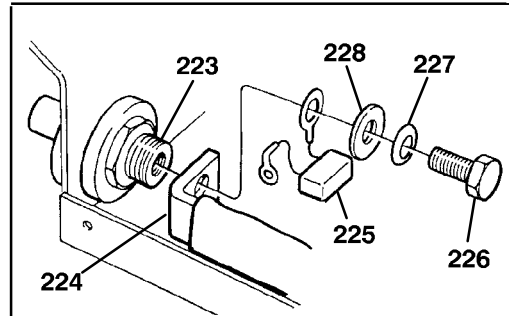
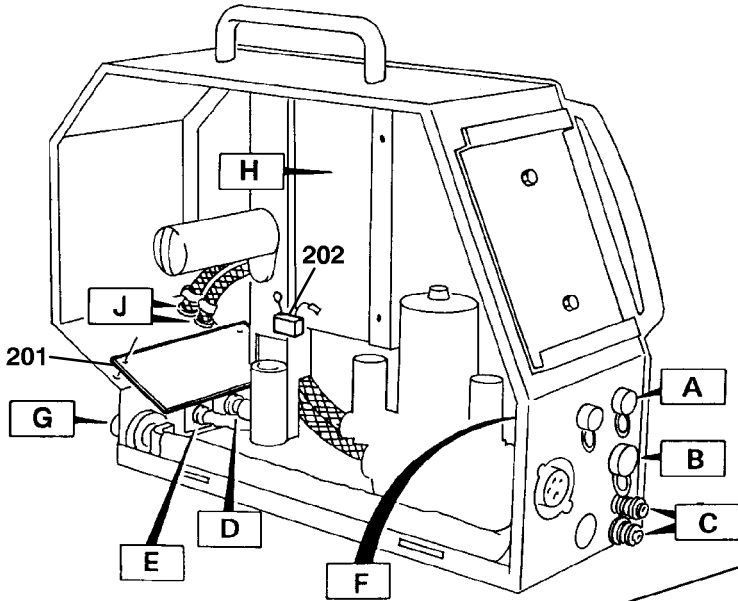


AH 0336

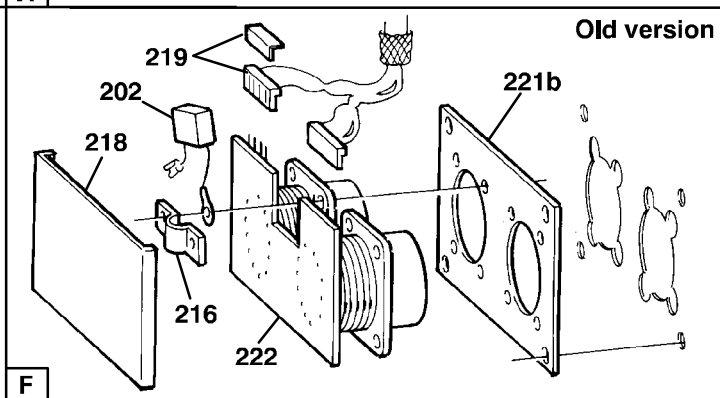
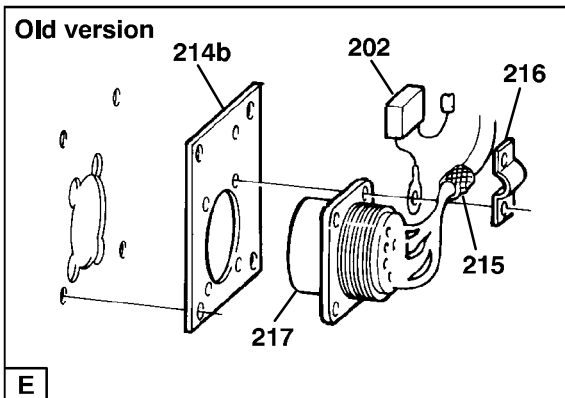
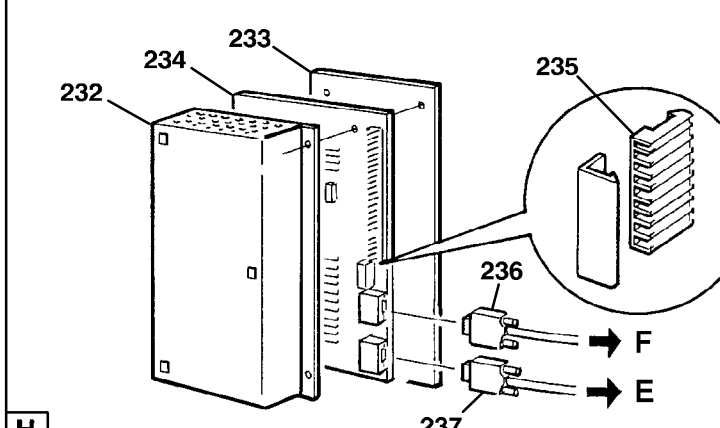
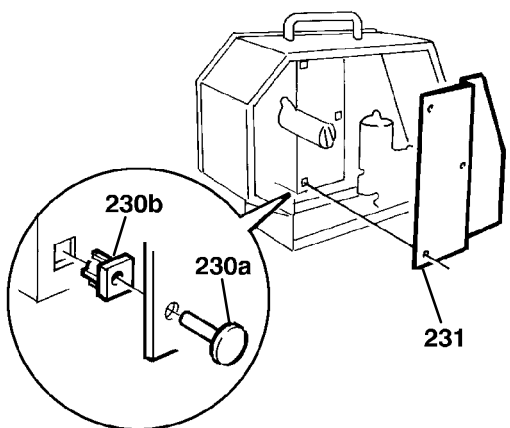
cmek3p04

C = component designation in the circuit diagram

Item	Qty	Ordering no.	Denomination	Notes	C
201	1	0456 684 001	Insulation		
202	3	0467 911 884	Capacitor	With cable lugs	C1, C2, C3
203	2	0366 285 001	Protection cap		
204	1	0368 544 005	Sleeve socket	23-pole.	XS15
	23	0323 945 003	Sleeve		
205	1	0455 516 001	Protection cap		
207	1	0367 149 001	Quick connector	Male, the M10 nut is not included.	
	1		Nut	M10	
	-	0365 803 002	Quick connector	Female	
208	1	0456 496 001	Hose	L=0.33m, D=9/5mm, reinforced PVC. To be ordered per metre	
209	1	0193 054 002	Solenoid valve	42 V	YV01
210	1	0456 496 001	Hose	L=0.22m, D=9/5mm, reinforced PVC. To be ordered per metre	
211	2	0457 799 001	Plate	Used from the first half year 1999	
212	1	0190 315 106	Hose	L=2x0.65 metre, D=16/9.5mm, reinforced PVC. To be ordered per metre.	
213a	1	0365 803 008	Quick connector	Female, red. To be used at the front side	
	1	0365 803 009	Quick connector	Female, blue. To be used at the front side	
	-	0365 803 001	Quick connector	Male, for connection at the front side	
213b	1	0365 803 011	Quick connector	Female, red. To be used at the rear side	
	1	0365 803 012	Quick connector	Female, blue. To be used at the rear side	
	-	0365 803 013	Quick connector	Male, for connection at the rear side	
214a	1	0457 800 001	Insulation	Used from the first half year 1999	
214b	1	0486 466 880	Insulation board	Used up to the first half year 1999	
215	1	0456 678 880	Cable	Item 237 connector XP02 is included	
216	2	0456 686 880	Clamp		
217	1	0368 543 003	Pin socket	12-pole	XP01
	11	0323 945 004	Pin		
218	1	0456 619 001	Cover		
219	1	0193 260 153	Connector	5-pole	XS11
	1	0193 260 183	Cover	For 5-pole connector	
	1	0193 260 063	Connector	4-pole	XS10
	1	0193 260 093	Cover	For 4-pole connector	
220	1	0456 677 880	Cable	XS10 and item 236 are included	
221a	1	0457 801 001	Insulation	Used from the first half year 1999	
221b	1	0486 449 880	Insulation board	Used up to the first half year 1999	
222	1	0486 388 880	Connection board		AP02
223	1	0160 609 881	Welding current connector		
224	1	0469 832 880	Busbar	With insulation	
225	1	0467 911 881	Capacitor	PME 271 0.1 µF 250 V, with cable lugs	C4
226	1		Screw	M10x20	
227	1		Spring washer	20/10.2x1.1	
228	1		Washer	24/13x2	
230a	3	0193 517 342	Screw	RX-PT 8-16x12	
230b	3	0194 019 001	Plastic spacer		
231	1	0455 519 001	Cover		
232	1	0455 518 001	Top box (box)		
233	1	0455 517 001	Bottom box (cover)		
234	1	0486 384 891	Circuit board		AP01
235	1	0193 260 150	Connector	2-pole	XS01
	3	0193 260 152	Connector	4-pole	XS05, XS06, XS08
	1	0193 260 154	Connector	6-pole	XS07
	1	0193 260 163	Connector	15-pole	XS04
236	1		Connector	Included in item 220	XP03
237	1		Connector	Included in item 215	XP02



AH 0478a cmek3p07

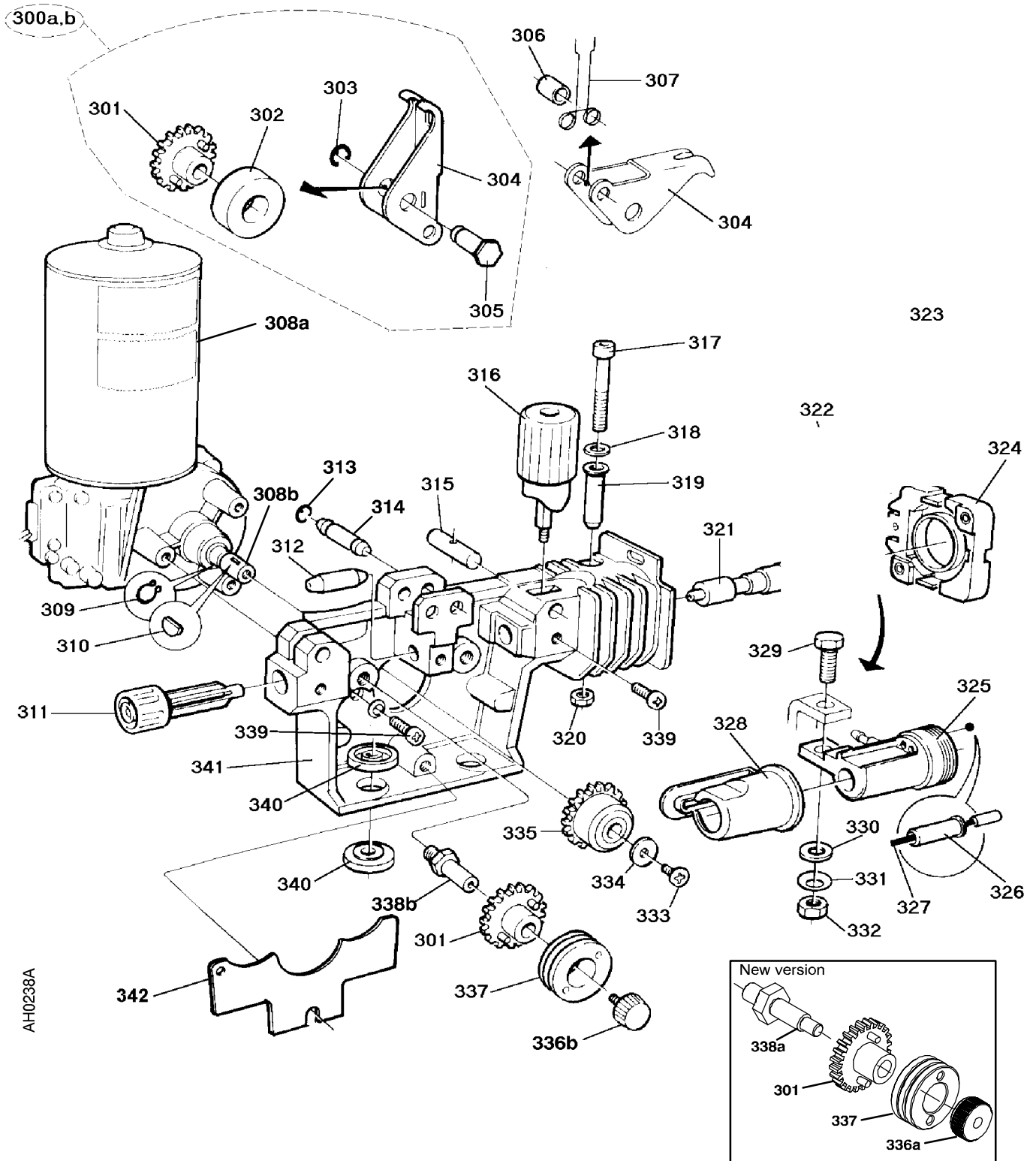


C = component designation in the circuit diagram

Item	Qty	Ordering no.	Denomination	Notes	C
	1	0469 834 883	Wire feed mechanism, complete	Contains items 300a, 300b, 306-328, 333-339, 341 and 342, items marked with (A) are not included	
300a	1	469 833 880	Pressure arm, left	Contains items 301, 302, 303, 304 and 305, one of each.	
300b	1	469 833 881	Pressure arm, right	Contains items 301, 302, 303, 304 and 305, one of each. The same items as 300a, but fitted differently.	
301	4	0455 053 880	Geared adapter (W)		
302	2	0369 728 001	Pressure roller (W)		
	2	0466 262 001	Pressure roller (W) (A)	Knurled	
303	2		Locking washer	Included in item 300a and 300b	
304	2		Holder	Included in item 300a and 300b	
305	2		Shaft	Included in item 300a and 300b	
306	2	0455 070 001	Sleeve		
307	1	0455 050 001	Spring		
308a	1	0455 077 001	Drive unit	With tachometer	M01, G01
-	1	0467 911 880	Capacitor	0,1µF 250V with cable lugs	C5
308b	1	0332 351 012	Shaft (with pinion)	Included in item 308a	
309	1	0215 701 007	Locking washer	Included in item 308a	
310	1	0191 496 114	Key	Included in item 308a	
311	1	0455 049 001	Inlet nozzle (W)		
312	1	0455 072 001	Adapter nozzle (W)		
	1	0456 615 001	Adapter nozzle (W) (A)	For aluminium	
313	4	0215 702 706	Locking washer		
314	2	0455 071 001	Shaft		
315	2	0367 528 001	Pin bolt		
316	2	0368 749 880	Pressure transducer		
317	1		Screw	M6x40	
318	1		Washer	∅ 12/6.4x1.5	
319	1	0455 048 001	Insulating tube		
320	1		Nut	M6	
321	1	0469 837 880	Outlet nozzle (W)		
	1	0469 837 881	Outlet nozzle (W) (A)	For aluminium	
324	1	0455 047 001	Front flange		
325	1	0455 044 001	Current junction		
326	2	0368 750 001	Insulating sleeve		
327	1	0469 964 882	Cable set		
328	1	0455 045 001	Insulating sleeve		
329	1		Screw	M8x25	
330	1		Washer	∅ 16/8.4x1.5	
331	1		Spring washer	∅ 16/8.2x0.9	
332	1		Nut	M8	
333	1		Screw	M4x12	
334	1		Washer	∅ 16/5x1	
335	1	0455 052 001	Drive gear (W)		
336a	2	0458 721 001	Nut	Valid from ser.no.918-114-xxxx	
336b	2	0455 075 001	Screw	Valid before ser.no.918-114-xxxx When ordering: items 336a and 338a are delivered.	
337	2	0369 557 001	Feed roller (W) (A)	(V) For ∅ 0.6-0.8mm Fe, Ss and cored wire	
	2	0369 557 002	Feed roller (W) (A)	(V) For ∅ 0.8-1.0mm Fe, Ss and cored wire	
	2	0369 557 003	Feed roller (W)	(V) For ∅ 1.0-1.2mm Fe, Ss and cored wire	
	2	0369 557 007	Feed roller (W) (A)	(V) For ∅ 1.2-1.6mm Fe, Ss and cored wire	
	2	0369 557 010	Feed roller (W) (A)	(V) For ∅ 1.2mm x2 Fe, Ss and cored wire	
	2	0369 557 013	Feed roller (W) (A)	(V) For ∅ 1.4-1.6mm Fe, Ss and cored wire	
	2	0369 557 004	Feed roller (W) (A)	(K) (V) For ∅ 1.0-1.2 / 1.4-1.6mm cored wire	
	2	0369 557 006	Feed roller (W) (A)	(U) For ∅ 1.0-1.2mm Al wire	
	2	0369 557 008	Feed roller (W) (A)	(U) For ∅ 1.6 mm Al wire	
	2	0369 557 011	Feed roller (W) (A)	(U) For ∅ 0.8-0.9mm Al wire	

Item	Qty	Ordering no.	Denomination	Notes	C
338a	2	0458 722 001	Shaft	Valid from ser.no.918-114-xxxx	
338b	2	0455 068 001	Shaft	Valid before ser.no.918-114-xxxx When ordering: items 336a and 338a are delivered.	
339	7		Screw	M6x16	
340	4	0153 043 002	Insulating washer		
341	1	0455 046 001	Gear housing		
342	1	0469 838 001	Protection plate		

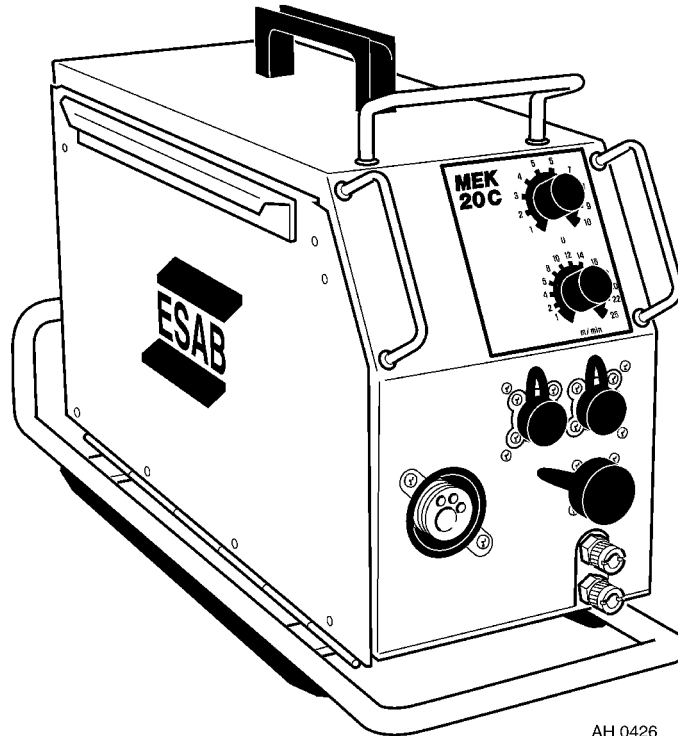
(W) = wear part (A) = accessory (K) = knurled rollers (V) = V-groove (U) = U-groove



AH0238A

cm ek0p03

Spare parts list



AH 0426

Valid for serial no. 710-xxx-xxxx to 309-xxx-xxxx

Ordering number

0456 980 880 MEK 20C without water connection

0456 980 881 MEK 20C with water connection

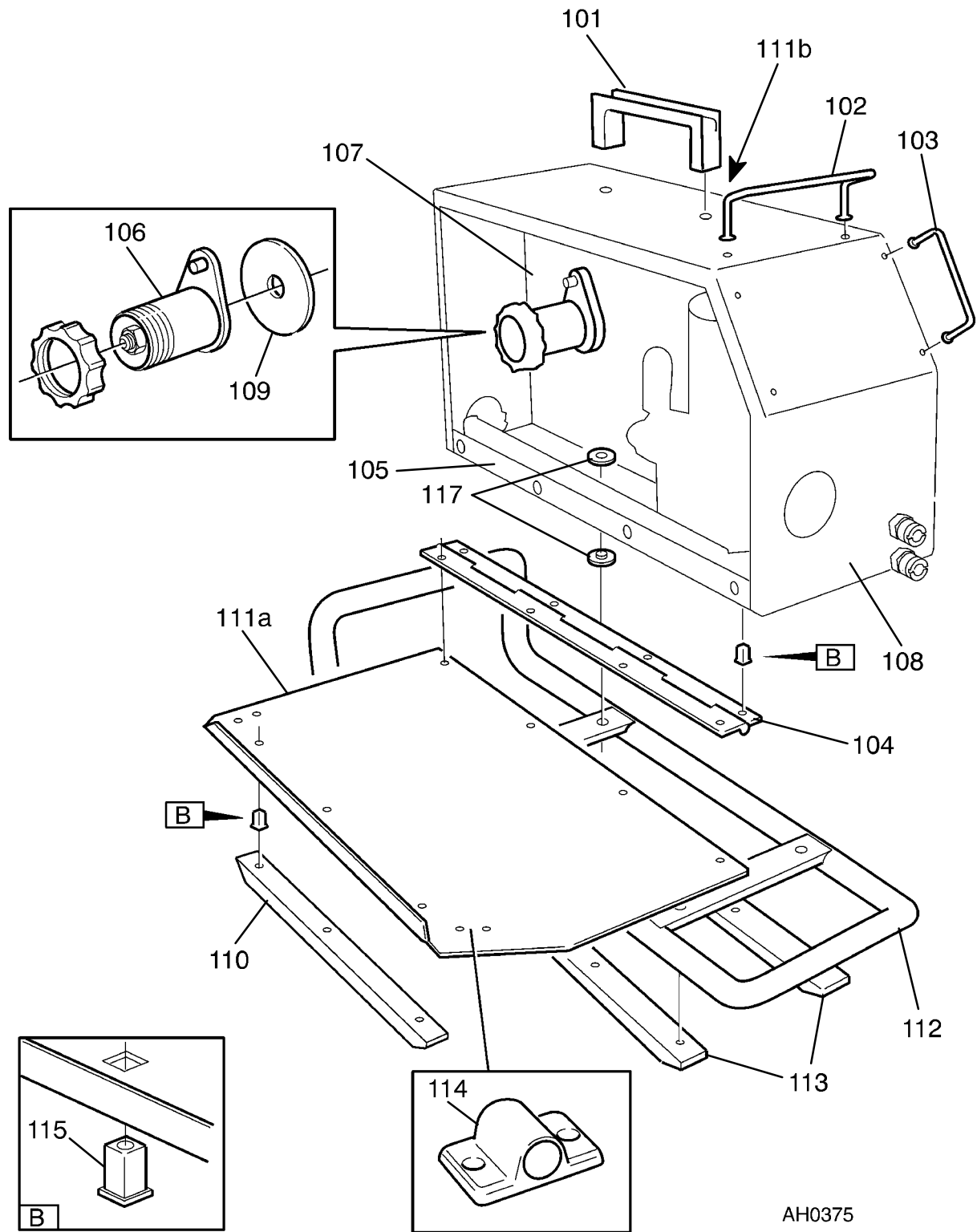
Spare parts are to be ordered through the nearest ESAB agency. Kindly indicate type of unit, serial number, denominations and ordering numbers according to the spare parts list.

Maintenance and repair work should be performed by an experienced person, and electrical work only by a trained electrician. Use only recommended spare parts.

Rights reserved to alter specifications without notice.

MEK 20C

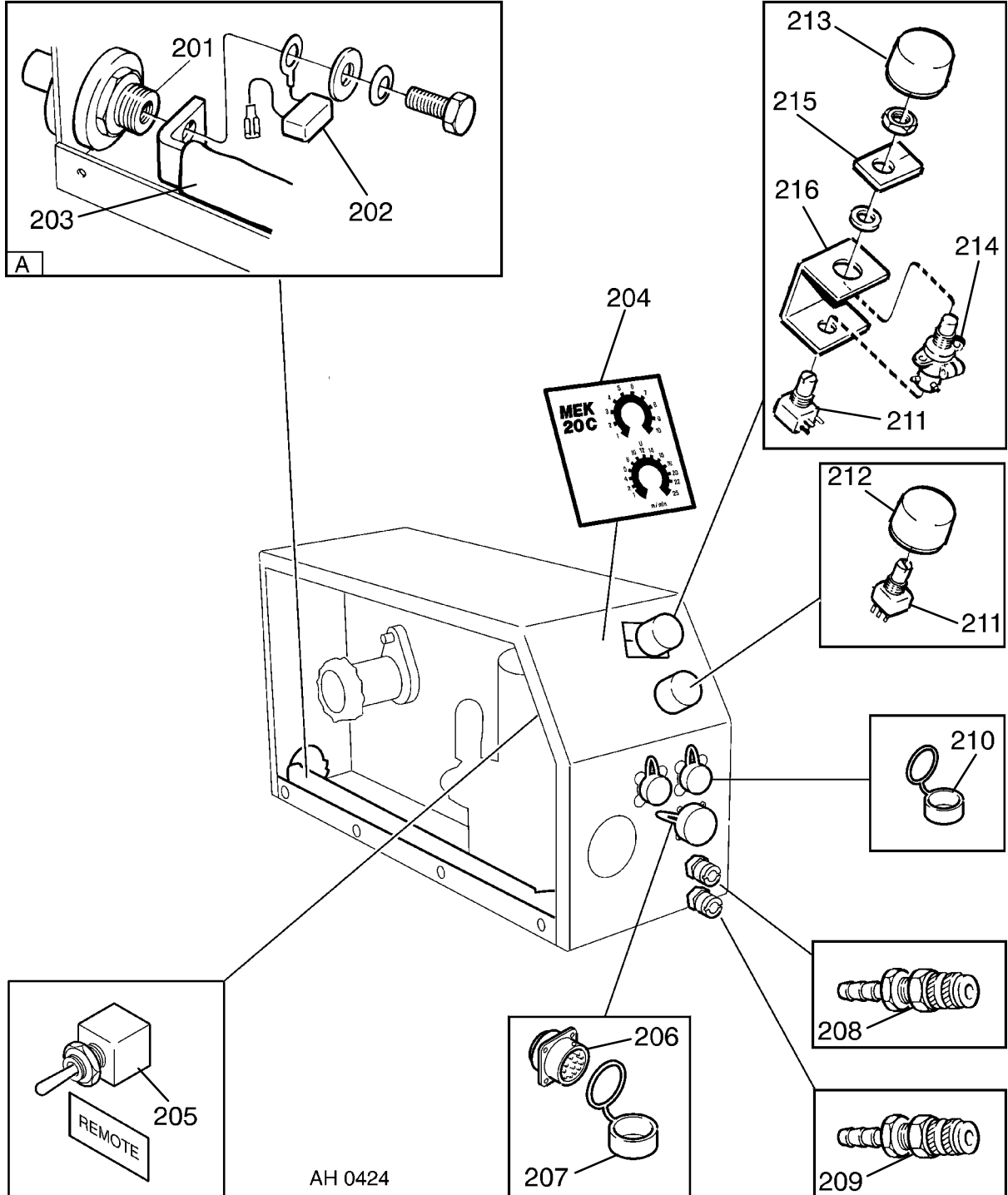
Item	Qty	Ordering No.	Denomination	Notes
101	1	0156 388 001	Handle	
102	1	0457 135 001	Handle	
103	2	0457 120 001	Handle	
104	1	0366 561 001	Hinge	
105	1	0456 971 001	Bottom plate	New design from the first half year 1999. If item 403b is fitted to the machine it must be replaced by item 403a when the bottom plate is replaced.
106	1	0469 474 003	Brake hub	
107	1	0456 973 001	Intermediate plate	
108	1	0456 972 001	Panel plate	New design from the first half year 1999. If item 407b is fitted to the machine it must be replaced by item 407a when the panel plate is replaced.
109	2	0457 338 001	Washer	
110	2	0457 263 001	Profile	
111a	1	0456 975 001	Cover left	
111b	1	0456 974 001	Cover right	
112	1	0457 325 880	Protection frame	
113	2	0469 223 001	Slide bar	
114	2	0367 902 001	Locking device	
115	10	0194 019 003	Spacer	
117	8	0153 043 002	Bushing	Insulated



C = component designation in the circuit diagram

Item	Qty	Ordering No.	Denomination	Notes	C
201	1	0160 609 881	Welding currenr terminal		
202	1	0467 911 881	Capacitor	0.1μF, 250V	C4
203	1	0469 832 880	Current bar	Insulated	
204	1	0456 979 001	Sign plate		
205	1	0147 866 001	Toggle switch		SA1
206	1	0368 544 005	Socket, Burndy	23-pole	XS15
207	1	0455 516 001	Cap		
208	1	0365 803 008	Quick connector	Red, female	
209	1	0365 803 009	Quick connector	Blue, female	
210	2	0366 285 001	Cap		
211	2	0191 870 512	Potentiometer	2.5kΩ For voltage reference and wire feed reference	
212	1	0321 475 887	Knob		
213	1	0321 475 889	Knob		
214	1	0317 942 001	Planetary gear		
215	1	0366 212 001	Arrow		
216	1	0318 419 002	Support bracket		

MEK 20C



AH 0424

Valid for ser. no. 726-xxx-xxxx to 918-xxx-xxxx

C = component designation in the circuit diagram

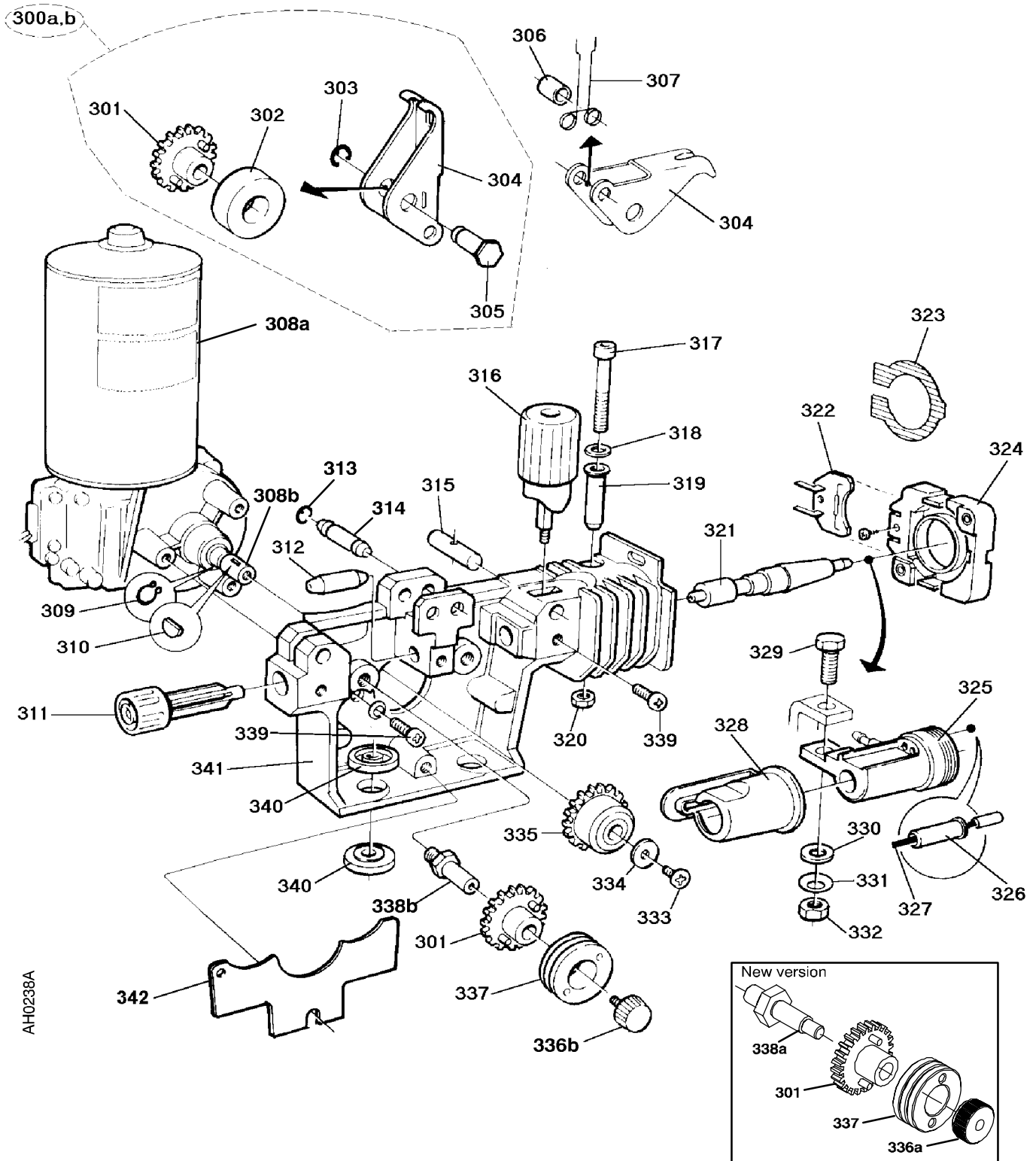
Item	Qty	Ordering No.	Denomination	Notes	C
	1	0469 834 883	Wire feed mechanism, complete	Contains items 300a, 300b, 306-328, 333-339, 341 and 342, items marked with (A) are not included	
300a	1	469 833 880	Pressure arm, left	Contains items 301, 302, 303, 304 and 305, one of each.	
300b	1	469 833 881	Pressure arm, right	Contains items 301, 302, 303, 304 and 305, one of each. The same items as 300a, but fitted differently.	
301	4	0455 053 880	Geared adapter (W)		
302	2	0369 728 001	Pressure roller (W)		
	2	0466 262 001	Pressure roller (W) (A)	Knurled	
303	2		Locking washer	Included in item 300a and 300b	
304	2		Holder	Included in item 300a and 300b	
305	2		Shaft	Included in item 300a and 300b	
306	2	0455 070 001	Sleeve		
307	1	0455 050 001	Spring		
308a	1	0455 077 001	Drive unit	With tachometer	M01, G01
-	1	0467 911 880	Capacitor	0,1µF 250V with cable lugs	C5
308b	1	0332 351 012	Shaft (with pinion)	Included in item 308a	
309	1	0215 701 007	Locking washer	Included in item 308a	
310	1	0191 496 114	Key	Included in item 308a	
311	1	0455 049 001	Inlet nozzle (W)		
312	1	0455 072 001	Adapter nozzle (W)		
	1	0456 615 001	Adapter nozzle (W) (A)	For aluminium	
313	4	0215 702 706	Locking washer		
314	2	0455 071 001	Shaft		
315	2	0367 528 001	Pin bolt		
316	2	0368 749 880	Pressure transducer		
317	1		Screw	M6x40	
318	1		Washer	∅ 12/6.4x1.5	
319	1	0455 048 001	Insulating tube		
320	1		Nut	M6	
321	1	0469 837 880	Outlet nozzle (W)		
	1	0469 837 881	Outlet nozzle (W) (A)	For aluminium	
324	1	0455 047 001	Front flange		
325	1	0455 044 001	Current junction		
326	2	0368 750 001	Insulating sleeve		
327	1	0469 964 882	Cable set		
328	1	0455 045 001	Insulating sleeve		
329	1		Screw	M8x25	
330	1		Washer	∅ 16/8.4x1.5	
331	1		Spring washer	∅ 16/8.2x0.9	
332	1		Nut	M8	
333	1		Screw	M4x12	
334	1		Washer	∅ 16/5x1	
335	1	0455 052 001	Drive gear (W)		
336a	2	0458 721 001	Nut	Valid from ser.no.918-114-xxxx	
336b	2	0455 075 001	Screw	Valid before ser.no.918-114-xxxx When ordering: items 336a and 338a are delivered.	
337	2	0369 557 001	Feed roller (W) (A)	(V) For ∅ 0.6-0.8mm Fe, Ss and cored wire	
	2	0369 557 002	Feed roller (W) (A)	(V) For ∅ 0.8-1.0mm Fe, Ss and cored wire	
	2	0369 557 003	Feed roller (W)	(V) For ∅ 1.0-1.2mm Fe, Ss and cored wire	
	2	0369 557 007	Feed roller (W) (A)	(V) For ∅ 1.2-1.6mm Fe, Ss and cored wire	
	2	0369 557 010	Feed roller (W) (A)	(V) For ∅ 1.2mm x2 Fe, Ss and cored wire	
	2	0369 557 013	Feed roller (W) (A)	(V) For ∅ 1.4-1.6mm Fe, Ss and cored wire	
	2	0369 557 004	Feed roller (W) (A)	(K) (V) For ∅ 1.0-1.2 / 1.4-1.6mm cored wire	
	2	0369 557 006	Feed roller (W) (A)	(U) For ∅ 1.0-1.2mm Al wire	
	2	0369 557 008	Feed roller (W) (A)	(U) For ∅ 1.6 mm Al wire	

MEK 20C

Item	Qty	Ordering No.	Denomination	Notes	C
	2	0369 557 011	Feed roller (W) (A)	(U) For \varnothing 0.8-0.9mm Al wire Valid from ser.no.918-114-xxxx	
338a	2	0458 722 001	Shaft		
338b	2	0455 068 001	Shaft	Valid before ser.no.918-114-xxxx When ordering: items 336a and 338a are delivered.	
339	7		Screw	M6x16	
340	4	0153 043 002	Insulating washer		
341	1	0455 046 001	Gear housing		
342	1	0469 838 001	Protection plate		

(W) = wear part (A) = accessory (K) = knurled rollers (V) = V-groove (U) = U-groove

Valid for ser. no. 726-xxx-xxxx to 918-xxx-xxxx



AH0238A

cm ek0p03

Valid from ser. no. 309-xxx-xxxx

C = component designation in the circuit diagram

(W) = wear part (V) = V-groove

Item	Qty	Ordering no.	Denomination	Notes	C
		0459 000 885	Wire feed mechanism Type MEM 30	Includes items HH1 - HH21 and HH23 - HH41	
HH1	1	0455 077 001	Drive unit	With tachometer	13M1
HH2	1	0332 351 012	Shaft (with pinion)	Included in item HH1	
HH3	1	0191 496 114	Key	Included in item HH1	
HH4	1	0215 701 007	Locking washer	Included in item HH1	
HH5	1	0455 046 003	Gear housing		
HH6	1		Screw	M6x40	
HH7	2		Washer	Ø 12/6.4x1.5	
HH8	1	0455 048 001	Insulating tube		
HH9	1		Nut	M6	
HH10	1	0467 911 880	Capacitor	0.1 µF 250V with cable lugs	13C5
HH11	1		Flat pin	6.3x0.8 M6	
HH12	4		Screw	M6x12	
HH13	1	0455 045 001	Insulating sleeve		
HH14	1	0455 044 001	Current connection		
HH15	1		Screw	M8x25	
HH16	1		Spring washer	Ø 16/8.2x0.9	
HH17	1		Washer	Ø 16/8.4x1.5	
HH18	1		Nut	M6	
HH19	1	0459 229 880	Cable set	Includes sleeves and insulating sleeves.	
HH20	1	0455 047 001	Front flange		
HH21	1	0469 837 880	Outlet nozzle (W)	Ø 2mm for 0.6-1.6mm Fe, Ss and cored wire	
HH22	4	0153 043 002	Insulating washer		
HH23	1	0469 838 001	Cover		
HH24	3		Screw	M6x12	
HH25	1	0455 052 001	Drive gear (W)		
HH26	1		Washer	Ø 16/5x1	
HH27	1		Screw	M4x12	
HH28	2		Axle feed roll	See item HH102	
HH29	4	0455 053 880	Gear adapter (W)		
HH30	4	0459 052 003	Feed/pressure roller (W)	(V) For Ø 1.0 & 1.2mm Fe, Ss, Al and cored wire	
HH31	2		Locking nut	See item HH102	
HH32	3	0458 689 001	Screw for nozzle		
HH33	1		Pin bolt	See item HH101	
HH34	1	0455 049 001	Inlet nozzle (W)	Ø 3mm for 0.6-1.6mm Fe, Ss, Al and cored wire	
HH35	1		Pressure device	See item HH101	
HH36	1	0455 072 002	Intermediate nozzle (W)	For Fe, Ss and cored wire	
HH37	1		Pressure arm	See item HH100	
HH38	1		Locking washer	See item HH100	
HH39	1		Torsion spring	See item HH100	
HH40	1		Shaft	See item HH100	
HH41	2	0458 999 001	Shaft		

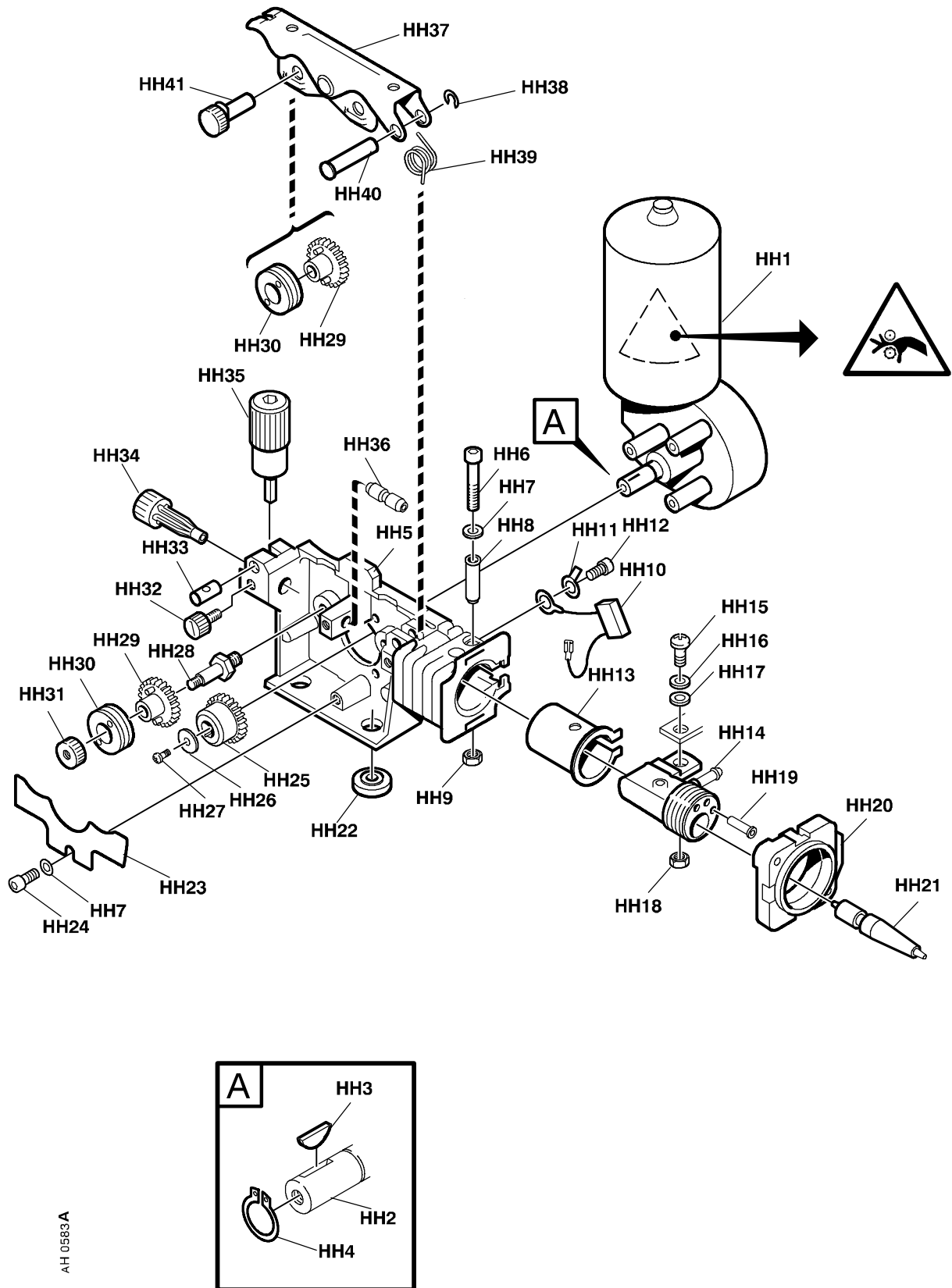
For more wear parts see page 50.

SPARE PARTS SETS

Item	Ordering no.	Denomination	Notes
HH100	0459 227 880	Pressure arm set	Includes items HH37, HH38, HH39 and HH 40
HH101	0459 228 880	Pressure device set	Includes items HH33, HH35 and one screw M3x12.
HH102	0458 722 880	Axle and nut	Includes items HH28 and HH31.

MEK 20C

Valid from ser. no. 309-xxx-xxxx



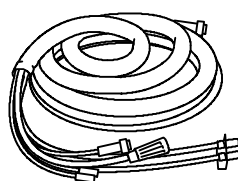
AH 0583A

C = component designation in the circuit diagram

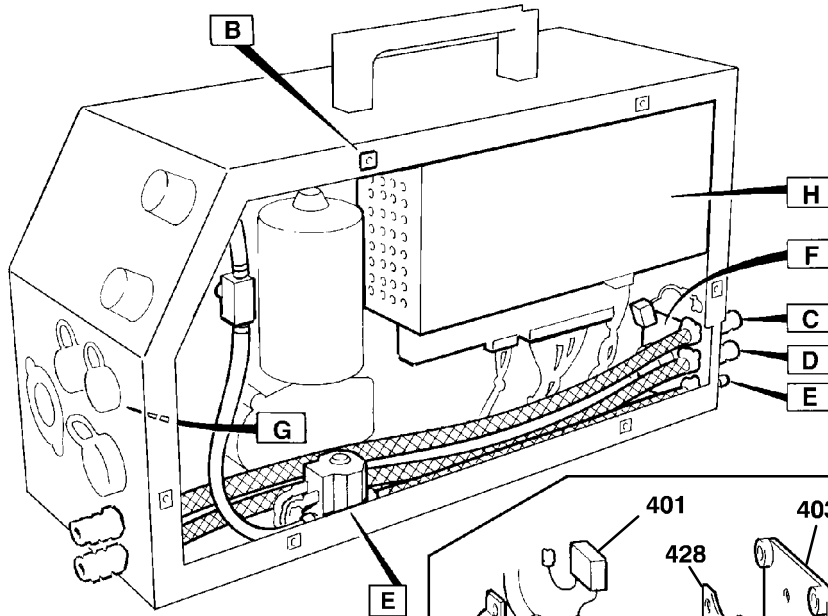
Item	Qty	Ordering no.	Denomination	Notes	C
401	3	0467 911 884	Capacitor	0.1µF 250V	C1, C2, C3
402	1	0368 543 003	Pin socket	12-pole	XP01
	11	0323 945 004	Pin		
403a	1	0457 800 001	Insulation	Used from the first half year 1999	
403b	1	0486 466 880	Insulation board	Used up to the first half year 1999	
404	1	0366 285 001	Cap		
405	2	0456 686 880	Clamp		
406	1	0456 678 882	Cable	Connector XP02 is included	
407a	1	0457 801 001	Insulation	Used from the first half year 1999	
407b	1	0486 449 880	Insulation board	Used up to the first half year 1999	
408	1	0456 677 882	Cable	Connectors XS10 and XP03 are included	
409	1	0486 388 880	Connection board		AP02
410	1	0456 619 001	Cover		
411	2	0192 713 001	Hose nipple		
412	1	0194 029 101	Valve		
413	3	0456 496 001	Hose	L=200+280+320mm, D=9/5mm, reinforced PVC. To be ordered per metre	
414	1	0193 054 002	Solenoid valve		
415	6	0193 761 002	Hose clip		
416	1	0367 149 001	Quick connector	Male (for gas), the M10 nut is not included	
	1		Nut	M10	
	-	0365 803 002	Quick connector	Female (for gas)	
417	1	0365 803 011	Quick connector	Female, red	
418	1	0365 803 012	Quick connector	Female, blue	
419	2	0190 315 106	Hose	L=2x480mm, D=16/9.5mm, reinforced PVC. To be ordered per metre	
420	8	0192 562 106	Cage nut	M6	
421	2	0193 260 063	Connector	4-pole	XS10, XS13
	1	0193 260 150	Connector	2-pole	XS01
	3	0193 260 152	Connector	4-pole	XS05, XS06, XS08
	1	0193 260 153	Connector	5-pole	XS11
	1	0193 260 154	Connector	6-pole	XS07
	1	0193 260 163	Connector	15-pole	XS04
422	2	0192 927 101	Spacer		
424	1	0486 384 891	Circuit board		AP01
425	4	0194 019 005	Spacer		
426	1	0456 790 001	Bottom box		
427	1	0456 791 001	Top box		
428	2	0457 799 001	Plate	Used from the first half year 1999	
429	1		Connector	Included in item 408	XP03
430	1		Connector	Included in item 406	XP02

Connection sets for the connection between the power source and the feed unit

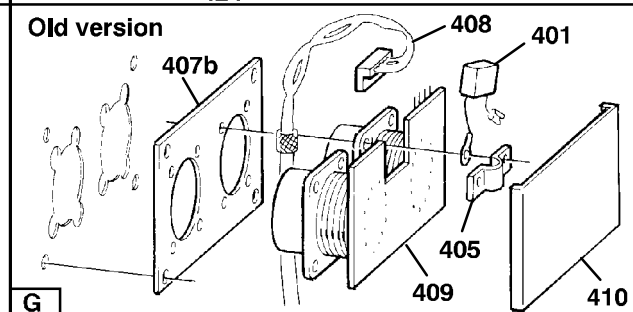
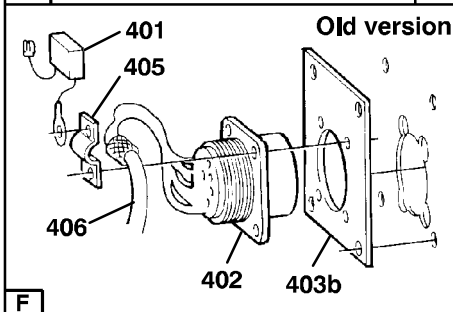
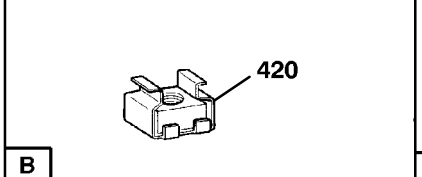
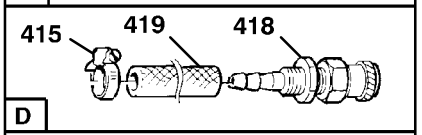
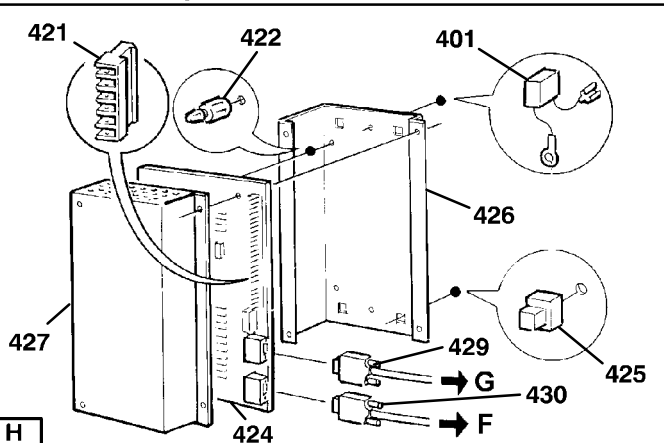
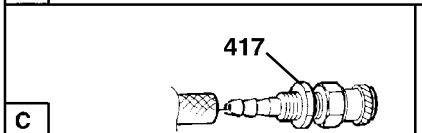
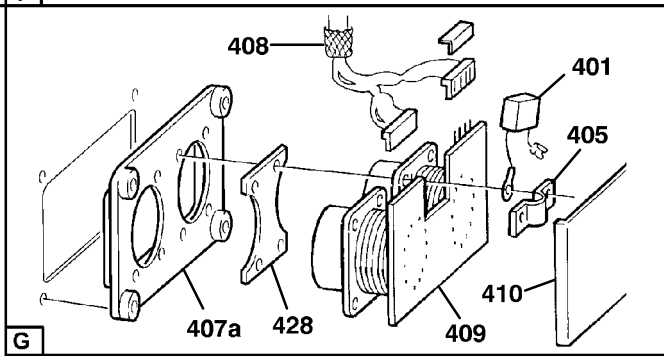
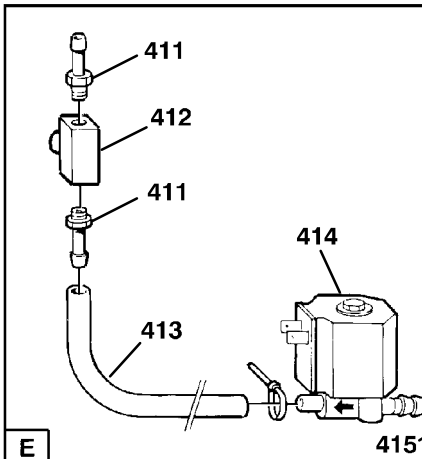
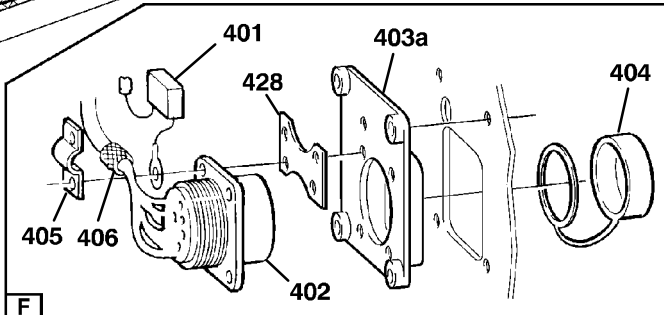
Length metre	Ordering no. without water	Ordering no. without water
1.7	0456 528 880	0456 528 885
8	0456 528 881	0456 528 886
16	0456 528 882	0456 528 887
25	0456 528 883	0456 528 888
35	0456 528 884	0456 528 889



MEK 20C



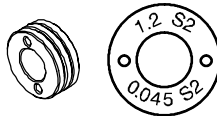
AH 0423a cmek3p09



Wear components

Item A

Feed and pressure rollers



Ordering no.	Wire dimensions	Wire type	Groove type	Roller markings
0459 052 001	Ø 0.6 & 0.8 mm	Fe, Ss & cored	V	0.6 S2 & 0.8 S2
0459 052 003	Ø 0.9/1.0 & 1.2 mm	Fe, Ss & cored	V	1.0 S2 & 1.2 S2
0459 052 013	Ø 1.4 & 1.6 mm	Fe, Ss & cored	V	1.4 S2 & 1.6 S2
0458 825 001	Ø 0.9/1.0 & 1.2 mm	Cored	V-knurled	1.0 R2 & 1.2 R2
0458 825 002	Ø 1.2 & 1.4 mm	Cored	V-knurled	1.2 R2 & 1.4 R2
0458 825 003	Ø 1.6 & 2.0 mm	Cored	V-knurled	1.6 R2 & 2.0 R2
0458 824 001	Ø 0.8 & 0.9/1.0 mm	Al	U	0.8 A2 & 1.0 A2
0458 824 003	Ø 1.2 & 1.6 mm	Al	U	1.2 A2 & 1.6 A2

Use only pressure and feed rollers marked **A2**, **R2** or **S2**.

The rollers are marked with wire dimension in mm, some are also marked with inch.

Item B

Item C

Item D

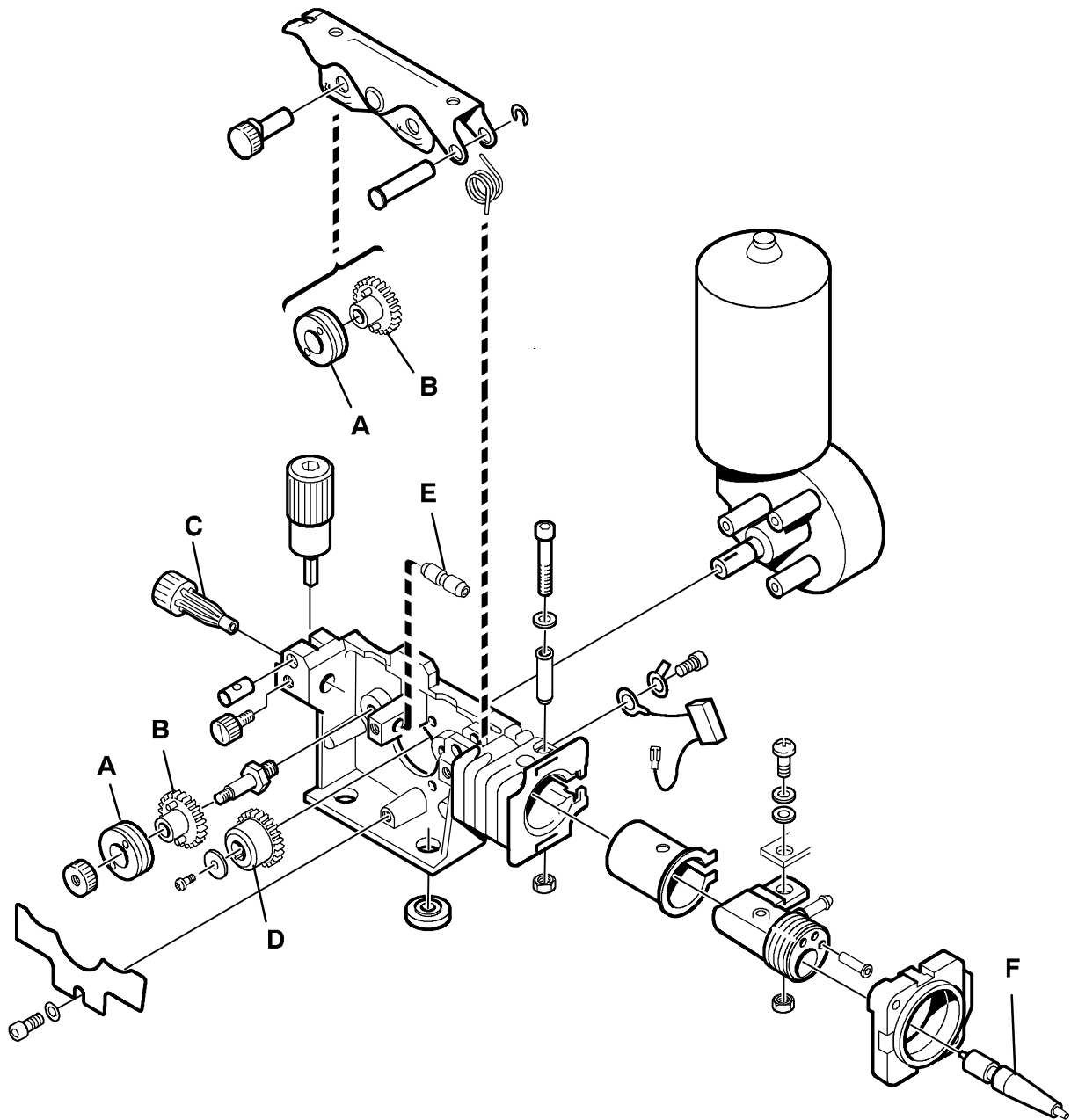
Gear adapter		Inlet nozzle		Drive gear	
Ordering no.		Ordering no.		Ordering no.	
0455 053 880		0455 049 880		0455 052 001	

Item E

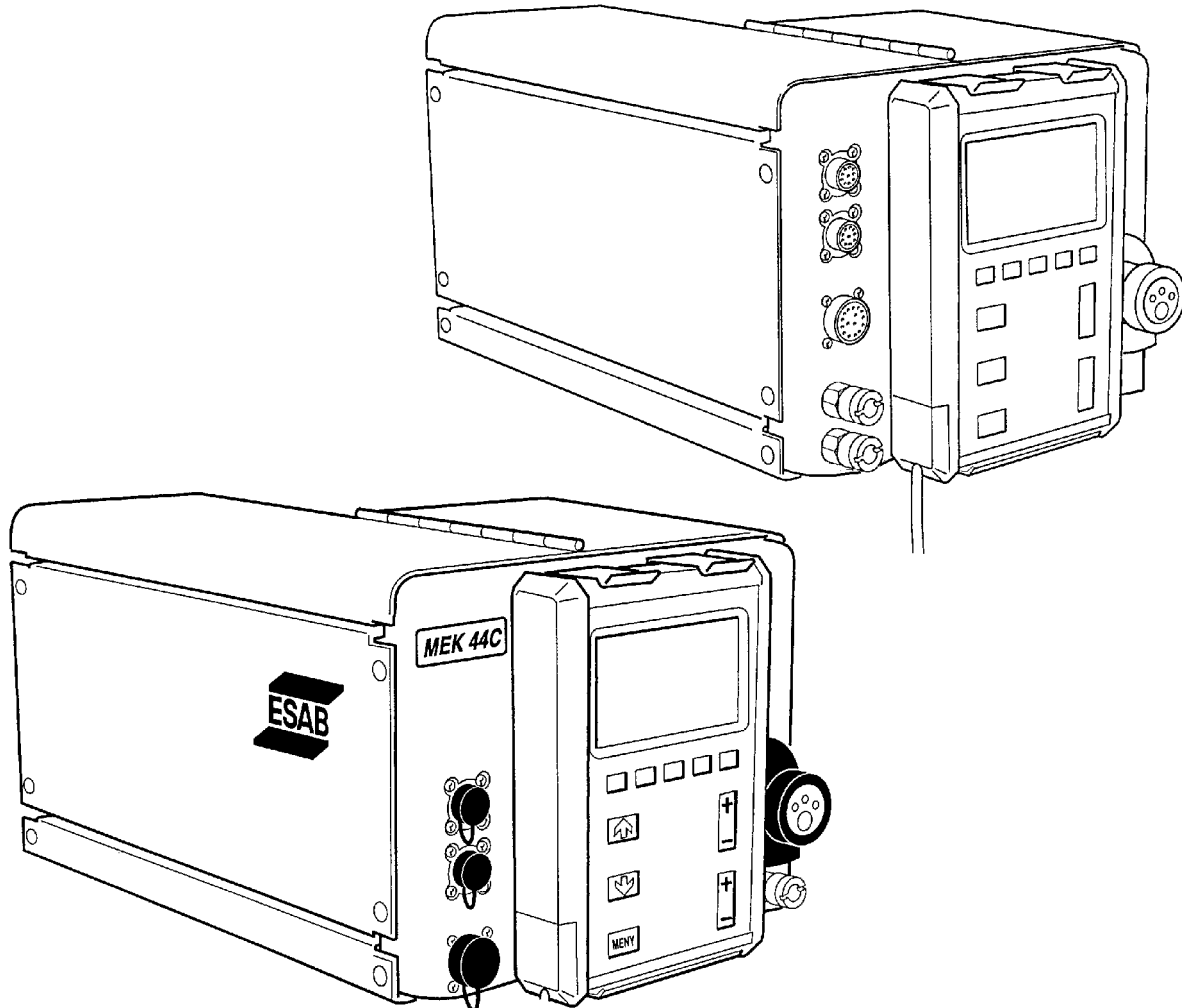
Intermediate nozzles		
Ordering no.	Wire type	
0455 072 002	Fe, Ss & cored	
0456 615 001	Al	

Item F

Outlet nozzles			
Ordering no.	Dimensions	Wire type	
0469 837 880	Ø 2.0 mm steel for 0.6–1.6 mm wire	Fe, Ss & cored	
0469 837 881	Ø 2.0 mm plastic for 0.8–1.6 mm wire	Al	



Spare parts list



Valid for serial no. 645-xxx-xxxx to serial no. 918-xxx-xxxx

Ordering numbers for MEK 44C

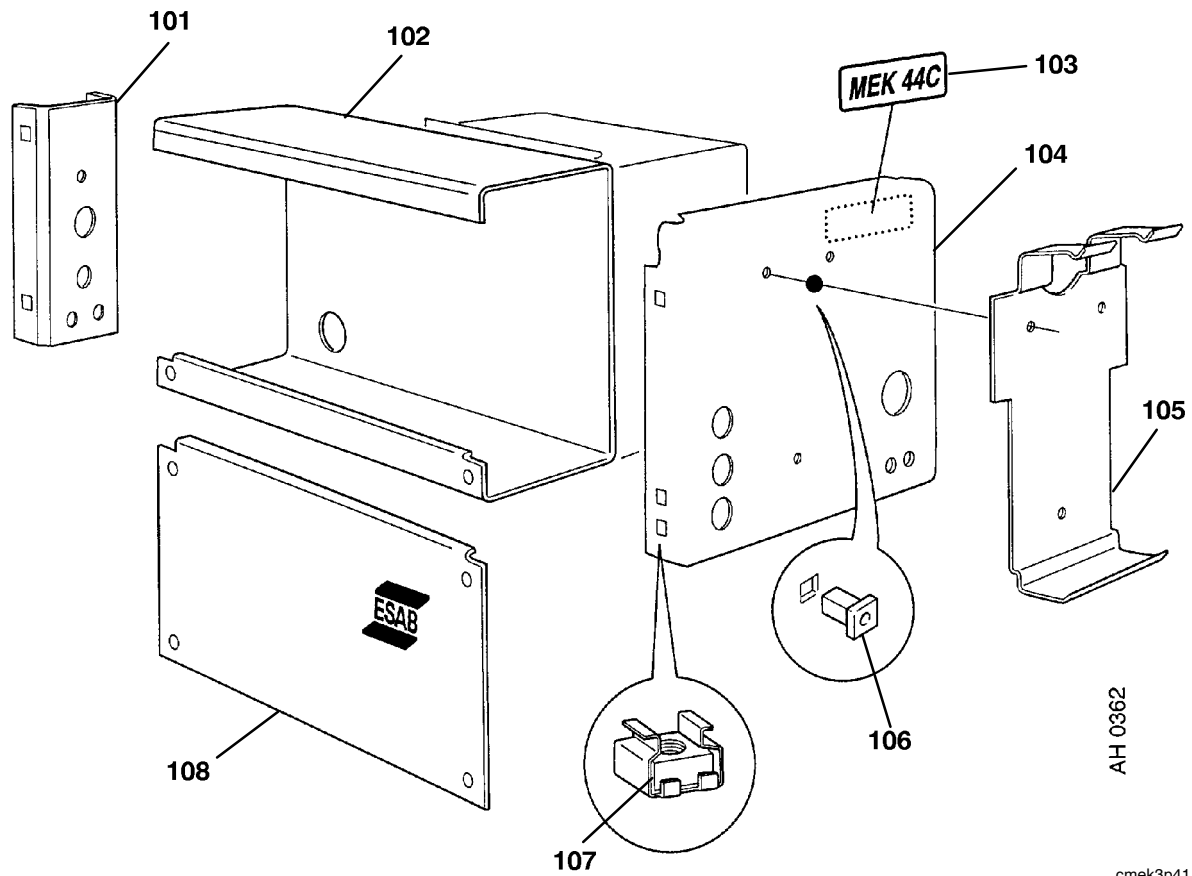
0456 800 880 MEK 44C without water connection

0456 800 881 MEK 44C with water connection

Spare parts are to be ordered through the nearest ESAB agency as per the list on the back of the cover. Kindly indicate type of unit, serial number, denominations and ordering numbers according to the spare parts list.

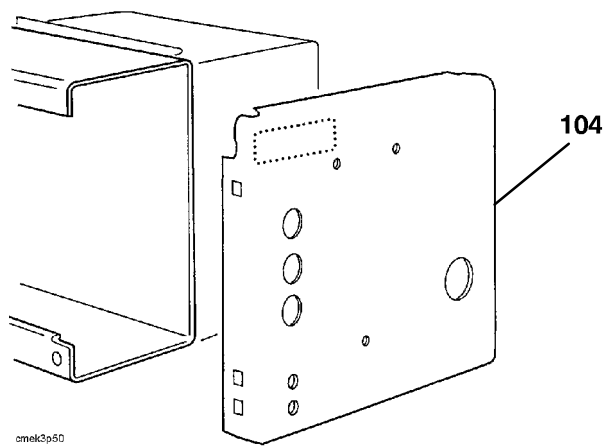
Maintenance and repair work should be performed by an experienced person, and electrical work only by a trained electrician. Use only recommended spare parts.

Item no.	Qty	Ordering no.	Denomination	Notes
101	1	0456 732 001	Spacer plate	New design from the first half year 1999. If item 214b is fitted to the machine it must be replaced by item 214a when the spacer plate is replaced.
102	1	0456 808 001	Case	
103	1	0456 793 001	Sticker	
104	1	0456 731 001	Front plate	New design from machine number 827 842 0363 The water connections are moved to the left side Changed design from the first half year 1999. If item 221b is fitted to the machine it must be replaced by item 221a when the front plate is replaced.
105	1	0456 618 001	Attachment	For control box
106	3	0194 019 003	Spacer	
107	11	0192 562 106	Cage nut	M6
108	1	0156 640 001	Lid	



AH 0362

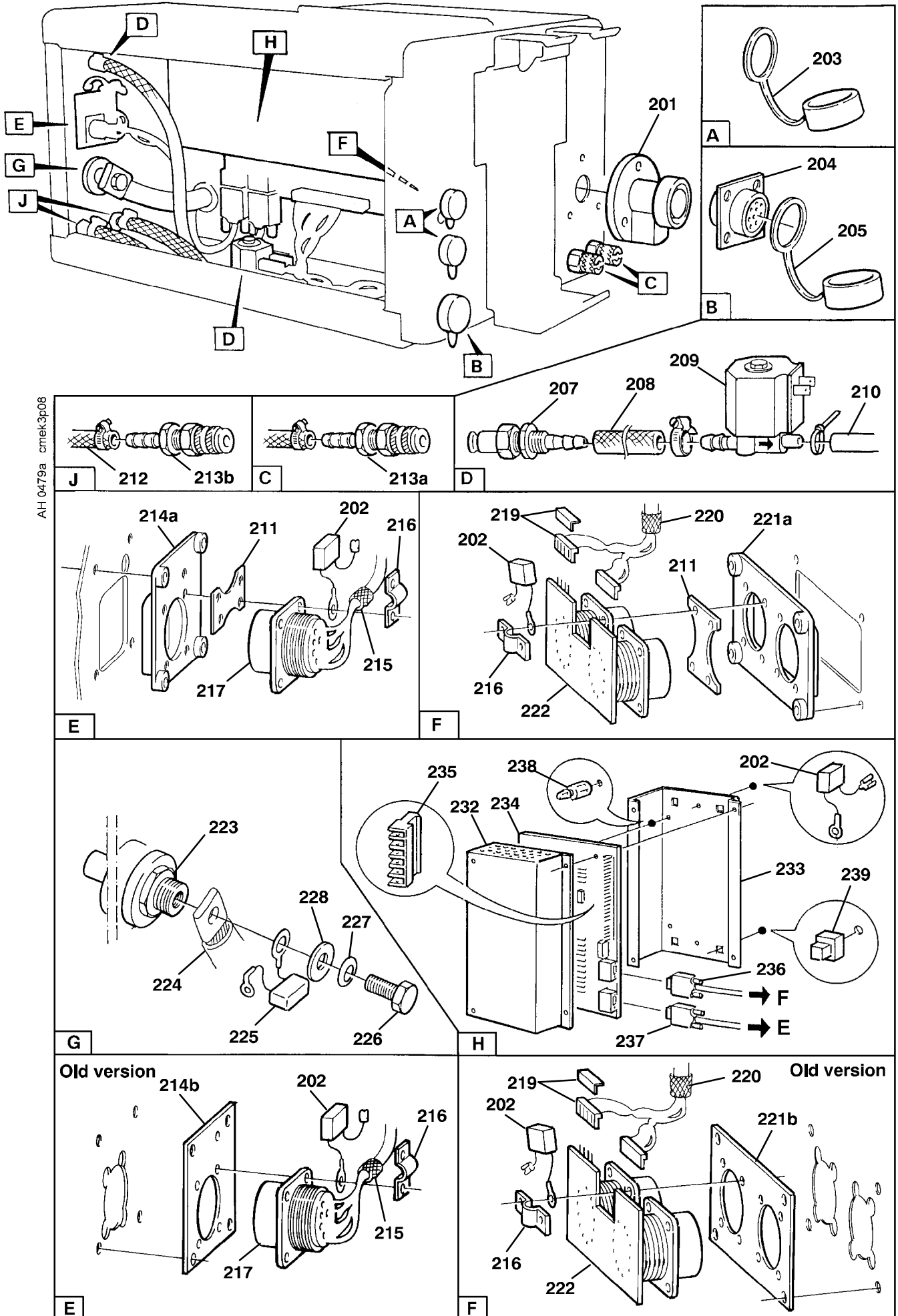
cmek3p41



cmek3p50

C = component designation in the circuit diagram

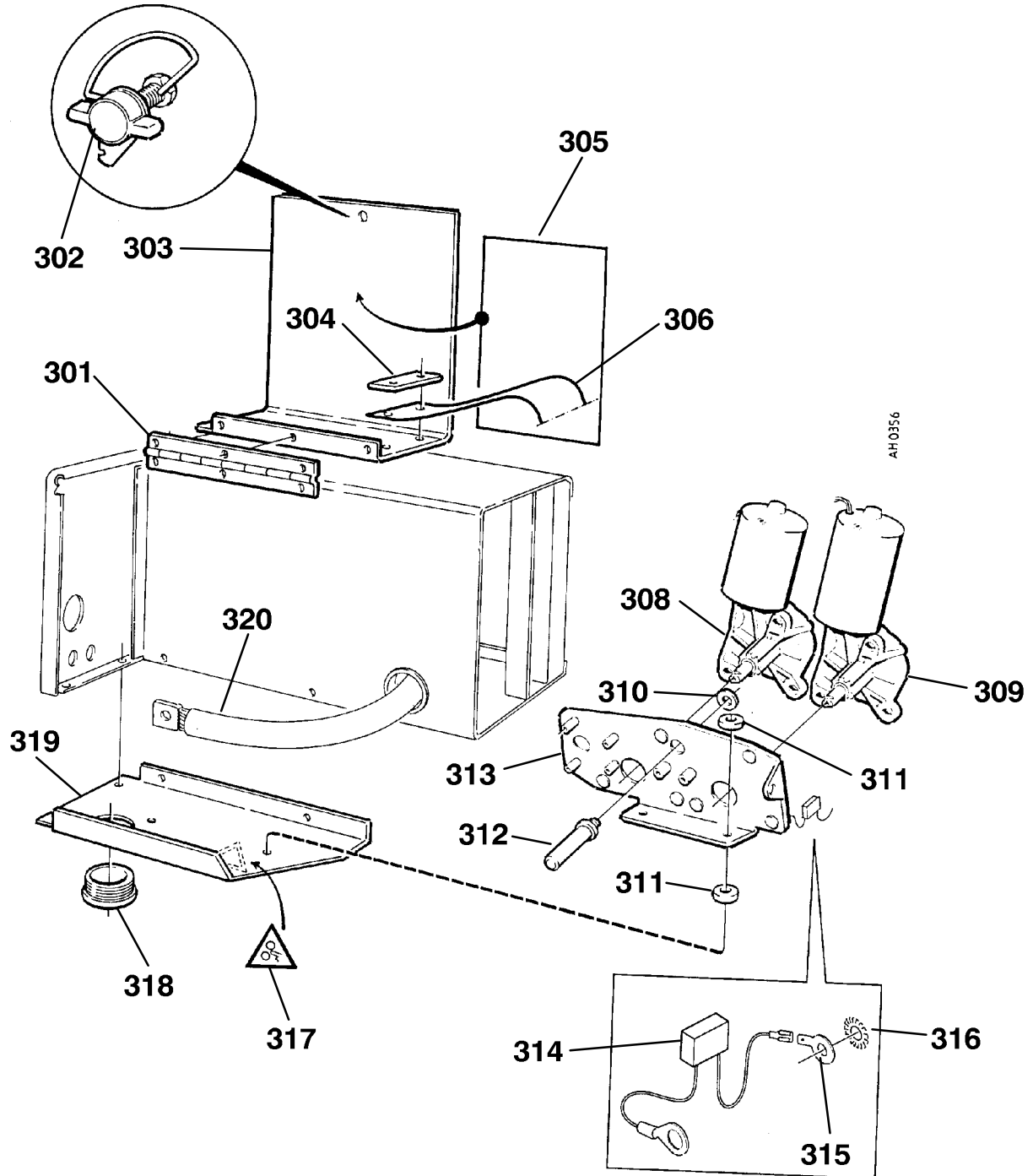
Item	Qty	Ordering no.	Denomination	Notes	C
201	1	0349 501 001	Euro adapter, female	Complete, including adapter and hood	
-	1	0333 041 001	Central connection adapter	Included in item 201 (made of brass)	
-	1	0333 041 002	Adapter hood, insulated	Included in item 201	
202	3	0467 911 884	Capacitor	0.1µF with cable lugs	C1, C2, C3
203	2	0366 285 001	Protection cap		
204	1	0368 544 005	Sleeve socket	23-pole.	XS15
	23	0323 945 003	Sleeve		
205	1	0455 516 001	Protection cap		
207	1	0367 149 001	Quick connector	Male, the M10 nut is not included	
	1		Nut	M10	
	-	0365 803 002	Quick connector	Female	
208	1	0456 496 001	Hose	L=0.33metre, D=9/5mm, reinforced PVC. To be ordered per metre.	
209	1	0193 054 002	Solenoid valve	42 V	YV01
210	1	0456 496 001	Hose	L=0.22metre, D=9/5mm, reinforced PVC. To be ordered per metre	
211	2	0457 799 001	Plate	Used from the first half year 1999	
212	1	0190 315 106	Hose	L=2x0.65metre, D=16/9.5mm, reinforced PVC. To be ordered per metre.	
213a	1	0365 803 008	Quick connector	Female, red. To be used at the front side	
	1	0365 803 009	Quick connector	Female, blue. To be used at the front side	
	-	0365 803 001	Quick connector	Male, for connection at the front side	
213b	1	0365 803 011	Quick connector	Female, red. To be used at the rear side	
	1	0365 803 012	Quick connector	Female, blue. To be used at the rear side	
	-	0365 803 013	Quick connector	Male, for connection at the rear side	
214a	1	0457 800 001	Insulation	Used from the first half year 1999	
214b	1	0486 466 880	Insulation board	Used up to the first half year 1999	
215	1	0456 678 880	Cable	Item 237 connector XP02 is included	
216	2	0456 686 880	Clamp		
217	1	0368 543 003	Pin socket	12-pole	XP01
	11	0323 945 004	Pin		
219	1	0193 260 153	Connector	5-pole	XS11
	1	0193 260 183	Cover	For 5-pole connector	
	1	0193 260 063	Connector	4-pole	XS10
	1	0193 260 093	Cover	For 4-pole connector	
220	1	0456 677 881	Cable	XS10 and item 236 are included	
221a	1	0457 801 001	Insulation	Used from the first half year 1999	
221b	1	0486 449 880	Insulation board	Used up to the first half year 1999	
222	1	0486 388 880	Connection board		AP02
223	1	0160 609 881	Welding current connector		XP02
224	1	0469 879 884	Cable	With cable lug	
225	1	0467 911 881	Capacitor	PME 271 0.1 µF 250 V, with cable lugs	C4
226	1		Screw	M10x20	
227	1		Spring washer	20/10.2x1.1	
228	1		Washer	24/13x2	
232	1	0456 791 001	Top box		
233	1	0456 790 001	Bottom box		
234	1	0486 384 892	Circuit board		AP01
235	1	0193 260 150	Connector	2-pole	XS01
	3	0193 260 152	Connector	4-pole	XS05, XS06, XS08
	1	0193 260 154	Connector	6-pole	XS07
	1	0193 260 163	Connector	15-pole	XS04
236	1		Connector	Included in item 220	XP03
237	1		Connector	Included in item 215	XP02
238	2	0192 927 101	Spacer		
239	4	0194 019 005	Spacer		



AH 0479a cmek3p08

C = component designation in the circuit diagram

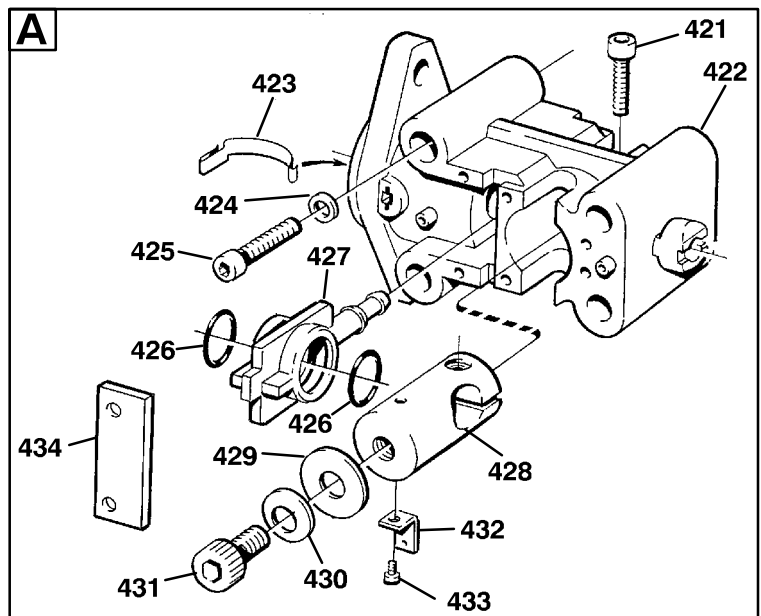
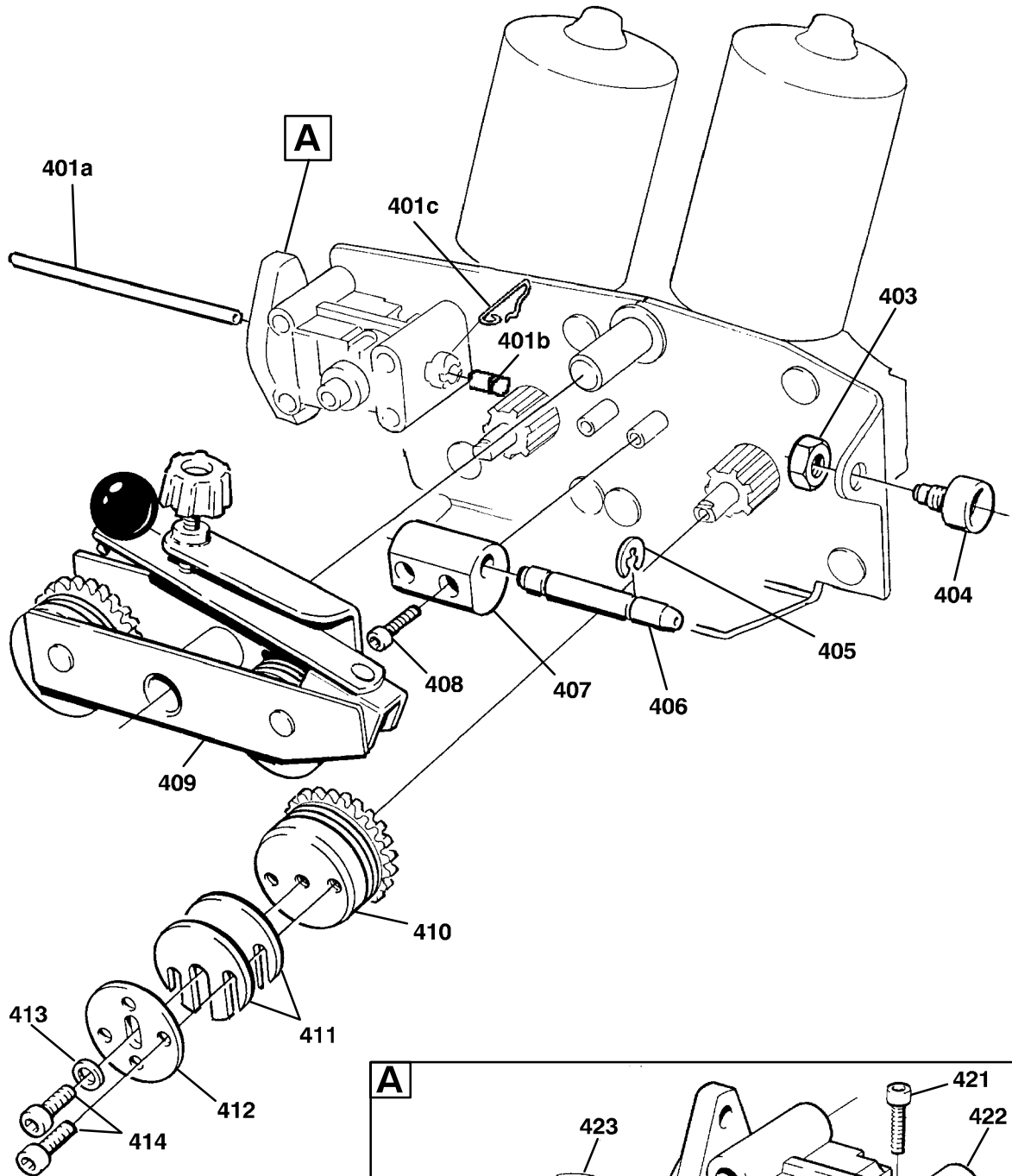
Item no.	Qty	Ordering no.	Denomination	Notes	C
301	1	0156 636 002	Hinge		
302	1	0467 372 001	Lock		
303	1	0466 953 001	Cover		
304	1	0156 630 001	Clamp		
305	1	0469 852 001	Sticker		
306	1	0156 633 003	Reel cover		
	1	0366 942 886	Wire feed mechanism, complete	Contains items 308-310, 312-313, 403-410, 412, 413, 421-425 and 428 Items marked with (A) are not included	
308	1	0156 728 011	Drive unit		M02
309	1	0156 728 010	Drive unit	With tachometer	M01, G01
310	1	0215 100 202	Washer	26/8,4x5	
311	4	0153 043 002	Insulation washer		
312	1	0366 962 001	Pressure arm shaft		
313	1	0366 813 880	Mounting plate		
314	1	0467 648 880	Capacitor	With cable lugs	C5
315	1	0191 548 010	Washer	With flat pin connection (6.3x0.8xM10)	
316	4	0219 501 309	Locking washer	AZ 6.4x11	
317	1	0443 514 001	Sticker		
318	1	0190 753 107	Insulation bushing	D 32/39.5	
319	1	0466 629 001	Base plate		
320	1	0469 879 884	Cable set		



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(W) = wear part (A) = accessory HD = heavy duty bogey with ball bearings

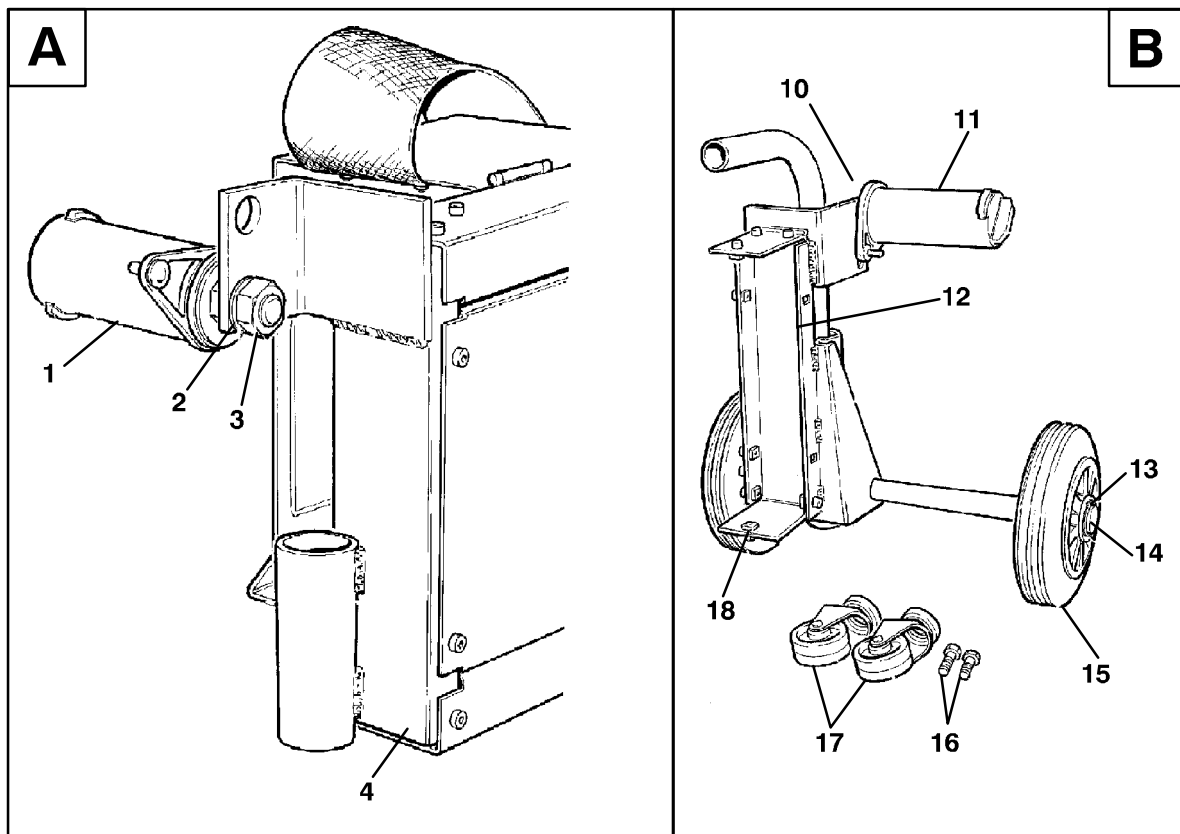
Item no.	Qty	Ordering no.	Denomination	Notes
	1	0366 942 886	Wire feed mechanism, complete	Contains items 308-310, 312-313, 403-410, 412, 413, 421-425 and 428 Items marked with (A) are not included
401a	1	0455 417 001	Outlet nozzle	(W) Ø 2 mm for 0.6-1.6 mm Fe, Ss, Al and cored wire
	1	0333 163 009	Outlet nozzle	(W) (A) Ø 3.5 mm for 2-2.4 mm wire
	1		O-ring	D=4,3/2.4mm Used to keep the outlet nozzle in place when the welding gun is disconnected.
401b	1	0457 546 001	Support sleeve	For the outlet nozzle
401c	1	0156 703 001	Locking wire	For the support sleeve
403	1		Nut	M10
404	1	0156 602 001	Inlet nozzle	(W) Ø 2 mm plastic for 0.6-1.2 mm Fe, Ss and Al wire
	1	0156 602 002	Inlet nozzle	(W) (A) Ø 4 mm plastic for 1.6-2.4 mm Fe, Ss and Al wire
	1	0332 318 001	Inlet nozzle	(W) (A) Ø 2.4 mm steel for 1.2-2 mm cored wire
	1	0332 318 002	Inlet nozzle	(W) (A) Ø 4 mm steel for 2.4 mm cored wire
405	2	0215 702 708	Cir clip	
406	1	0156 603 001	Intermediate nozzle	(W) Ø 1.6 mm plastic for 0.8-1.2 mm Fe, Ss and Al wire
	1	0156 603 002	Intermediate nozzle	(W) (A) Ø 4 mm plastic for 1.6-2.4 mm Fe, Ss and Al wire
	1	0332 322 001	Intermediate nozzle	(W) (A) Ø 2.4 mm copper for 1.2-2 mm cored wire
	1	0332 322 002	Intermediate nozzle	(W) (A) Ø 4 mm copper for 2.4 mm cored wire
407	1	0366 961 001	Intermediate nozzle support	
408	6		Screw	M5 x 25 mm
409	1	0366 941 880	Bogey No. 1	(W) For 0.6-1.2 mm Fe, Ss, Al and cored wire
	1	0366 902 880	Bogey No. 1 HD	(W) (A) For 0.6-1.2 mm Fe, Ss, Al and cored wire
	1	0366 941 881	Bogey No. 2	(W) (A) For 1.4-2.4 mm Fe, Ss, Al and cored wire
	1	0366 902 881	Bogey No. 2 HD	(W) (A) For 1.4-2.4 mm Fe, Ss, Al and cored wire
	1	0366 941 882	Bogey No. 3	(W) (A) For 1.2-2 mm cored wire (knurled rollers)
	1	0366 902 882	Bogey No. 3 HD	(W) (A) For 1.2-2 mm cored wire (knurled rollers)
	1	0366 902 883	Bogey No. 4 HD	(W) (A) For 2.4 mm cored wire (knurled rollers)
410	2	0366 966 880	Feed roller	(W) For 0.6-1.2 mm Fe, Ss, Al and cored wire
	2	0366 966 881	Feed roller	(W) (A) For 1.4-2.4 mm Fe, Ss, Al and cored wire
	2	0366 966 882	Feed roller	(W) (A) For 1.2-2 mm cored wire (knurled rollers)
	2	0366 966 883	Feed roller	(W) (A) For 2.4 mm cored wire (knurled rollers)
411	4	0156 707 001	Spacer	
412	2	0156 707 002	Carrier	
413	2	0366 944 001	Washer	
414	6		Screw	M5x16
		0332 420 880	Connection plate, complete	Contains items 421-423, 426-431 and 434
421	1		Screw	M5 x 20
422	1	0156 596 001	Connection plate	
423	1	0156 701 001	Sheet metal contact	
424		0219 504 302	Spring washer	10/5.2x0.5
425			Screw	M5x25
426	2	0215 201 212	O-ring	14.3x2.4
427	1	0156 597 001	Connection device	
428	1	0156 706 001	Cable fixture	
429	1		Washer	D22/10.5x2
430	1	0219 504 307	Spring washer	D20/10.2
431	1		Screw	M10x20
432		0191 548 005		
433			Screw	M4x12
434	1	0156 760 001	Cover plate	



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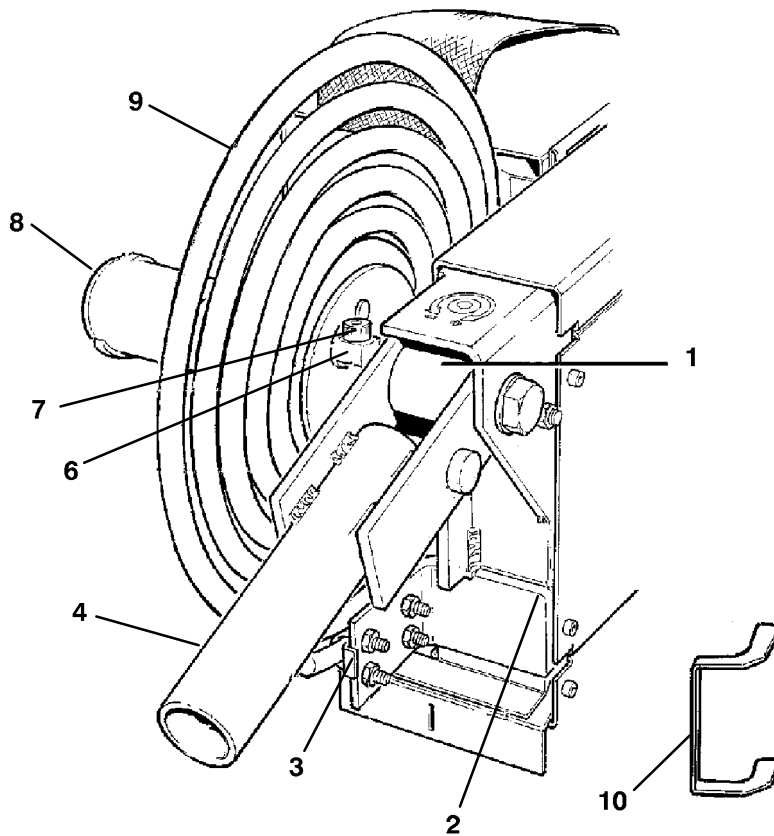
Item no.	Qty	Ordering no.	Denomination	Notes
A		0156 681 883	Turning piece	Accessory, complete (includes items 1-4)
1	1	0146 967 881	Brake hub	D 30/17x3 M16
2	1		Washer	
3	1		Nut	
4	1	0156 657 881	Rear plate	

Item no.	Qty	Ordering no.	Denomination	Notes
B		0332 650 880	Trolley	Accessory, complete (includes items 10-18)
10	1		Washer	D 30/17x3 M16
	1		Nut	
11	1	0146 967 881	Brake hub	D 36/21x3 D 20
12	1	0332 646 880	Rear plate	
13	2		Washer	
14	2			
15	2	0157 325 001	Wheel	M6x16
16	2		Screw	
17	2	0321 203 001	Castor wheel	M6
18			Cage nut	



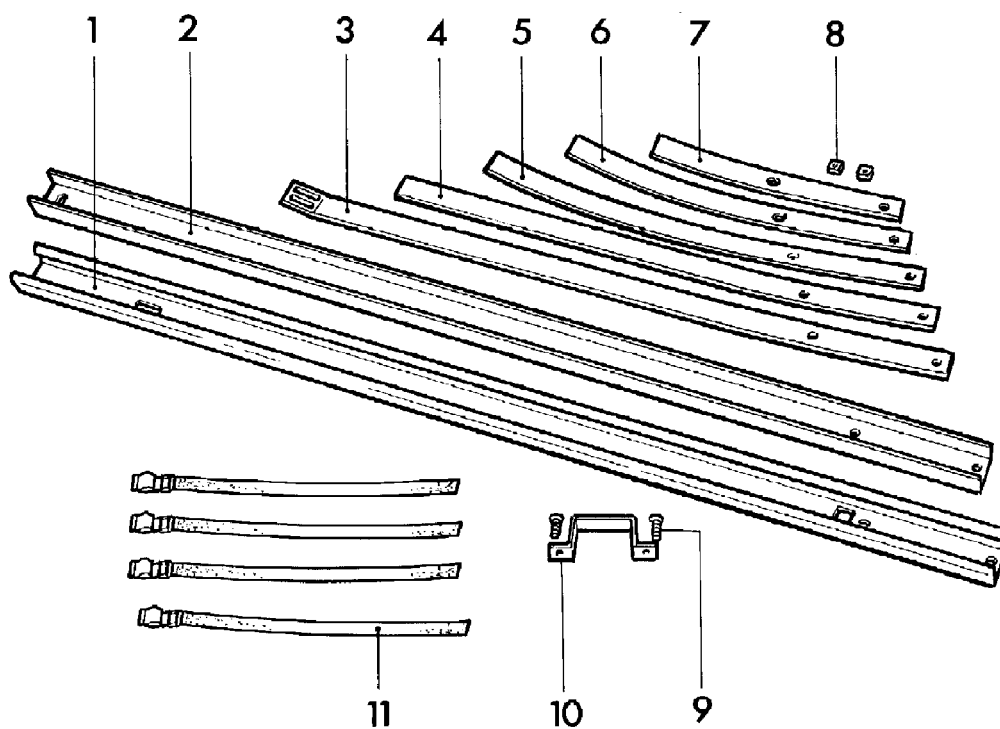
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Item no.	Qty	Ordering no.	Denomination	Notes
		0467 816 881	Counter balance	Accessory, complete (includes items 1-10)
1	1	0156 678 001	Shaft	
2	1	0467 814 880	Rear panel	
3	2	0467 873 006	Wire lock	
4	1	0156 664 880	Arm	
6	1	0156 680 001	Carrier	
7	1	0192 866 002	Bearing	
8	1	0146 967 881	Brake hub	
9	1	0156 668 880	Spring	
10	1	0156 721 001	Hook	For welding gun



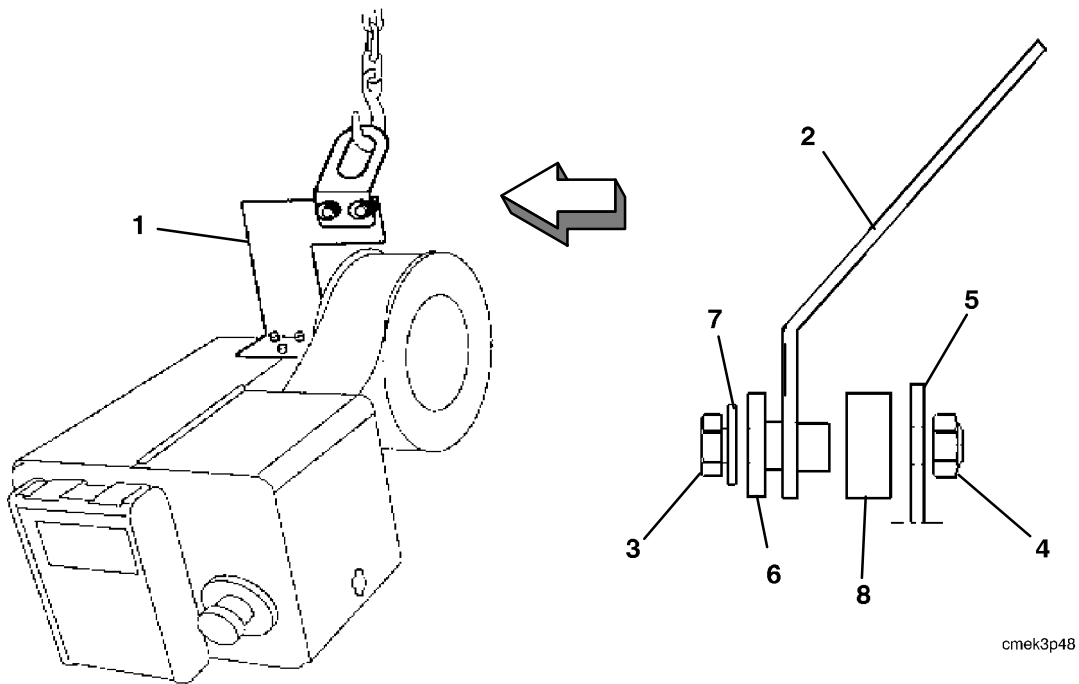
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Item no.	Qty	Ordering no.	Denomination	Notes
		0156 746 880	Mast	Accessory, complete (includes items 1-11)
1	1	0156 661 001	Mast	Lower
2	1	0156 660 001	Mast	Upper
3	1	0156 686 001	Spring	L = 700 mm
4	1	0156 686 002	Spring	L = 570 mm
5	1	0156 686 003	Spring	L = 470 mm
6	1	0156 686 004	Spring	L = 370 mm
7	1	0156 686 005	Spring	L = 270 mm
8	2	0192 847 003	Welding nut	M5
9	2		Screw	M6x20
10	1	0156 658 001	Clip	
11	4	0192 855 001	Strap	



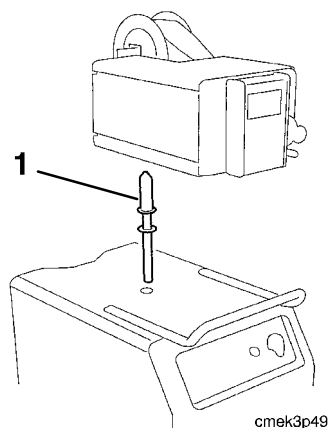
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Itemn o.	Qty	Ordering no.	Denomination	Notes
		0456 909 880	Lifting device	Accessory, complete (includes items 1-8)
1	1	0456 813 001	Plate	
2	1	0457 191 001	Lifting eye	
3	1		Screw	M6S/8x35
4	1		Nut	M8x35
5	1	0456 813 001	Attachment	
6	1	0162 414 002	Insulating tube	
7	1		Washer	D20/8.4x2
8	1	0163 139 001	Bushing	



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Itemn o.	Qty	Ordering no.	Denomination	Notes
1		0156 654 893	Guide journal	Accessory, complete



cmek3p49

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