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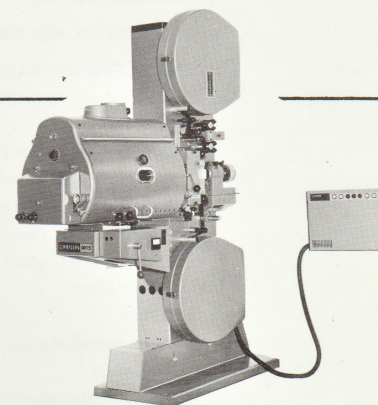
SERVICE

EL 4075

70 mm projector



PHILIPS



EL 4075

70 mm projector

SERVICE INFORMATION

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I. GENERAL

The projector is suitable for the projection of 35 mm films with optical or magnetic sound reproduction. It may also be converted for the projection of 70 mm sound films.

Version number: EL 4075

- ../00 Basic projector, including optical sound head, magazines, asynchronous or synchronous motor, without sprockets.
- ../10 For 35 mm films with optical sound track, 60 Hz, asynchronous.
- ../11 As ../10, however, also suitable for films with magnetic sound track.
- ../12 As ../11, however, also suitable for 70 mm films.
- ../50 For 35 mm films with optical sound track, 50 Hz, asynchronous.
- ../51 As ../50, however, also suitable for films with magnetic sound track.
- ../52 As ../51, however, also suitable for 70 mm films.
- ../60 For 35 mm films with optical sound track, 60 Hz, asynchronous.
- ../61 As ../60, however, also suitable for films with magnetic sound track.
- ../62 As ../62, however, also suitable for 70 mm films.

Version number EL 4076

- ../00 For 35 mm films with optical sound track, 50 Hz, 24 frames, synchronous.
- ../01 As ../00, however, also suitable for films with magnetic sound track.
- ../02 As ../01, however, also suitable for 70 mm films.
- ../10 For 35 mm films with optical sound track, synchronous.
- ../11 As ../10, however, also suitable for films with magnetic sound track.
- ../12 As ../11, however, also suitable for 70 mm films.
- ../25 For 35 mm films with optical sound track, 50 Hz, 25 frames, synchronous.
- ../26 As ../25, however, also suitable for films with magnetic sound track.
- ../27 As ../26, however, also suitable for 70 mm films.
- ../60 For 35 mm films with optical sound track, 60 Hz, synchronous.
- ../61 As ../60, however, also suitable for films with magnetic sound track.
- ../62 As ../61, however, also suitable for 70 mm films.

II. TECHNICAL DATA

Working of the projector mechanism, Fig. 2

By means of a V-belt the motor drives shaft A of the intermittent unit, which in turn drives vertical main shaft B and shutter spindle C. The main shaft drives the upper and lower sprocket shafts D and E via wormwheels.

Lower sprocket shaft E has been provided with a chainwheel, which drives the lower spool shaft via a chain.

If the projector has been equipped with a magnetic sound head, a chainwheel is mounted on upper sprocket shaft D.

Via a chain this wheel drives the sprocket on the magnetic sound head.

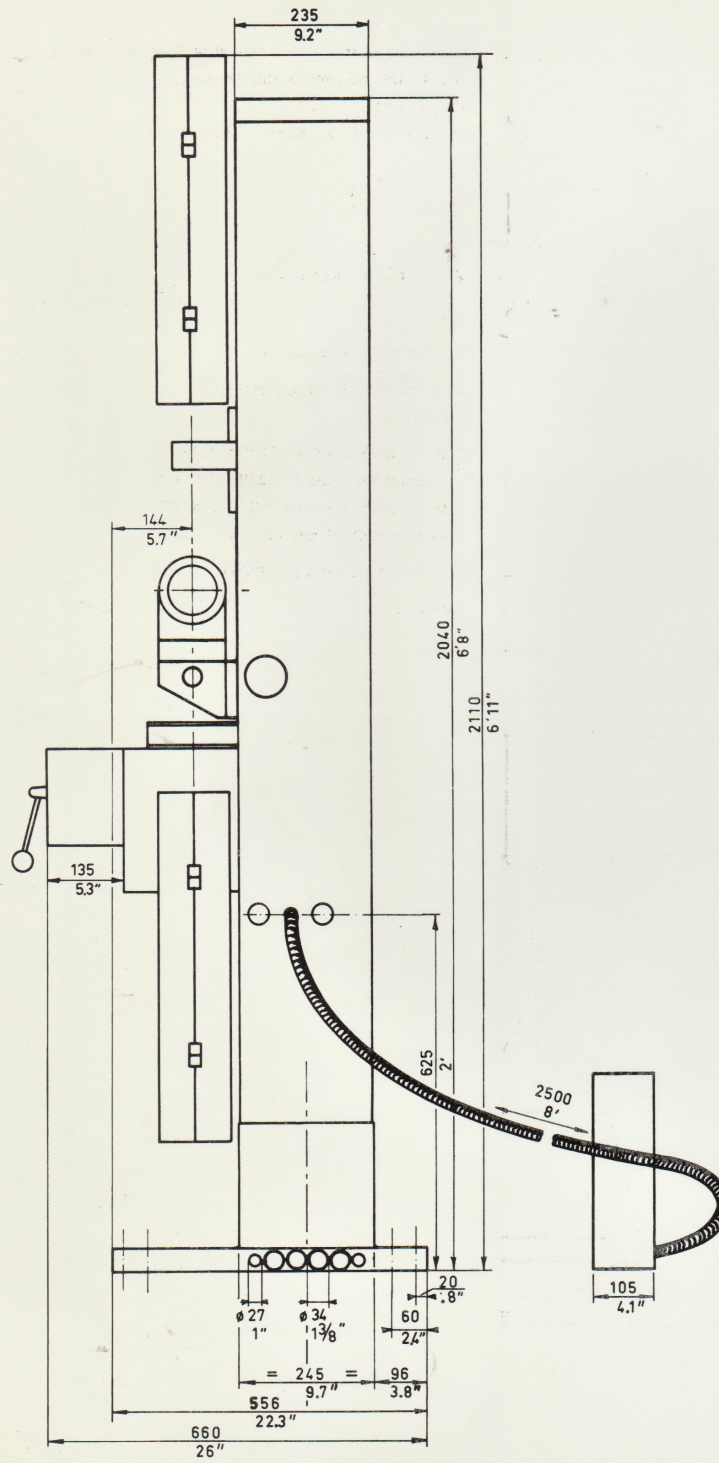
Framing is effected with knob G, which drives shaft F via chainwheels and a chain. Shaft F moves framing bushing H so that via the internal left-hand and right-hand toothed section, the sprocket section shaft of this intermittent shaft is turned with respect to the cross section shaft which frames the film in the aperture.

The projector mechanism has been mounted into a cast housing, which should be filled with oil as far as the mark. Fig. 2 shows how the various shafts are mounted in this housing.

The letters of fig. 2 refer to the letters of the shafts of Fig. 18, page 43.

Moreover, the head sides of the shafts have been marked with the same letters. Shaft E is mounted in the same way as shaft D.

Dimensions	: See Fig. 1,
Mains voltage	: 110 V - 124 V - 220 V - 248 V
Power consumption	: $\pm$ 350 W
Film speed	: 24 or 25 frames per second
Film spool 35 mm	: 600 m (2000 ft) 1200 m (4000 ft)
70 mm	900 m (3000 ft)
Aperture 35 mm Standard	: 20.9 mm x 15.2 mm (0.822" x 0.598")
C.S.	20.9 mm x 18.1 mm (0.822" x 0.814")
W.S.	20.9 mm x 11.3 mm (0.822" x 0.444")
70 mm	48.59 mm x 22.05 mm (1.912" x 0.868")
Exciter lamp	: 5 V - 4 A, type 4822 134 80008
Optical system	: Solar cell
Picture instability	: < 0.2 %



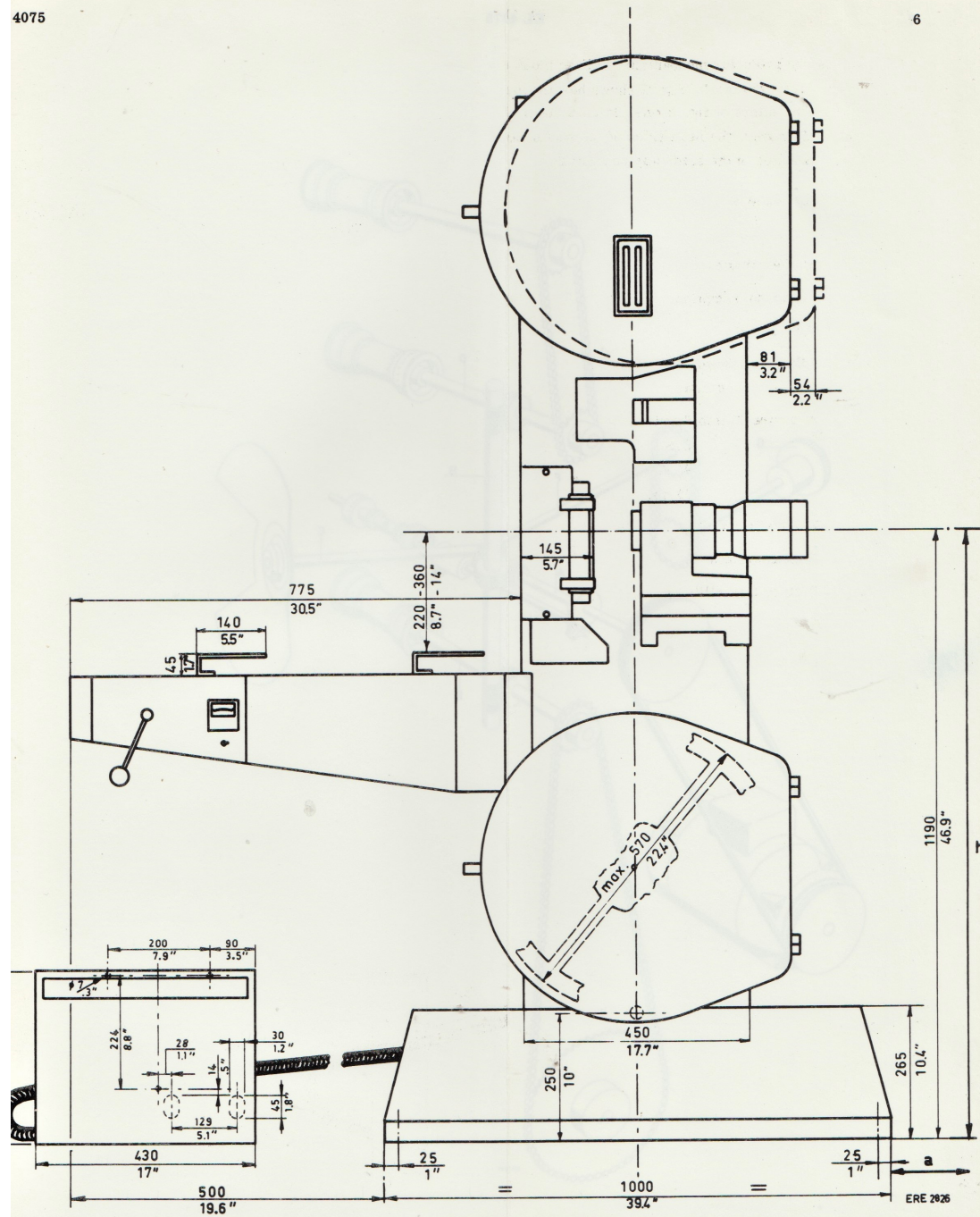


fig. 1

CS11370

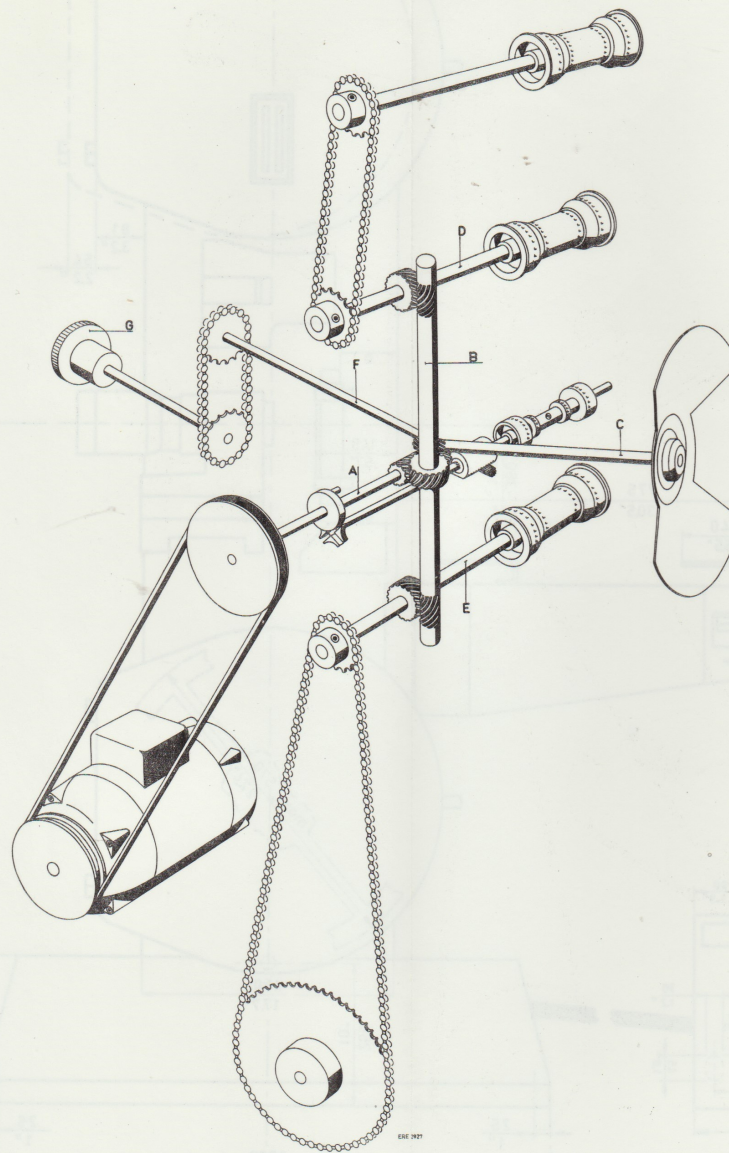


Fig. 2

III. LUBRICATION AND MAINTENANCE

Projector oil, type 3672.

1. Projector mechanism. Fill as far as arrow, when projector is not operative. For filling use the special oil can.
Change oil after one month of operation; further change oil every six months.

Ball and bearing grease EL 4850.

1. Friction discs once a month; grease felt rings regularly with a very small amount of grease.

Cardan oil 5867.

1. Hinge points of pressure roller lever.
2. Hinge points of tensioning roller lever.
Remove and clean these levers once a year; then re-grease them.
Ensure that proper adjustment is effected.

Guide grease 1322 507 94701.

1. Slide points and pivots of 35 mm and 70 mm apertures.
2. Magazine hinges once a month.
3. Hinges of film windows once a month.

Esso Handy oil 4822 390 10006.

1. Magazine lock once a month.
2. All guide rollers, including of fire-trap rollers; clean the shafts and the bore; next, lubricate the shaft with one drop of oil once a week. When removing the rollers, ensure that they are not interchanged.
3. Lubricate the pivots of the dowsers mechanism once a week.
4. Lubricate the outer bearing of the intermittent unit once a week.
5. Lubricate the spool shafts once a month.
6. Lubricate the chains once a month.

Daily clean the parts that come into contact with the film, such as rollers, sprockets, sound tracks, etc.

Clean the runner plate and the skates after each reel.

If the dirt persistent, it can be removed with a piece of wood and some projector oil.

Never use metal.

Clean the projection lens with a very soft brush. If the lens cannot be cleaned with this brush, use a soft cloth. If necessary, breathe on the lens. If the lens is very dirty, use some alcohol. Keep the optical system dust and oil free and ensure that the exciter lamp is free from dust and finger prints.

Never turn the lock-painted screws.

IV. PROJECTOR MECHANISM

Intermittent unitDisassembling, assembling, and adjusting

- . Drain the oil from projector mechanism A, Fig. 4 via transparent plastic tube B, Fig. 4.
- . Remove the motor belt C, Fig. 4.
- . Loosen the 4 screws D, Fig. 4.
- . Turn framing knob E, Fig. 4 as far as possible clockwise.
- . Carefully pull intermittent unit F, Fig. 4 out of the projector mechanism.
- . Ensure that leaf spring B, Fig. 3 does not drop into the projector.
- . If framing bushing D, Fig. 3 remains in the projector mechanism, disassemble this mechanism as follows.
- . Screw a 2.6 mm screw (in the box with spare screws) into the threaded hole of framing bushing.
- . Then pull the framing bushing from the mechanism (if necessary, use pliers).
- . Next, slide the framing bushing over the shaft of the new intermittent unit so that the 2.6 mm screw hole is turned in the direction of this unit.
- . Position leaf spring B, Fig. 3 in the groove, bent part down.
- . Subsequently, slide the intermittent unit into the projector mechanism and simultaneously turn the framing knob E, Fig. 4 so that the teeth of the framing bushing engage the teeth of framing shaft F, Fig. 3.
- . If the teeth engage, slowly turn framing knob E to the left and to the right simultaneously pressing the intermittent unit further down into the projector mechanism.
- . After framing shaft F, Fig. 3 has engaged framing bushing D, Fig. 3 turn the flywheel G, Fig. 4 until the shaft of the intermittent unit is in an intermittent position (approx. mid position).

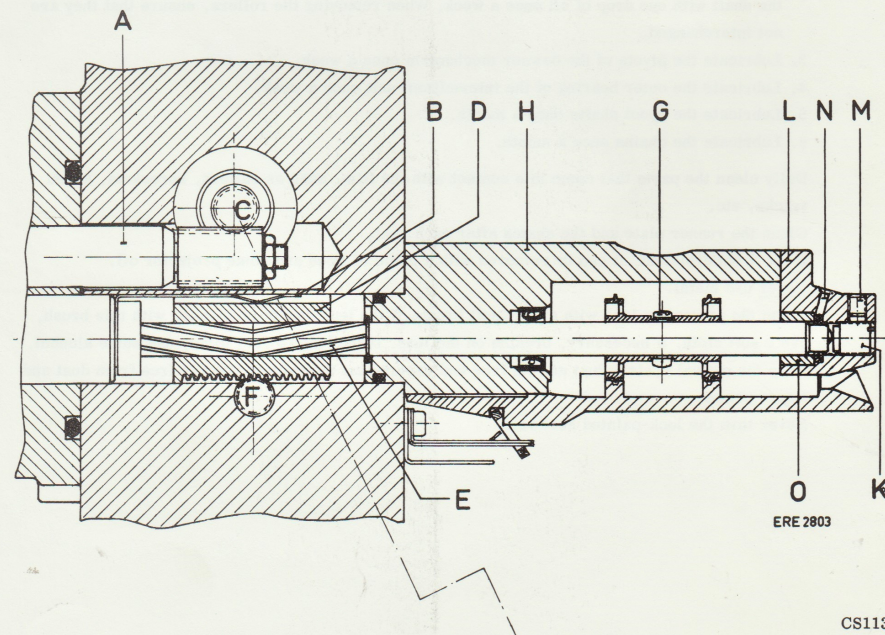


Fig. 3

CS11372

- . Press the intermittent unit as far as possible into the projector mechanism, simultaneously turning the flywheel G slightly to the left and to the right until the teeth of intermittent sprocket shaft E, Fig. 3 engage the nylon bushing of framing bushing D, Fig. 3. This is facilitated by turning the intermittent sprocket. Moreover, damage to the teeth is prevented.
- . Now press the intermittent unit completely into the projector mechanism. Ensure that the teeth of the sprocket shaft A, Fig. 3 can properly engage the teeth of the main shaft B, Fig. 18.
- . Turn the four screws D, Fig. 4 in (do not tighten).
- . Next, turn the complete intermittent unit as far as possible clockwise and then slightly anti-clockwise. The proper position and play of the teeth is thus obtained.
- . Tighten the four screws D.
- . Check the position of ring H, Fig. 4. The white line on this ring should correspond to the white dot on the projector housing, while the framing mechanism should be in the mid-position.
- . Refit the motor belt.
- . Fill the projector mechanism with oil as far as the white line. Use the special oil can and pour the oil through the transparent tube.
- . Check that the intermittent unit runs smoothly, also in the two extreme positions of the framing mechanism. If it does not in the extreme pos. turn framing knob E, Fig. 4 slightly back.

Framing bushing D, Fig. 3

Disassembling and assembling

See under intermittent unit, page 10.

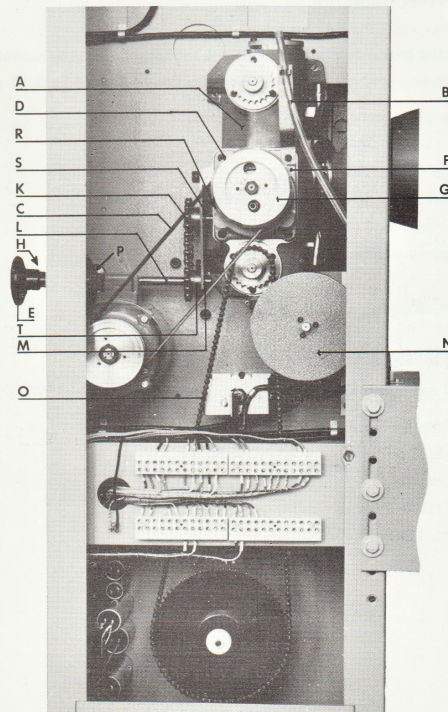


Fig. 4

ERE2837

CS11373

Intermittent sprocket Fig. 3, page 10Disassembling

- . Remove stripper (2 screws).
- . Loosen screw G (ensure that the nut is not mislaid).
- . Remove bearing L (2 screws).
- . Slide the bearing from the shaft.
- . Slide the intermittent sprocket from the shaft.
- . Slide the new intermittent sprocket onto the shaft.
- . If this is a 35 mm intermittent sprocket, hold gauge 4822 395 80039 having a dimension of 17.5 mm (0,688") between the intermittent sprocket and bearing H.
- . If a 70 mm intermittent sprocket is used, hold a thin piece of paper (0.01 mm/0,000393") between the intermittent sprocket and the bearing. Mounting should be effected in the reverse order.
- . When mounting sprockets, never twist or tap them. Lightly oil on shaft and bore. It should be possible to slide the sprocket smoothly onto the shaft.

Pivot screw K for sprocket shaft, Fig. 3, page 10Adjusting

- . Slide bearing L on the shaft and press it against bearing H.
- . Secure bearing L (two screws).
- . Turn pivot screw K against ball.
- . Set the measuring gauge (accuracy of 0.01 mm (0.000393") against pivot screw K.
- . Then turn pivot screw 0.01 mm (0.000393") back.
- . Lock the pivot screw with screw M.
- . Checking
 - Hold the measuring gauge against the slide of the intermittent sprocket and turn framing knob E, Fig. 4 to and fro. The deflection on the gauge should be 0.01 mm (0.000393").
- If no measuring gauge is present:
 - . Turn pivot screw K against ball.
 - . Inject a few drops of oil into oil hole N.
 - . Ensure that the oil is flush with the top of the hole.
 - . Turn the pivot screw back until the oil surface is slightly concave.
 - . Lock the pivot screw with screw M.
 - . Checking
 - If framing is now effected, the oil level should slightly change.

Bearing bushing O for sprocket shaft, Fig. 3, page 10Disassembling and assembling

- . Loosen screw M and pivot screw K.
- . Remove bearing L (2 screws).
- . Remove pivot screw K.
- . Press bearing O from bore.
- . Fit a new bearing. Use some oil.

Framing shaft, inner, Fig. 4, page 11Disassembling

- . Drain the oil.
- . Remove chain K.
- . Remove spring washer S.
- . Pull framing shaft from bore.
- . Unscrew chainwheel.
- . Fit a new shaft. Use some oil.
- . Ensure that gasket R is not damaged.

Framing shaft, outer L, Fig. 4, page 11Disassembling

- . Remove knob E.
- . Remove ring H.
- . Remove chain K.
- . Remove spring washer M.
- . Remove chainwheel T.
- . Remove shaft L.
- . Fit a new shaft. Mounting should be effected in the reverse order.

Shutter shaftDisassembling

- . Drain the oil.
- . Loosen spring "4", Fig. 9, page 25
- . Remove cotter pin A, Fig. 9
- . Slide dowser "2" Fig. 9 from the spindle.
- . Remove flywheel N, Fig. 4, page 11
- . Loosen the four screws A, Fig. 5, page 14
- . Loosen the two screws D, Fig. 5.
- . Remove the dowser lifting mechanism A, Fig. 11, page 27 (4 screws).
- . Remove screws A, Fig. 5.
- . Remove ring E, Fig. 5.
- . Remove the shutter "1", Fig. 9.
- . Remove flange F (Fig. 5) and ring K (Fig. 5)
- . Loosen the three screws G, Fig. 5.
- . Slide flange F and ring K back onto the spindle. Fit screws "D".
- . Pull shaft "C" from the projector mechanism with the aid of the flange.
- . Remove flange "F" and ring K.
- . Remove bushing H 2 screws Fig. 5.
- . Remove the spring washer L.
- . Pull shaft C from the bearing.
- . Remove spring washer M, Fig. 5.
- . Press the ball bearing from the shaft.
- . Mounting should be effected in the reverse order.
- . Ensure that the oil gasket N, Fig. 5 is not damaged and that no dirt penetrates the ball bearing.

ShutterAdjusting

For 35 mm intermittent sprocket.

- . Adjust intermittent sprocket with knob E, Fig. 4 to the beginning of an intermittent cycle.
Make a mark.
- . Turn the intermittent sprocket two teeth further with knob E.
- . In this position of the intermittent sprocket the shutter should be adjusted so that the line on the shutter is in the centre of the aperture.

For 70 mm intermittent sprocket.

- . See under adjusting for 35 mm intermittent sprocket; however, turn the intermittent sprocket $2\frac{1}{2}$ teeth further instead of 2 teeth.

Travel ghost:

Moving down on the screen:

- .. Adjust the shutter against its direction of rotation

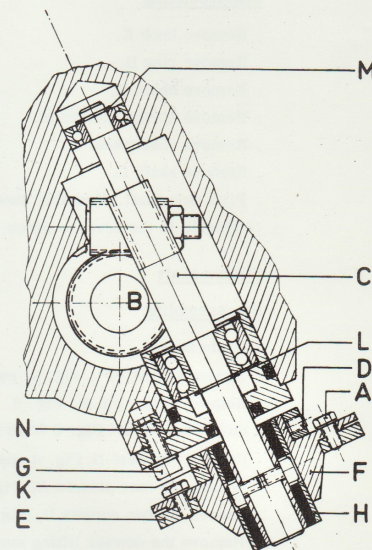
Moving up on the screen:

- . Adjust the shutter in the direction of rotation

Upper sprocket shaft D, Fig. 6

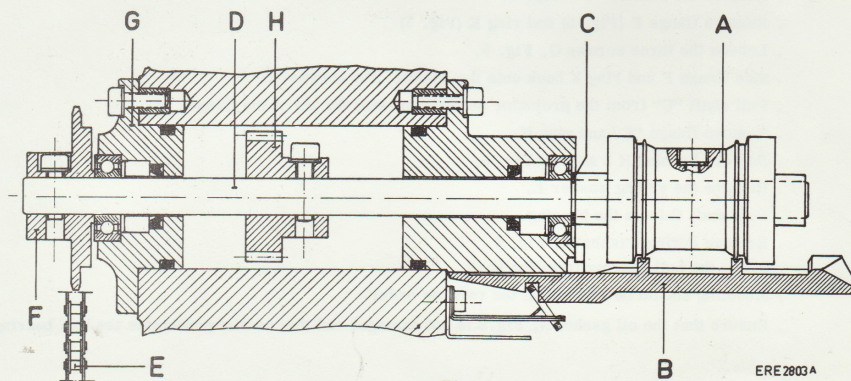
Disassembling

- . Drain the oil.
- . Loosen the filmstripper.
- . Remove pad B.
- . Unscrew sprocket A.
- . Remove spring washer C.
- . Remove chain E.



ERE 2803

Fig. 5



ERE 2803 A

Fig. 6

- . Remove chainwheel F.
- . Remove bearing G (three screws).
- . Pull the shaft from the projector mechanism.
- . Unscrew the gearwheel H.
- . Mounting is effected in the reverse order.
- . Ensure that the oil gaskets are not damaged.
- When replacing oil gaskets, use liquid gasket cement.
- . When replacing the ball bearings:
- . Unscrew the relevant bearing (three screws) and press the ball bearings from the bore with a piece of wood.
- . Fit new ball bearings with some oil.

Main shaft B, Fig. 7

Disassembling

- . Drain the oil.
- . Remove chain D, Fig. 4.
- . Remove holder with 2 microswitches.
- . Unsolder the magnetic sound head connections.
- . Unscrew the magnetic sound head.
- . Remove lid C (three screws).
- . Remove the upper sprocket shaft (see page 14).
- . Remove the shutter shaft (see page 14).
- . Pull the main shaft from the projector mechanism.
- If necessary, remove lower lid D, so that the shaft can be pressed up.
- . Mounting is effected in the reverse order.

Dowser lifting magnet B, Fig. 11, page 27.

Disassembling

- . Remove flywheel N, Fig. 4, page 11.
- . Loosen the four screws C.
- . Detach the electrical connections and remove the complete dowser lifting mechanism from the projector.
- . Unscrew the two electrical contacts of the lifting magnet on terminal D.
- . Loosen the nut E and the two screws F.
- . Remove the lifting magnet from block B.
- . Mount the new lifting magnet.
- . Tighten the nut.

Adjusting, Fig. 11, page 27.

- . Remove the flywheel N, Fig. 4, page 11.
- . Unscrew the two electrical contacts of the lifting magnet on terminal D.
- . Loosen nut E.
- . Loosen the two screws F.

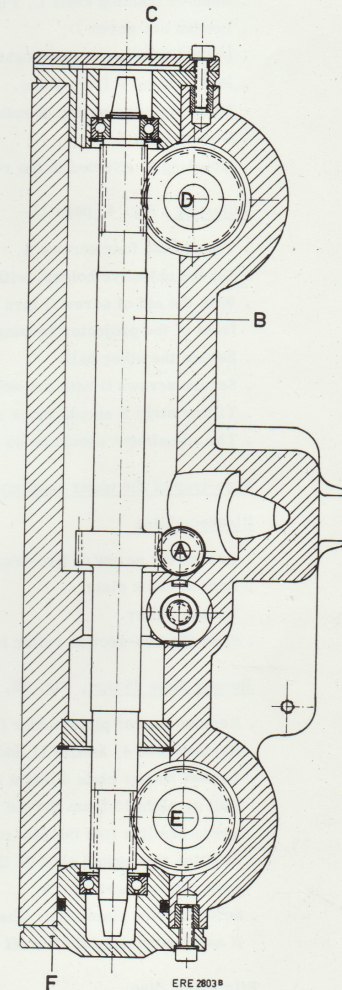


Fig. 7

- . Turn the lifting magnet to such a position that the bottom of the dowser is at an angle of 90° with respect to the side of frame A.
- . Secure the magnet.

Objective holder spindle, Fig. 16A, page 33.

Disassembling

- . Loosen the 4 screws A.
- . Lift objective holder B from guide C.
- . Remove framing shaft L, Fig. 4 (see page 11).
- . Loosen set-screw D.
- . Put a 5 mm screw into bushing P, Fig. 4.
- . Pull bushing P from guide.
Mind pressure spring of spindle. When pulling bushing P out, firmly hold knob E, Fig. 4
- . Loosen knob E.
- . Mounting is effected in the reverse order. When mounting, use cardan oil.

Adjusting, Fig. 4, page 11.

- . Tighten the four screws A.
- . Set the objective holder, with tilting strip F, to position 70..
- . With the aid of screw G turn one of the balls so that distance A (centre of the objective to front of the projector housing) is 76 mm (2.992").
- . Secure the other ball.
- . Secure screws G with set-screw.
- . Tilting strip F should move smoothly.
- . The adjustment should be so that objective holder moves smoothly along guide.

Fire-trap of the upper magazine

Disassembling

- . Loosen the screw of fire-trap housing (2 screws rear).
- . Loosen black plate.
- . Loosen roller.
- . Slide the two-section roller from the shaft.

Runner plate 35 mm, Fig. 12, page 28.

- . Remove runner plate holder from the projector.
- . Remove disc 4, handle 11 and press the aperture out of the opening.
- . Loosen runner plate 5 (eight screws at the bottom).
- . Pull circlips 13 from the old runner plate.
- . Press circlips into the new runner plate.
- . Position the runner plate in the holder so that the two narrow cams engage slot A and the wide cam engages slot B.
- . Screw runner plate tight. Check that the aperture can be shifted smoothly.
If necessary, slightly file off the ribs at the rear.

Film guide disc

Replacing

- . Pull the disc from the runner plate with the aid of pliers.
- . Press a new disc into the runner plate.

Skate (nylon)Replacing

- . Loosen the pressure spring "9", Fig. 12, page 28.
- . Press skate back so that the cams no longer engage the recesses.
- . Pull the skate out along the top.

Skate (steel), Fig. 16, page 32.

Replacing

- . Remove the old skates.
- . Hook skate with bent profile round point (1).
- . Bend skate and pass it through the slot (2).
- . Straighten the skate (3).
- . Cut the skate to length.

Skate pressure

- . Tighten screw "8", Fig. 12. The film just should not clatter.

Film window lockAdjusting

- . Tighten the screw so that the door presses firmly against plate.
- . It should now be easy to open the door by means of bolt "14".
- . Lock screw C.

Spool shaft, Fig. 14, page 30.

Disassembling

- . Unscrew nut "3".
- . Pull spring "2" spring cup "4" and felt ring "5" from the shaft.
- . Remove the shaft from the bore.

Ball bearing of upper spool shaftDisassembling

- . Disassemble shaft "7" (see under spool shaft, Disassembling, page 17).
 - . Remove spring washer "1".
 - . Press the ball bearing out of the bore with a piece of wood.
 - . Mount a new ball bearing. Use some oil.
- Disassembling the lower spool shaft (Fig. 15).
- . Remove nut "8", spring "7" and chain O (Fig. 4).
 - . Pull the complete bearing from the shaft.
 - . Remove the retaining ring "1".
 - . Pull the shaft from the bearing.
 - . Mounting should be effected in the reverse order.

Capstan optical sound headDisassembling

- . Remove cover.
- . Remove flywheel and circlip.
- . Pull the capstan from the bore.

- . Lightly lubricate the new capstan and mount it.

Adjusting

- . Press the capstan against the ball bearing.
- . Slide the circlip onto the capstan. Ensure that the capstan moves smoothly without axial clearance.

Shaft of centrifugal switch, fig. 10, page 26.

Disassembling

- . Remove guide rollers H, Fig. 16a (ensure that the spring is not mislaid).
- . Unscrew microswitch "4".
- . Loosen the two screws A and pull the complete unit out of the projector housing.
- . Remove hook "2" (straighten one tag).
- . Slide the spring and the bushing from the shaft.
- . Remove collar.
- . Remove bracket (straighten one tag).
- . Remove collar.
- . Pull shaft out of ball bearings. Mounting should be effected in the reverse order.

Adjusting

Stationary film

- . Switching bushing 3 keeps switching pin of microswitch depressed.

Running film

- . Switch bushing 3 released from switching pin.

At an increasing speed from stationary to 24 frames per sec.

- . The microswitch is switched on before or at a speed of 15 frames per sec.

At decreasing speed from 24 frames per sec. to stationary.

- . The microswitch is switched off before or at a speed at 15 frames per sec.

These 15 frames per sec. are obtained as follows:

- . Disassemble the lower sprocket.
- . Slide the 12x18 mm rubber ring (0.472" x 0.708") (hose) over the sprocket shaft.
- . Next, place a rubber belt over this rubber ring and the rollers of the centrifugal switch.
- . Start the projector.
- . Adjust the microswitch with screw "B" so that it just switches.
- . Lock screw.

Solar cell

- . Loosen the two screws.
- . Unsolder the two wires.
- . Remove the solar cell holder.
- . Pull the solar cell from the holder.
- . Mount a new solar cell with the black side towards the lens.

Adjusting

Ensure that the solar cell is positioned exactly opposite the lens.

Aperture 35 mm, Fig. 12, page 28.

Adjusting

- . Remove handle "12".
 - . Remove the old mask from the aperture.
 - . Fit the new mask into the aperture.
 - . Grease the slide and pivot points with guide grease.
 - . Refit handle "12".
 - . Press the aperture in to one of the 3 positions. In this position the aperture should be enclosed without clearance.
- Next, move aperture from this position with the aid of handle "12" and release the handle. The aperture should now return to its original position due to the pressure of snap spring "11". This applies to both moving directions.
- File aperture to the correct size.

Motor

The motor is connected to the projector housing by means of four bolts through the slotted holes, so that the belt can be tensioned by moving the motor.

The basic version is suitable for 50 Hz.

For 60 Hz a 60 Hz motor pulley and a 60 Hz intermittent pulley must be added to the existing 50 Hz pulleys.

Optical sound system

The flywheel consists of four discs.

Disassembling, Fig. 17, page 36.

- . Remove solar cell holder "36".
- . Remove the capstan, see page 17.
- . Loosen screw "5" and remove the complete sound optic system from the bore.
- . Mount new sound head.

Adjusting

- . Loosen the two screws "2".
- . Turn the solar cell holder so that the light beam of the exciter lamp falls onto the centre of the solar cell. Tighten the screws.
- . Connect a voltmeter to the output of the output amplifier.
- . Insert 7000 Hz test loop 4822 397 10019 in the projector.
- . Start the projector.
- . Slide key 4822 395 50011 over ring A.
- . Turn the optic system with the key until the meter deflection is maximum.
- . Lock ring A.
- . Now insert 9 kHz loop 4822 397 10021 in the projector.
- . Focus the objective with ring B until the voltmeter indicates max. deflection.
- . Lock ring B.
- . Repeat the two measurements.
- . Next, insert Buzz track test loop 4822 397 10023 into the projector.
- . Start the projector.
- . Turn the pressure roller with screw "24" so that just no tone is audible or the meter shows min. deflection.
- . Set the arrow to the red dot of the pressure arm.

- . Lock screw "24".

Pressure roller of optical sound head

- . The pressure roller should close with a force of min. 600 g and open with a force of max. 800 g.

Magnetic sound head EL 4080

- . For magnetic sound reproduction this magnetic sound head is mounted on projector EL 4075.
- . The upper capstan has been provided with three flywheel discs, while the lower capstan has been provided with 6 discs.

Capstan

Disassembling

- . Remove cover.
- . Remove flywheel and circlip.
- . Pull shaft out of ball bearings.
- . Mount new shaft with some oil.

Adjusting

See sound shaft, optical sound head, page 18.

Tensioning roller

- . The tensioning roller should close with a force of min. 600 g and open with a force of max. 800 g.

Intermittent shaft E, Fig. 3, (page 10).

Disassembling

- . Remove pad.
- . Remove sprocket (see page 12).
- . Remove bearing H.
- . Remove intermittent shaft E.
- . Mount the new intermittent shaft as follows:
- . Mount the old-type retaining ring on the new shaft.
- . Slide the intermittent shaft with its ball side into the rear of bearing H thus preventing, damage to the oil sealing ring.
- . Turn the framing bushing anti-clockwise into the extreme position.
- . Press the intermittent shaft into the framing bushing.
- . Turn the framing bushing back.
- . Press the shaft with the bearing further into the bore.
- . Secure the bearing.

Synchronous version

The synchronous version is supplied under type number EL 4076/...

For the various versions, refer to the table below:

EL 4076	Number of teeth int. movement timing-belt pulley	Number of teeth of motor timing belt pulley	Hz	Frames/sec.
/01	25	12	50	24
/26	24	12	50	25
/61	25	10	60	24

For the synchronous version the following mechanical parts of the asynchronous version should be replaced.

The asynchronous motor becomes synchronous motor 4822 361 50042
 V-belt becomes timing-belt pulley (90 teeth) 4822 358 20027
 V-pulleys become timing-belt pulleys for

Motor timing-belt pulley 25 teeth 4822 522 30742
 Motor timing-belt pulley 24 teeth 4822 522 30743
 Motor timing-belt pulley 12 teeth 4822 522 30739
 Motor timing-belt pulley 10 teeth 4822 522 30741

The motor is secured to the projector housing with the aid of four bolts.

Adjust the timing-belt by moving the motor.

The electrical modifications for 60 Hz are shown in circuit diagram Fig. 22, page 48.

Conversion from 35 mm to 70 mm

With the aid of kit EL 4081 the projector can be converted for 70 mm sound films.

The difference between the parts for 35 mm and 70 mm is indicated at the relevant code numbers.

Sprocket conversion

Remove the 35 mm sprocket from the projector.

Slide a 70 mm gear ring onto one of the shaft ends.

Secure the gear ring with the three screws.

Slide a 70 mm gear ring onto the other shaft end.

Position the sprocket in gauge 4822 395 80039

Slide the loose gear ring so that the teeth are in line.

Secure the gear ring (3 screws).

Description circuit diagram

The circuit diagram shown in Fig. 22, page 48 is destined for 35 mm films, 220 V, 50 Hz and optical sound reproduction.

The mains voltage is applied to points 20 and 60 of the transformer.

Lamps LA2, LA4 (if the amplifier is switched on), LA5 and LA6 should light up.

From point 61 of the transformer the voltage is applied to SK1 via the centre contact of RE2 and SK2. If SK1 is closed, RE1 is energised and held via 61D.

SK1 may be released.

Lamp LA2 is extinguished and LA1 lights up. When RE1 is energised, a voltage is applied to the motor via point 62 of the transformer.

The film is transported through the projector. Via roller H, Fig. 16a centrifugal switch SK5 is switched on so that it closes. By depressing button SK3, 6 V is applied to points 50 - 52 via the amplifier and RE2 is energised. As a result the centre contact of RE2 is interrupted and also contact 35A, while contact 128 is closed.

Lamps LA4 and LA5 extinguish and LA3 lights up. The direct voltage then energises RE4 via contacts 128, 128A and 128B and as a result the dowsers are opened.

By depressing SK2 hold-contact 61D of RE1 is interrupted and the projector is stopped.

In case of film rupture or at too low a speed of the projector SK5 opens. Consequently, hold-contact 61D is de-energised and the projector is stopped.

Magnetic sound reproduction

The film is now guided via roller C, Fig. 19. This roller operates SK6, which changes-over the amplifier from optical to 4-channel magnetic via points 23 and 24.

70 mm film

The 70 mm index of the upper sprocket operates SK7, which changes the amplifier over to 10-channel magnetic via points 22 and 25.

The various mains voltages are controlled by means of connections on the transformer.

Terminal cabinet EL 4243

Terminal cabinet for operating the EL 4075 projector.

Relay contacts

Disassembling

- . Loosen the cover (two screws). Ensure that the two pressure springs under the cover are not lost.
- . Detach the connections from the contact to be replaced.
- . Pull the complete contact holder from the bracket.
- . Fit a new complete contact holder into the bracket.
- . This contact holder should be mounted as follows:
- . Slide core with movable contacts into holder so that the smallest side is in the largest hole of the holder and the largest side in the smallest hole. Next, fit the two fixed contacts into the holder. It should now be impossible for the core with movable contacts to drop out of the holder.
- . Press in the plastic blocking strips.
- . When mounting the holder in the bracket, note the following:
- . For break-contacts (marked  on cover) the spring of the movable contacts should be at the lower side.
- . For make-contacts (marked  on cover) the spring of the movable contacts should be at the upper side.
- . If necessary, turn the screws of the connection.

Coil

Disassembling

- . Loosen the cover (two screws). Ensure that the pressure springs under the cover are not lost.
- . Unscrew the contact.
- . Pull the bracket with contacts from the holder.
- . Pull coil out of holder.
- . Mount a new coil.
- . Mounting should be effected in the reverse order.

Arc-lamp switch EL 4245 Fig. 8 and 8a

When an arc-lamp housing rated up to 100 A is used, this switch should be screwed onto the mounting table of projector EL 4075.

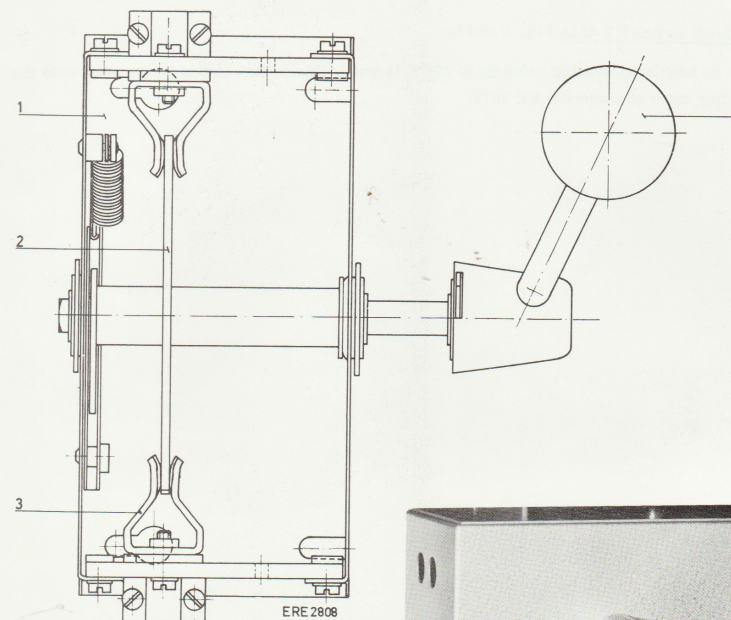


Fig. 8

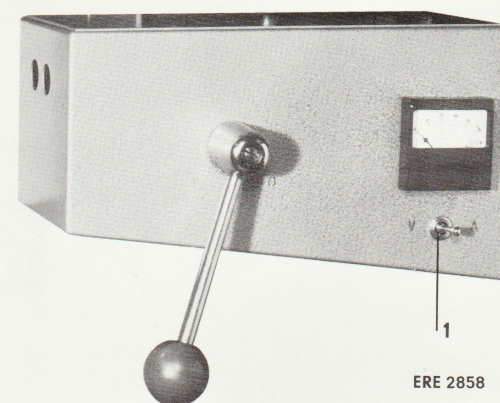


Fig. 8a

	Item Pos. Rep. Pos.	Ordering number Bestellnummer Bestellnummer Numéro de commande Núm. de pedido	Description Bezeichnung Omschrijving Désignation Descripción
Fig. 8	1	4822 277 10017	Switch complete - Schalter Komplet - schakelaar compleet - commutateur complet - interruptor completo
	2	4822 278 90074	Contact strip - Kontaktmesser - contactmes - lame de contact - lámina de contacto
	3	4822 278 90001	Contact clip - Kontaktklemme - contactklem - borne de contact - borne de contacto
	4	4822 413 90002	Knob - Knopf - knop - bouton - botón
Fig. 8a	1	4822 277 10021	Switch - Schalter - schakelaar - commutateur - interruptor

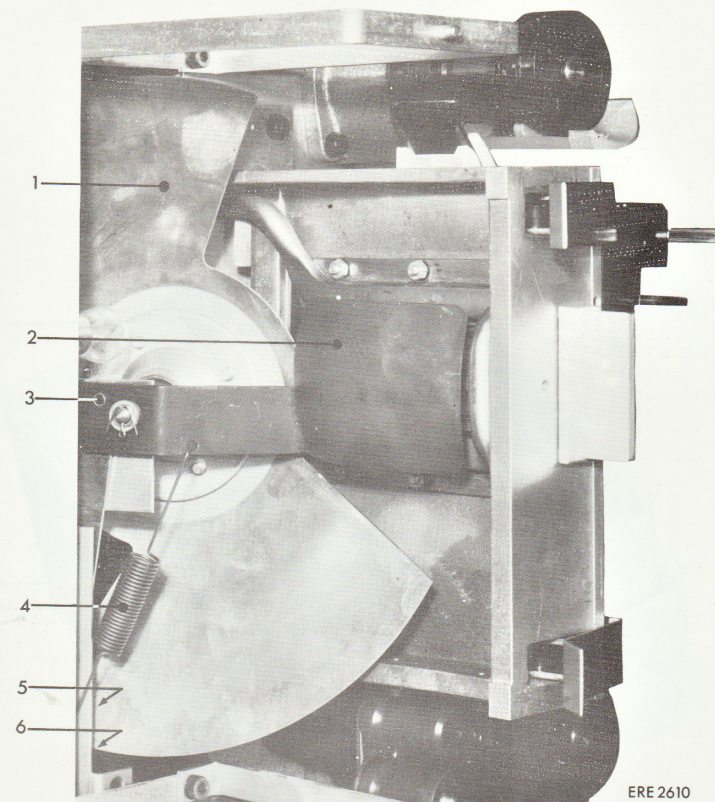


Fig. 9

Item Pos. Pos. Rep. Pos.	Ordering number Bestellnummer Bestelnummer Numéro de commande Núm. de pedido	Description Bezeichnung Omschrijving Désignation Descripción
1	4822 515 40054	Shutter - Blende - Vlinder - Obturateur - Obturador
2	4822 463 50026	Change over - Überblendungsklappe - Klep - Volet d'image - Conmutador de imagen
3	4822 535 90199	Pin - Stift - Pen - Clavette - Clavija
4	4822 492 30383	Spring - Feder - Veer - Ressort - Resorte
5	4822 271 30028	Microswitch - Mikroschalter - Microschakelaar - Commutateur micro - Micro interruptor
6	4822 281 30016	Magnet - Magnet - Hefmagneet - Aimant - Imán
7	4822 134 40111	Lamp - Lampe - Lamp - Lampe - Lámpara
8	4822 532 30196	Bracket - Nabe - Naaf - Support - Cubo de la rueda
9	4822 492 61223	Spring - Feder - Veer - Ressort - Resorte

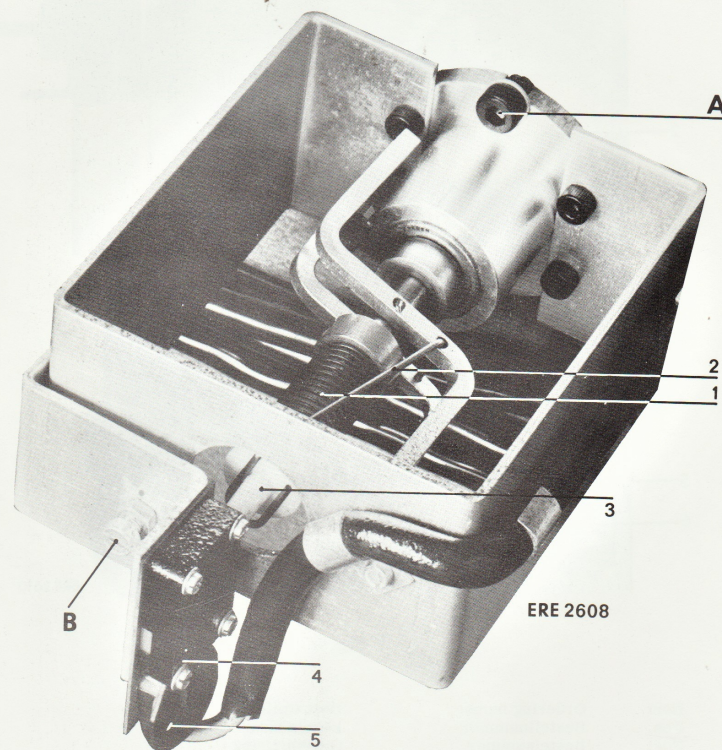
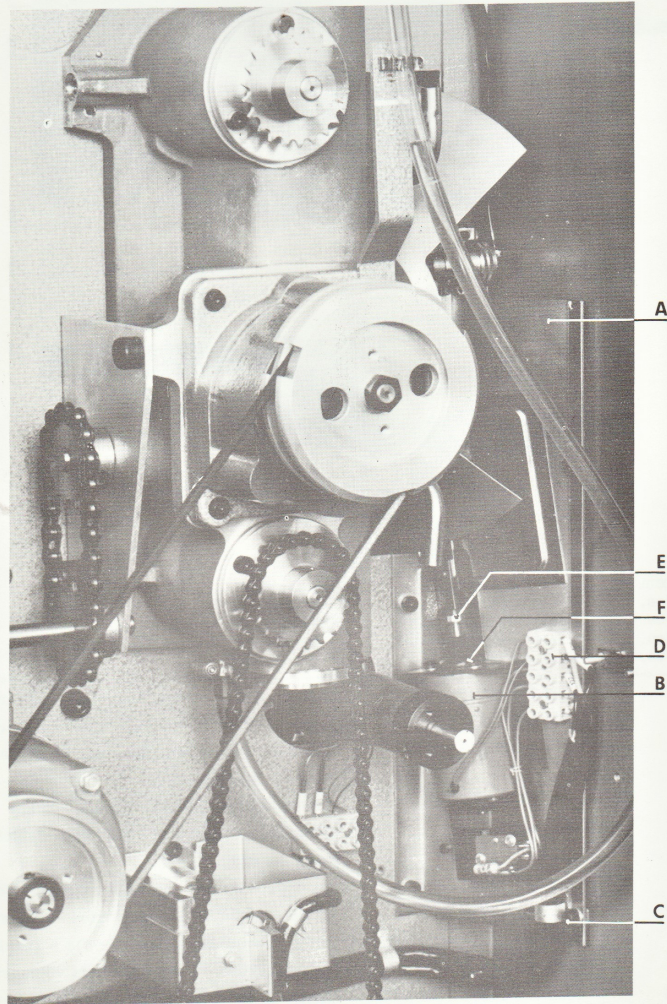


Fig. 10

Item Pos. Rep. Pos.	Ordering number Bestellnummer Bestellnummer Numéro de commande Núm. de pedido	Description Bezeichnung Omschrijving Désignation Descripción
1	4822 492 60789	Spring - Feder - Veer - Ressort - Resorte
2	4822 492 60793	Hook - Haken - Trekhaak - Patère - Gancho
3	4822 532 60293	Bush - Buchse - Bus - Manchon - Manguito
4	4822 271 30008	Microswitch - Mikroschalter - Microschakelaar - Commutateur micro - Micro interruptor
5	4822 462 70026	Cap - Kappe - Kapje - Capot - Tapa



ERE 2833

Fig. 11

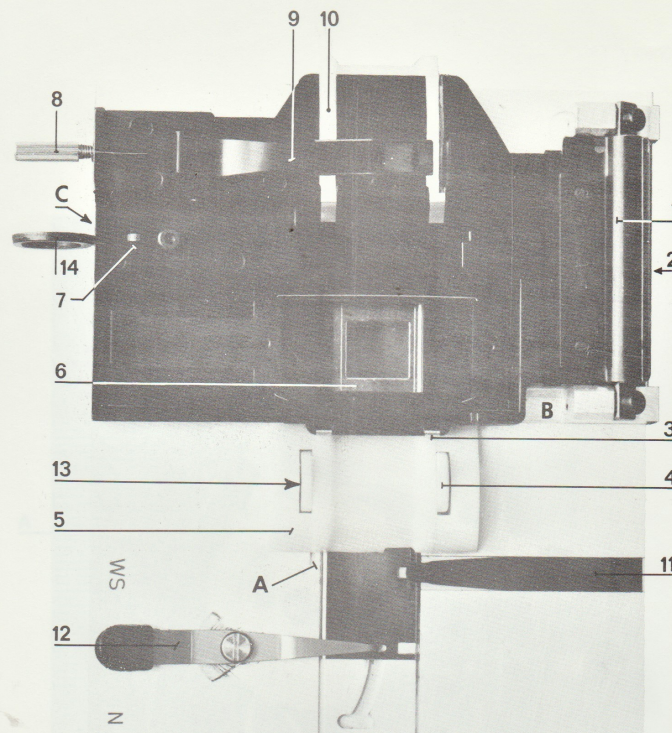


Fig. 12

ERE 2834

Item Pos. Pos. Rep. Pos.	Ordering number Bestellnummer Bestellnummer Numéro de commande Núm. de pedido	Description Bezeichnung Omschrijving Désignation Descripción
1	4822 492 60748	Spring - Feder - Veer - Ressort - Resorte
2	4822 492 60747	Spring - Feder - Veer - Ressort - Resorte
3	4822 463 30019	Pressure band - Druckband - Filmloopband - Patien - Banda presora
4	4822 532 50362	Disc - Scheibe - Schijf - Disque - Disco
5	4822 463 30017	Filmpath - Filmbahn - Filmbaan - Couloir - Pista del filme
6	4822 451 10022	Aperture - Maske - Masker - Cache - Máscara
7	4822 492 60746	Spring - Feder - Veer - Ressort - Resorte
8	4822 502 10534	Screw - Schraube - Schroef - Vis - Tornillo
9	4822 492 60749	Spring - Feder - Veer - Ressort - Resorte
10	4822 463 10017	Skate - Kufe - Scheen - Patien - Patín
11	4822 492 61221	Spring - Feder - Snapperveer - Ressort - Resorte
12	4822 466 80333	Handle - Griff - Maskerkiezer - Levier - Manivela
13	4822 492 61222	Spring - Feder - Veer - Ressort - Resorte
14	4822 498 60188	Lock - Riegel - Grendel - Verrou - Cerrojo

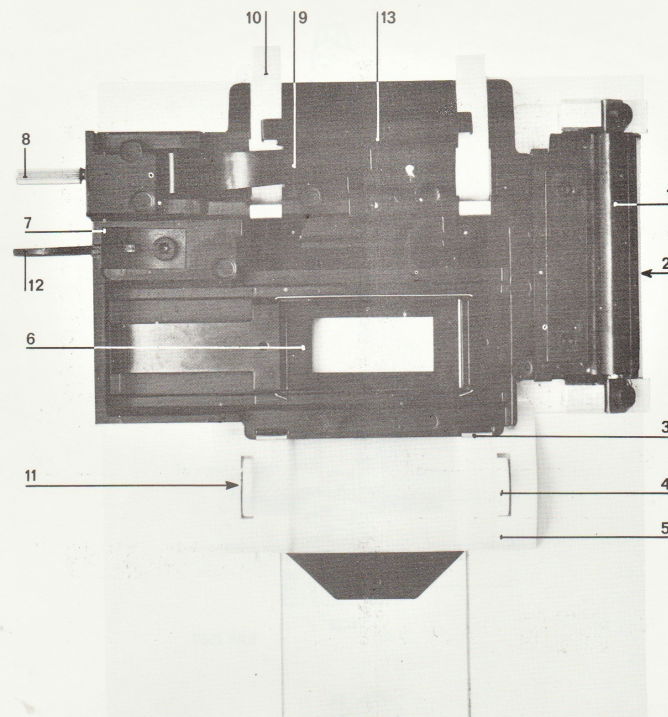


Fig. 13

ERE 2835

Item Pos. Rep. Pos.	Ordering number Bestellnummer Bestelnummer Numéro de commande Núm. de pedido	Description Bezeichnung Omschrijving Désignation Descripción
1	4822 492 60748	Spring - Feder - Veer - Ressort - Resorte
2	4822 492 60747	Spring - Feder - Veer - Ressort - Resorte
3	4822 463 30022	Pressure band - Druckband - Filmloopband - Patien - Banda presora
4	4822 532 50362	Disc - Scheibe - Schijf - Disque - Disco
5	4822 463 30015	Filmpath - Filmbahn - Filmbaan - Couloir - Pista de filme
6	4822 451 10023	Aperture - Maske - Masker - Cache - Máscara
7	4822 492 60746	Spring - Feder - Veer - Ressort - Resorte
8	4822 502 10534	Screw - Schraube - Schroef - Vis - Tornillo
9	4822 492 60749	Spring - Feder - Veer - Ressort - Resorte
10	4822 463 10015	Skate - Kufe - Scheen - Patien - Patín
11	4822 492 61222	Spring - Feder - Zijdrukveer - Ressort - Resorte
12	4822 498 60188	Lock - Riegel - Grendel - Verrou - Cerrojo
13	4822 404 50272	Spring - Feder - Veer - Ressort - Resorte

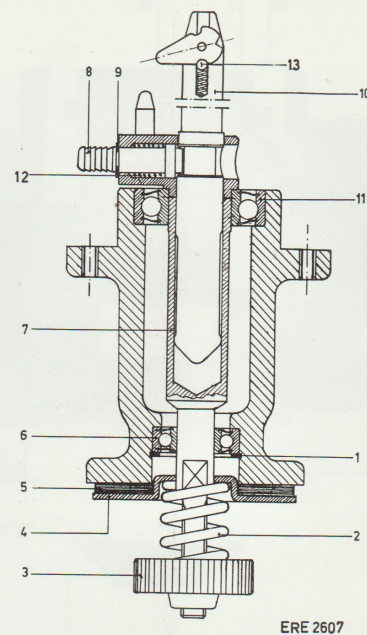


Fig. 14

Item Pos. Rep. Pos.	Ordering number Bestellnummer Bestellnummer Numéro de commande Núm. de pedido	Description Bezeichnung Omschrijving Désignation Descripción
1	4822 530 70022	Ring - Ring - Ring - Anneau - Anillo
2	4822 492 50064	Spring - Feder - Veer - Ressort - Resorte
3	4822 505 10206	Nut - Mutter - Moer - Ecrou - Tuerta
4	4822 492 61197	Disc - Scheibe - Schijf - Disque - Disco
5	4822 532 50028	Ring - Ring - Vitring - Anneau - Anillo
6	4822 520 20076	Ball-bearing - Kugellager - Kogellager - Palier - Cojinete
7	4822 535 90203	Shaft - Welle - As - Axe - Eje
8	4822 360 50145	Catch - Sperrklinke - Plunger - Arrêt - Gatillo
9	4822 530 70007	Ring - Feder - Borgring - Ressort - Resorte
10	4822 693 50065 (35 mm) 4822 693 50066 (70 mm) 4822 693 50067 (U. S. A.)	Spoolshaft - Spulenaxen - Spoelas - Axe bobine - Eje de bobina
11	4822 520 20099	
12	4822 492 50415	Spring - Feder - Veer - Ressort - Resorte
13	4822 520 40012	Ball - Kugel - Kogel - Bille - Bala

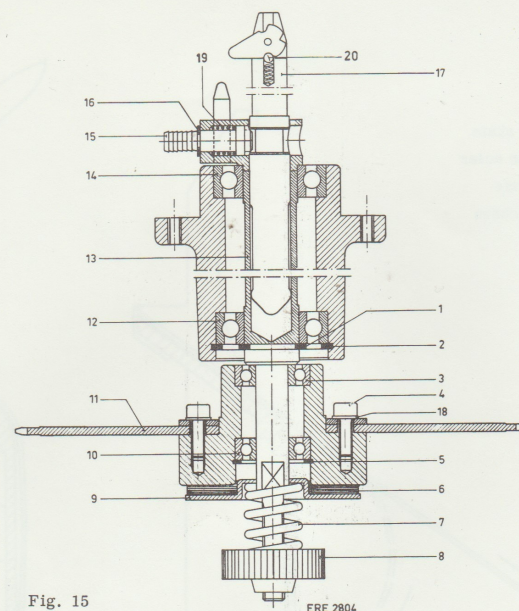


Fig. 15

ERE 2804

Item Pos. Rep. Pos.	Ordering number Bestellnummer Bestelnummer Numéro de commande Núm. de pedido	Description Bezeichnung Omschrijving Désignation Descripción
1	4822 530 70034	Ring - Ring - Borgring - Anneau - Anillo
2	4822 530 70022	Ring - Ring - Borgring - Anneau - Anillo
3, 10	4822 520 20076	Ball-bearing - Kugellager - Kogellager - Palier - Cojinete
4	4822 502 10077	Screw - Schraube - Schroef - Vis - Tornillo
5	4822 530 70022	Ring - Ring - Borgring - Anneau - Anillo
6	4822 532 50028	Ring - Ring - Viltring - Anneau - Anillo
7	4822 492 50064	Spring - Feder - Veer - Ressort - Resorte
8	4822 505 10206	Nut - Mutter - Moer - Erou - Tuerta
9	4822 492 61197	Disc - Scheibe - Schijf - Disque - Disco
11	4822 522 30105	Chain wheel - Kettenrad - Kettingwiel - Pignon - Piñon
12, 14	4822 520 20099	Ball-bearing - Kugellager - Kogellager - Palier - Cojinete
13	4822 535 90202	Shaft - Welle - As - Axe - Eje
15	4822 360 50145	Catch - Sperrklinke - Plunger - Arrêt - Gatillo
16	4822 530 70007	Ring - Ring - Borgring - Anneau - Anillo
17	4822 693 50065 (35 mm) 4822 693 50066 (70 mm) 4822 693 50067 (U.S.A.)	Spool shaft - Spulenaxen - Spoelas - Axe bobine - Eje de bobina
18	4822 530 80089	
19	4822 492 50415	
20	4822 520 40012	Ball - Kugel - Kogel - Bille - Bala

Fitting the steel skate
Fixation courroie acier
Einsetzen Stahlkufe
Inzetten stalen scheen

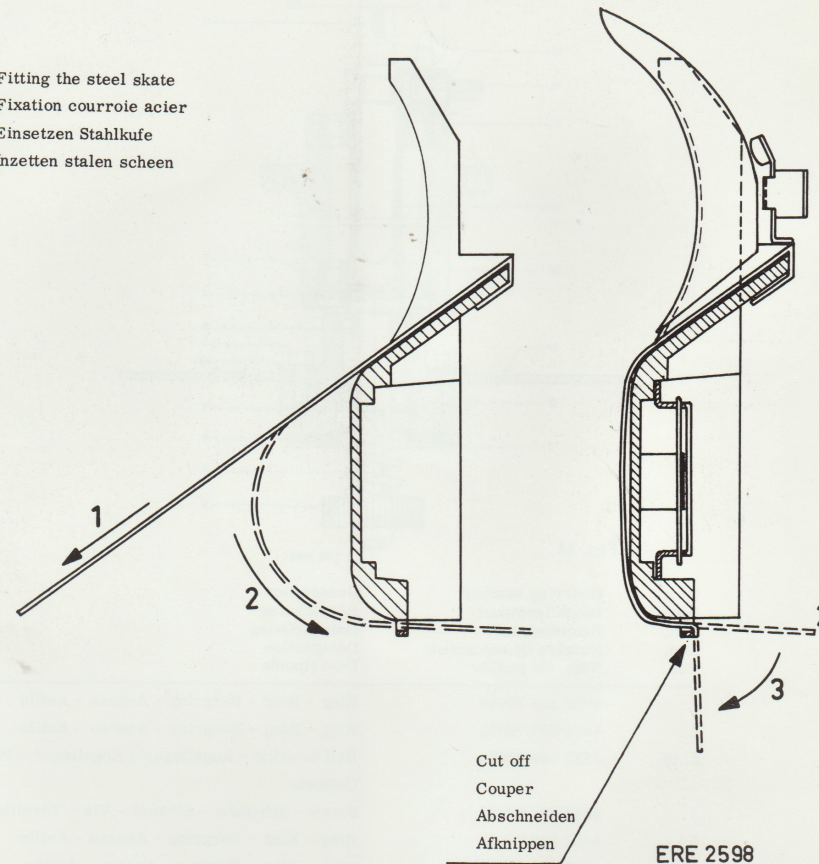


Fig. 16

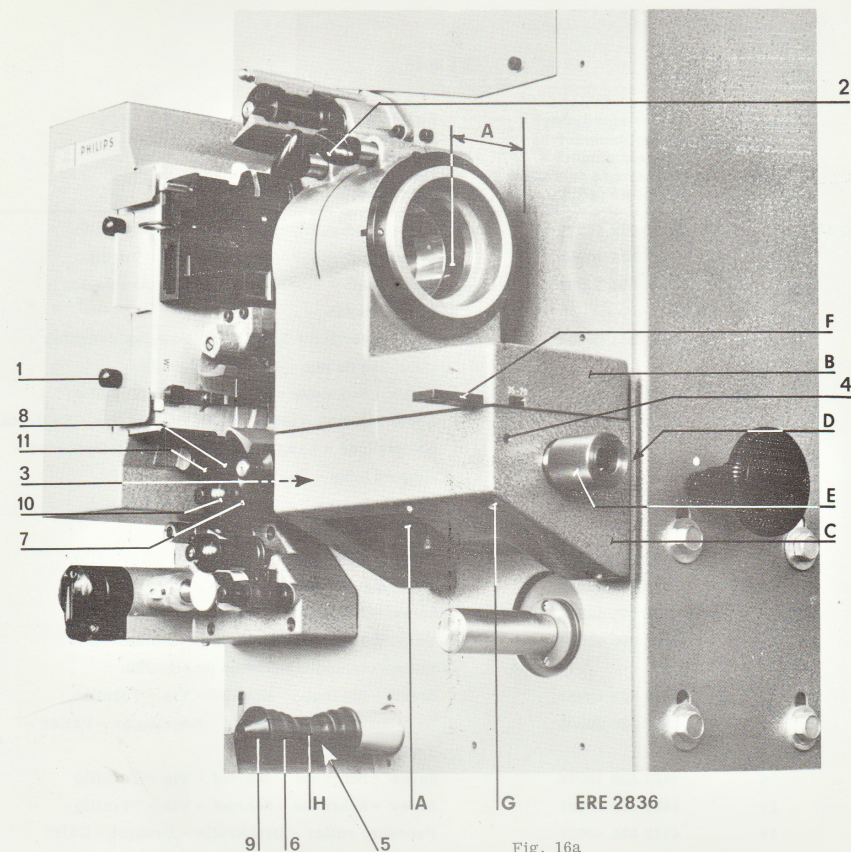


Fig. 16a

Item Pos. Rep. Pos.	Ordering number Bestellnummer Bestellnummer Numéro de commande Núm. de pedido	Description Bezeichnung Omschrijving Désignation Descripción
1	4822 505 10192	Nut - Mutter - Dopmoer - Ecrou - Tuerca
2	4822 498 60121	Screw - Schraube - Vis - Schroef - Tornillo
3	4822 492 50069	Spring - Feder - Veer - Ressort - Resorte
4	4822 520 40016	Ball - Kugel - Kogel - Bille - Bale
5	4822 492 50589	Spring - Feder - Veer - Ressort - Resorte
6	4822 525 60076	Half flange roller - Halbe Flanschrolle - Halve rol - Rouleau collet - Medio rodillo
7	4822 525 60096	Half flange roller - Halbe Flanschrolle - Halve rol - Rouleau collet - Medio rodillo
8	4822 525 60095	Half flange roller - Halbe Flanschrolle - Halve rol - Rouleau collet - Medio rodillo
9	4822 462 70476	Cap - Kappe - Dop - Capot - Tapa
10	4822 462 70374	Cap - Kappe - Dop - Capot - Tapa
11	4822 462 70373	Cap - Kappe - Dop - Capot - Tapa
	4822 525 60097	Fire trap roller (big), half - Feuerschutzkanal (gross), halbe - Brandslotrol (groot), half - Rouleau d'étouffoir (grand), demi - Rodillo de cierre ante-incendio (grande), medio
	4822 525 60098	Fire trap roller (small), - Feuerschutzkanal (klein), Brandslotrol (klein), - Rouleau d'étouffoir (petit), Rodillo de cierre ante-incendio (menor).

	Item Pos. Rep. Pos.	Ordering number Bestellnummer Bestelnummer Número de commande Núm. de pedido	Description Bezeichnung Omschrijving Désignation Descripción
Fig. 17	1	4822 502 10071	Screw - Schraube - Schroef - Vis - Tornillo
	2	4822 502 10064	Screw - Schraube - Schroef - Vis - Tornillo
	3	4822 535 50039	Sound shaft - Tonwelle - Toonas - Axe de son - Eje de sonido
	4	4822 381 20004	Sound objective - Tonoptiek - Sam. spleetoptiek - Objective de son - Objetivo de sonido
	5	4822 502 10019	Screw - Schraube - Schroef - Vis - Tornillo
	6	4822 693 50058	Cover - Haube - Sam. deksel - Couvercle - Cubierta
	7	4822 255 20021	Lampholder - Lampenfassung - Sam. lamphouder - Support lamp - Portalámpara
	8	4822 134 80008 (5 V - 4 A)	Exciter lamp - Tonlampe - Belichtingslamp - Lampe exicatrice - Lámpara excitadora
	10	4822 502 10041	Screw - Schraube - Schroef - Vis - Tornillo
	11	4822 505 10012	Nut - Mutter - Moer - Ecrou - Tuerta
	12	4822 502 10079	Screw - Schraube - Schroef - Vis - Tornillo
	13	4822 290 60044	Terminal - Anschlussleiste - Aansluitblok - Bloque connexion - Bloque de conexión
	14	4822 502 10042	Screw - Schraube - Schroef - Vis - Tornillo
	15	4822 520 20003	Ball-bearing - Kugellager - Kogellager - Palier - Cojinete
	16	4822 502 10077	Screw - Schraube - Schroef - Vis - Tornillo
	17	4822 502 10007	Screw - Schraube - Schroef - Vis - Tornillo
	18	4822 525 60022	Pressure roller - Druckrolle - Drukrol - Galet presseur - Rodillo presor
	19	4822 530 70018	Circlip - Ring - Binnenborgring - Anneau - Anillo
	20	4822 520 20061	Ball-bearing - Kugellager - Kogellager - Palier - Cojinete
	21	4822 532 10094	Ring - Ring - Ring - Anneau - Anillo
	22	4822 502 10051	Screw - Schraube - Schroef - Vis - Tornillo
	23	4822 462 70374	Cap - Kappe - Dop - Capot - Tapa
	24	4822 502 10225	Screw - Schraube - Schroef - Vis - Tornillo
	25	4822 492 40001	Spring - Feder - Veer - Ressort - Resorte
	26	4822 502 10067	Screw - Schraube - Schroef - Vis - Tornillo
	27	4822 404 50018	Lever - Hebearm - Hefboom - Levier - Palanca
	28	4822 532 10373	Ring - Ring - Ring - Anneau - Anillo
	29	4822 502 10556	Screw - Schraube - Schroef - Vis - Tornillo
	30	4822 532 10168	Ring - Ring - Ring - Anneau - Anillo
	31	4822 502 10558	Screw - Schraube - Schroef - Vis - Tornillo
	32	4822 525 60095	Guide roller - Rolle - Leirol - Galet - Rodillo de gufa
	33	4822 462 70373	Cap - Kappe - Dop - Capot - Tapa
	34	4822 256 90017	Soldar celholder - Solar-Celle-Halter - Solarcel houder - Support solar - Soporte de célula solar
		4822 130 90005	Solar cel - Solar-Celle - Solarcel - Solar - Célula solar

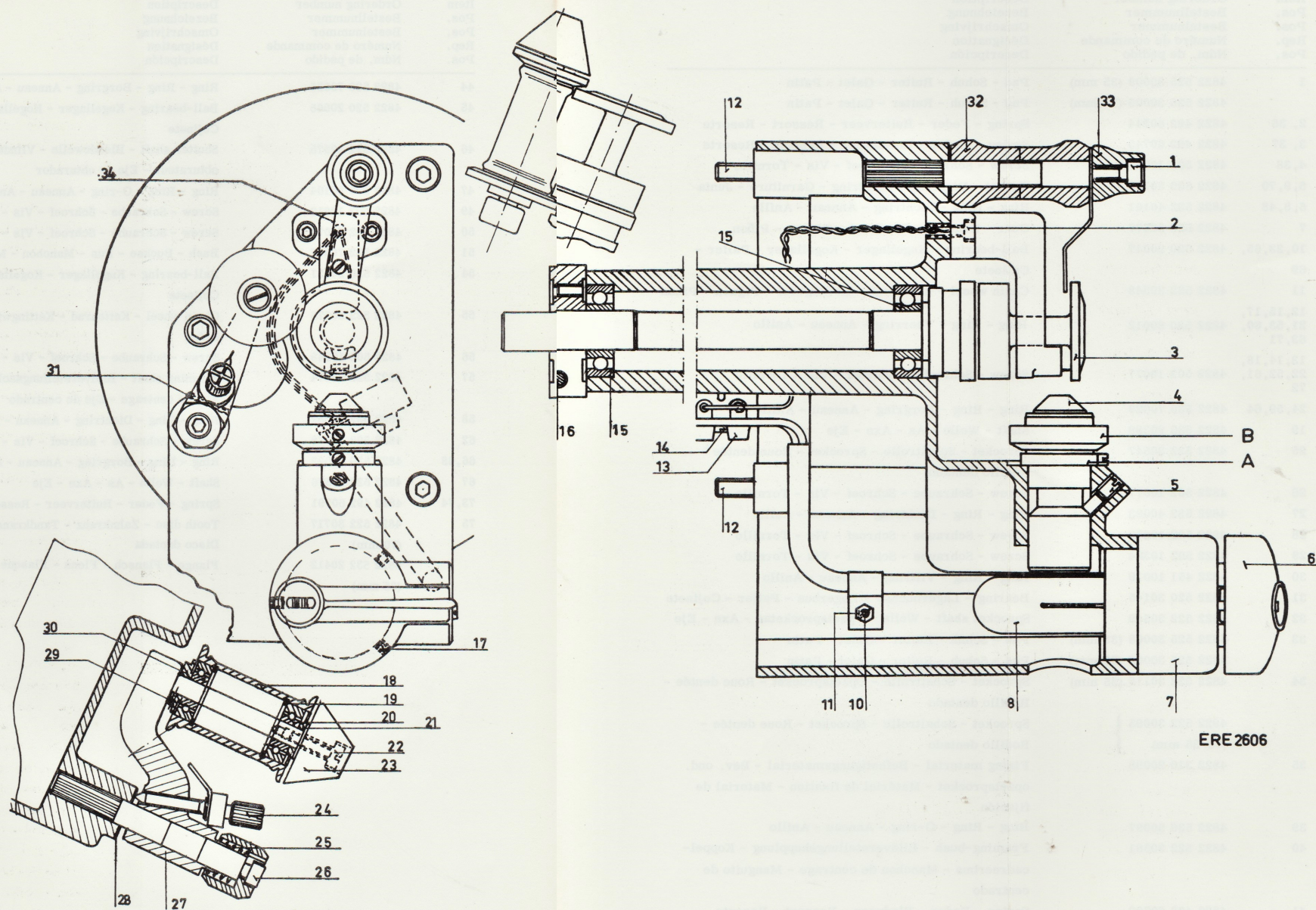
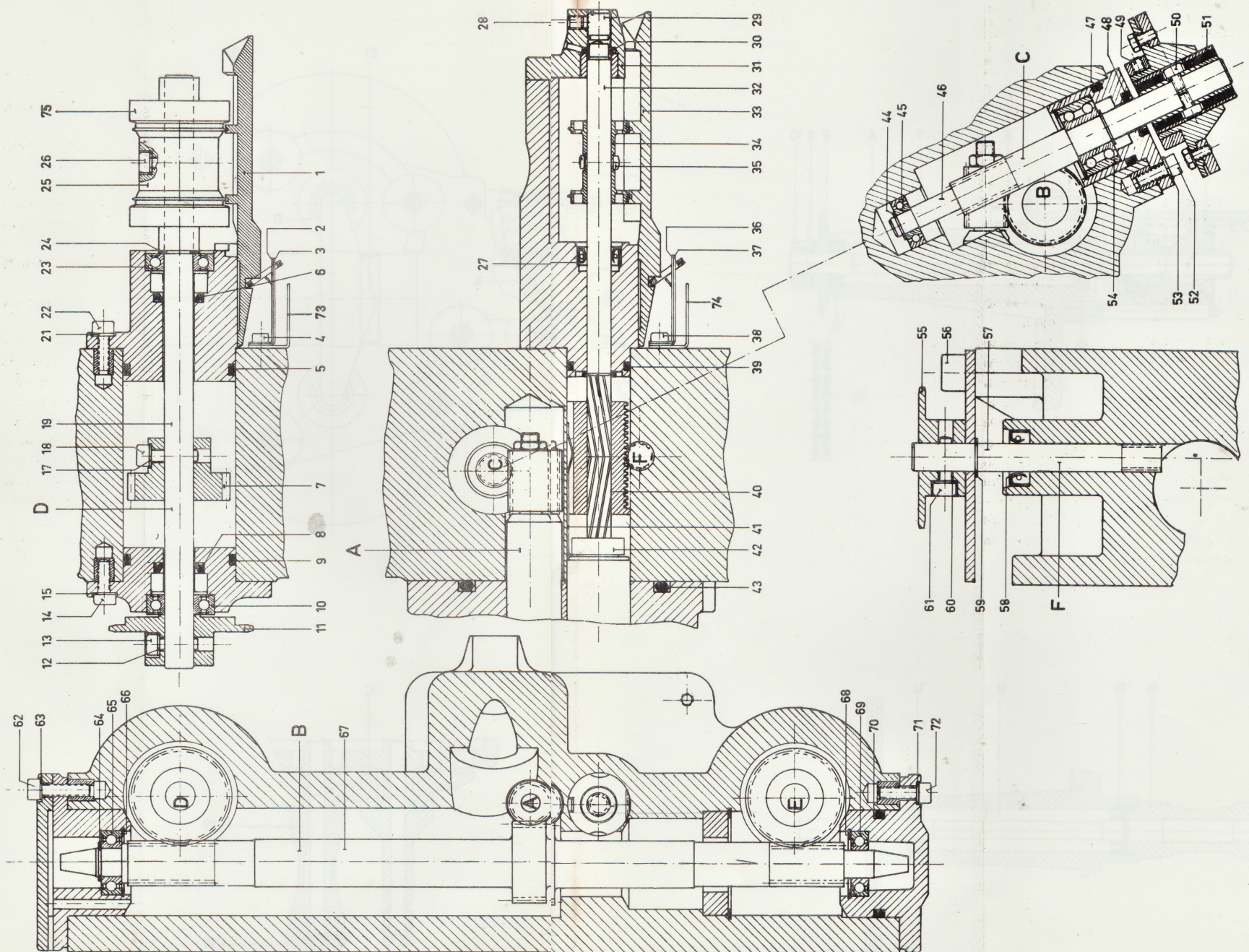


Fig 7

	Item Pos. Pos. Rep. Pos.	Ordering number Bestellnummer Bestellnummer Número de commande Núm. de pedido	Description Bezeichnung Omschrijving Désignation Descripción
Fig. 18	1	4822 525 30009 (35 mm)	Pad - Schuh - Ruiter - Galet - Patin
		4822 525 30005 (70 mm)	Pad - Schuh - Ruiter - Galet - Patin
	2, 36	4822 492 60744	Spring - Feder - Ruiterveer - Ressort - Resorte
	3, 37	4822 492 60745	Spring - Feder - Ruiterveer - Ressort - Resorte
	4, 38	4822 502 10047	Screw - Schraube - Schroef - Vis - Tornillo
	5, 9, 70	4822 530 50109	Gasket - Dichtung - Dichtring - Garniture - Junta
	6, 8, 48	4822 532 40101	Ring - Ring - Dichtring - Anneau - Anillo
	7	4822 522 30577	Gear - Zahnrad - Tandwiel - Pignon - Piñon
	10, 23, 65,	4822 520 20047	Ball-bearing - Kugellager - Kogellager - Palier -
	69		Cojinete
	11	4822 522 30548	Chain wheel - Kettenrad - Kettingwiel - Pignon - Piñon
	12, 15, 17,		
	21, 53, 60,	4822 530 80012	Ring - Ring - Veerring - Anneau - Anillo
	63, 71		
	13, 14, 18,		
	22, 52, 61,	4822 502 10077	Screw - Schraube - Schroef - Vis - Tornillo
	72		
	24, 59, 64	4822 530 70029	Ring - Ring - Borgring - Anneau - Anillo
	19	4822 535 90389	Shaft - Welle - As - Axe - Eje
	25	4822 522 30547	Sprocket - Schaltrolle - Sprocket - Roue dentée -
			Rodillo dentado
	26	4822 502 10077	Screw - Schraube - Schroef - Vis - Tornillo
	27	4822 532 40083	Ring - Ring - Dichtring - Anneau - Anillo
	28	4822 502 10273	Screw - Schraube - Schroef - Vis - Tornillo
	29	4822 502 10304	Screw - Schraube - Schroef - Vis - Tornillo
	30	4822 451 10019	Ring - Ring - Viltring - Anneau - Anillo
	31	4822 520 30145	Bearing - Lagerbuchse - Lagerbus - Palier - Cojinete
	32	4822 522 30549	Sprocket shaft - Welle - Opzetsprocketas - Axe - Eje
	33	4822 525 30008 (35 mm)	Pad - Schuh - Ruiter - Galet - Patin
		4822 525 30006 (70 mm)	Pad - Schuh - Ruiter - Galet - Patin
	34	4822 522 30118 (35 mm)	Sprocket - Schaltrolle - Opzetsprocket - Roue dentée -
			Rodillo dentado
		4822 522 30095 } (70/35 mm)	Sprocket - Schaltrolle - Sprocket - Roue dentée -
			Rodillo dentado
	35	4822 310 20098	Fixing material - Befestigungsmaterial - Bev. ond. opzetsprocket - Matériel de fixation - Material de fijación
	39	4822 530 50097	Ring - Ring - O-ring - Anneau - Anillo
	40	4822 522 30581	Framing-bush - Bildverstellungskupplung - Koppel- cadreerbus - Manchon de centrage - Manguito de centrado
	41	4822 492 60792	Spring - Feder - Bladveer - Ressort - Resorte
	42	4822 525 20015	Intermittent movement - Schaltgetriebe - Malteserkruijs Mouvement intermittent - Cruz de malta
	43	4822 530 50147	Ring - Ring - O-ring - Anneau - Anillo

Item Pos. Rep. Pos.	Ordering number Bestellnummer Bestelnummer Numéro de commande Núm. de pedido	Description Bezeichnung Omschrijving Désignation Descripción
44	4822 530 70035	Ring - Ring - Borgring - Anneau - Anillo
45	4822 520 20065	Ball-bearing - Kugellager - Kogellager - Palier - Cojinete
46	4822 522 30575	Shutter shaft - Blendewelle - Vlinderas - Axe obturateur - Eje de obturador
47	4822 530 50104	Ring - Ring - O-ring - Anneau - Anillo
49	4822 502 10019	Screw - Schraube - Schroef - Vis - Tornillo
50	4822 502 10074	Screw - Schraube - Schroef - Vis - Tornillo
51	4822 532 70097	Bush - Buchse - Bus - Manchon - Manguito
54	4822 520 20131	Ball-bearing - Kugellager - Kogellager - Palier - Cojinete
55	4822 522 30578	Chain wheel - Kettenrad - Kettingwiel - Pignon - Piñon
56	4822 502 10248	Screw - Schraube - Schroef - Vis - Tornillo
57	4822 522 30574	Framing shaft - Bildverstellungssachse - Kadreeras - Axe de centrage - Eje de centrado
58	4822 532 40082	Ring - Ring - Dichtring - Anneau - Anillo
62	4822 502 10078	Screw - Schraube - Schroef - Vis - Tornillo
66, 68	4822 530 70022	Ring - Ring - Borgring - Anneau - Anillo
67	4822 522 30576	Shaft - Welle - As - Axe - Eje
73, 74	4822 492 60791	Spring - Feder - Ruiterveer - Ressort - Resorte
75	4822 522 30717	Tooth disc - Zahnkranz - Tandkrans - Disque dentée
	(70 mm)	Disco dentada
	4822 532 20412	Flange - Flansch - Flens - Flasque - Brida
	(35 mm)	



ERE 2597

Fig. 18

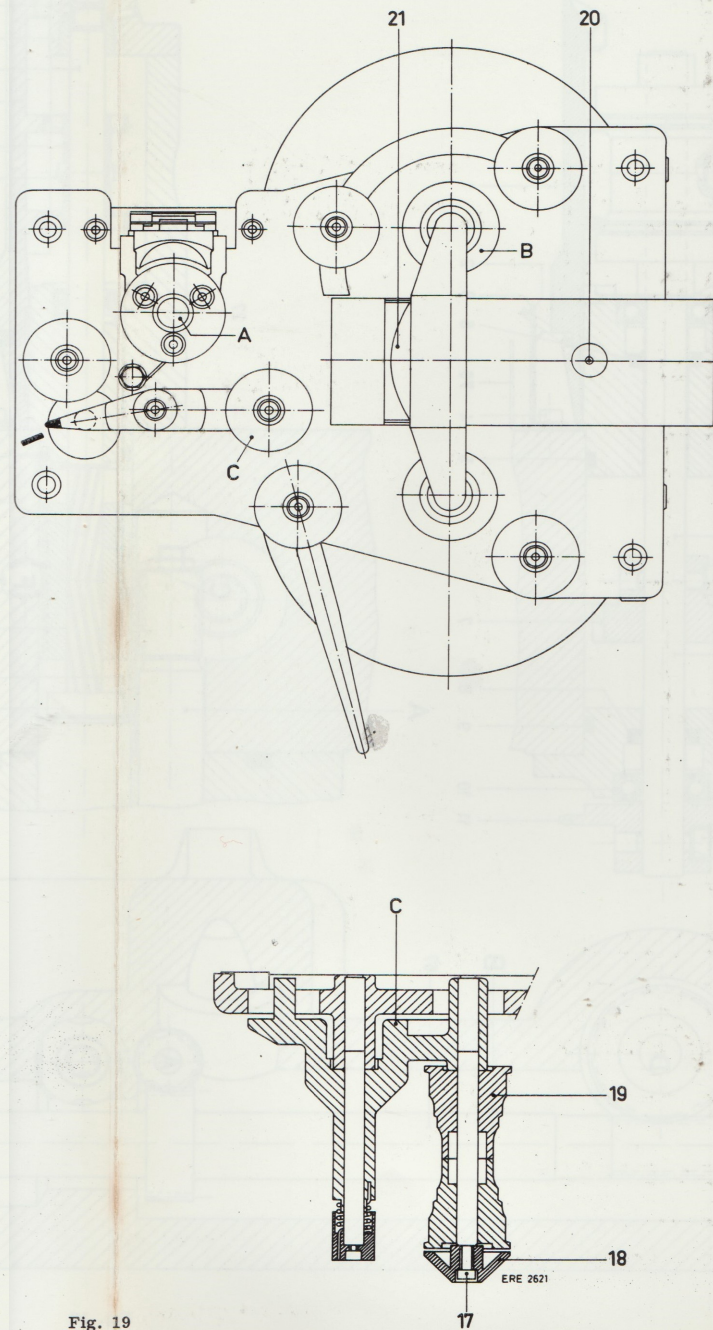
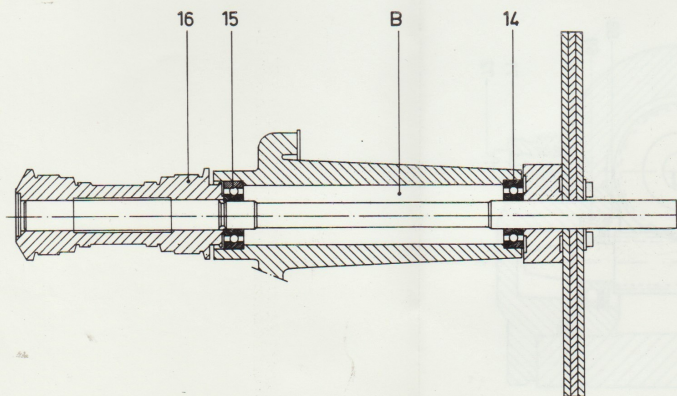
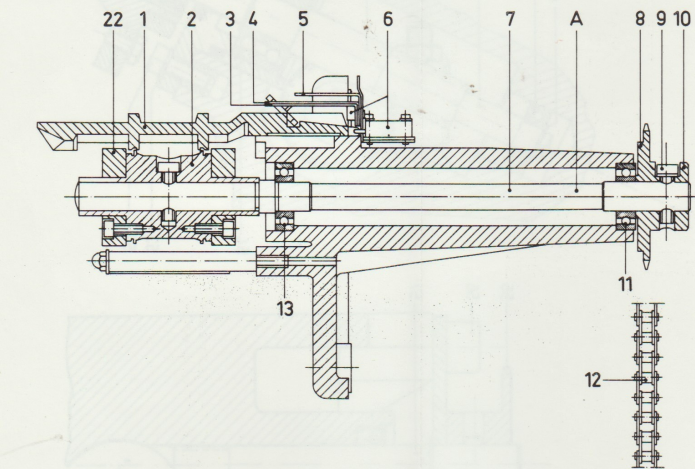
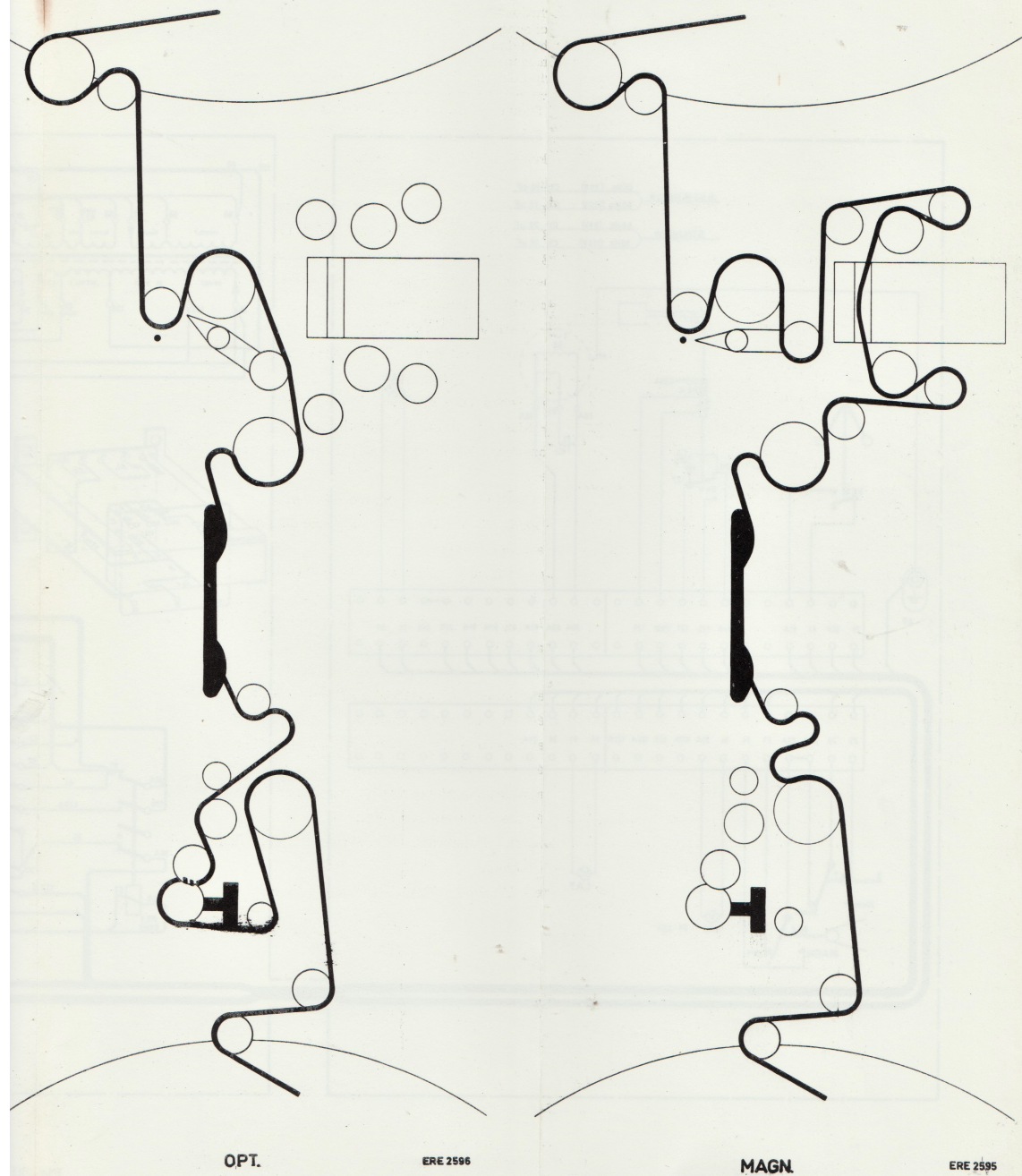


Fig. 19

	Item Pos. Pos. Rep. Pos.	Ordering number Bestellnummer Bestellnummer Numéro de commande Núm. de pedido	Description Bezeichnung Omschrijving Désignation Descripción
Fig. 19	1	4822 525 30009 (35 mm)	Pad - Schuh - Ruiter - Galet - Patfn
		4822 525 30005 (70 mm)	Pad - Schuh - Ruiter - Galet - Patfn
	2	4822 522 30547	Sprocket - Schaltrolle - Sprocket - Roue dentée - Rodillo dentado
	3	4822 492 60744	Spring - Feder - Veer - Ressort - Resorte
	4	4822 492 60745	Spring - Feder - Veer - Ressort - Resorte
	5	4822 492 60791	Spring - Feder - Veer - Ressort - Resorte
	6	4822 271 30008	Microswitch - Mikroschalter - Microschakelaar - Commutateur - Micro interruptor
	7	4822 535 90201	Shaft - Welle - As - Axe - Eje
	8	4822 522 30548	Chain wheel - Kettenrad - Ketting wiel - Pignon - Piñon
	9	4822 502 10059	Screw - Schraube - Schroef - Vis - Tornillo
	10	4822 530 80007	Ring - Ring - Sluitring - Anneau - Anillo
	11, 13, 14, 15	4822 520 20003	Ball-bearing - Kugellager - Kogellager - Palier - Cojinete
	12	4822 358 50031	Chain - Kette - Ketting - Chaîne - Cadena
	16	4822 535 50048	Sound shaft - Tonwelle - Toonas - Axe de son - Lámpara excitadora
	17	4822 502 10051	Screw - Schraube - Schroef - Vis - Tornillo
	18	4822 462 70476	Cap - Kappe - Dop - Capot - Tapa
	19	4822 525 60076	Half flange roller - Halbe Flanschrolle - Halve flensrol Rouleau collet - Medio rodillo de brida
	20	4822 505 10192	Nut - Mutter - Dopmoer - Ecrou - Tuerta
	21	4822 249 30016 (4 channels)	Magnet cluster - Magnetkopf - Aftastkop - Tête magnétique - Cabeza magnética
		4822 249 10022 (10 channels)	Magnet cluster - Magnetkopf - Aftastkop - Tête magnétique - Cabeza magnética
		4822 249 10018 (6 channels)	Magnet cluster - Magnetkopf - Aftastkop - Tête magnétique - Cabeza magnética
	22	4822 522 30717 (70 mm)	Tooth disc - Zahnkranz - Tandkrans - Disque dentée - Disco dentada
		4822 532 20412 (35 mm)	Flange - Flansch - Flens - Flasque - Brida



OPT.

ERE 2596

MAGN.

ERE 2595

Fig. 20

CS11402

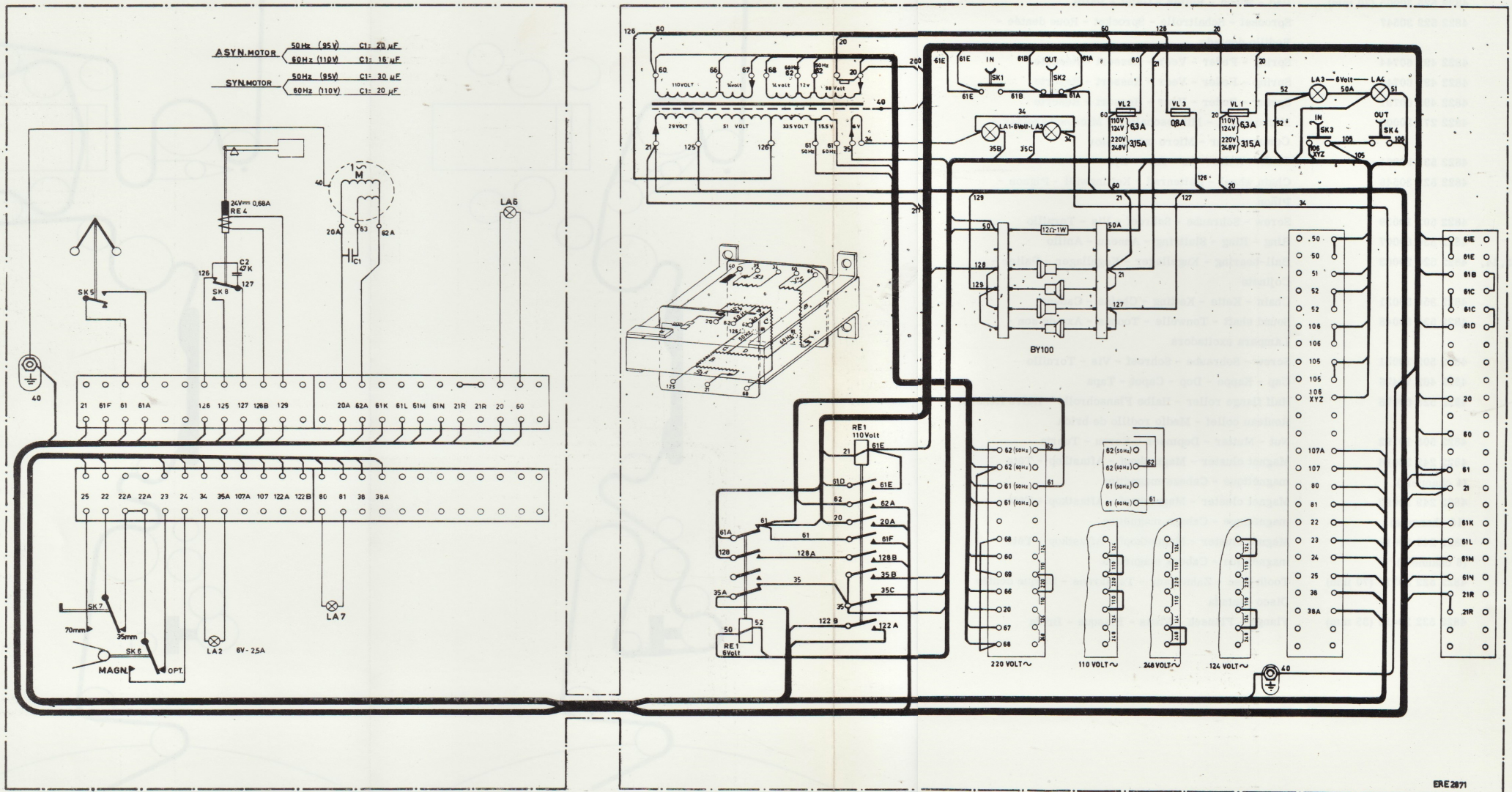
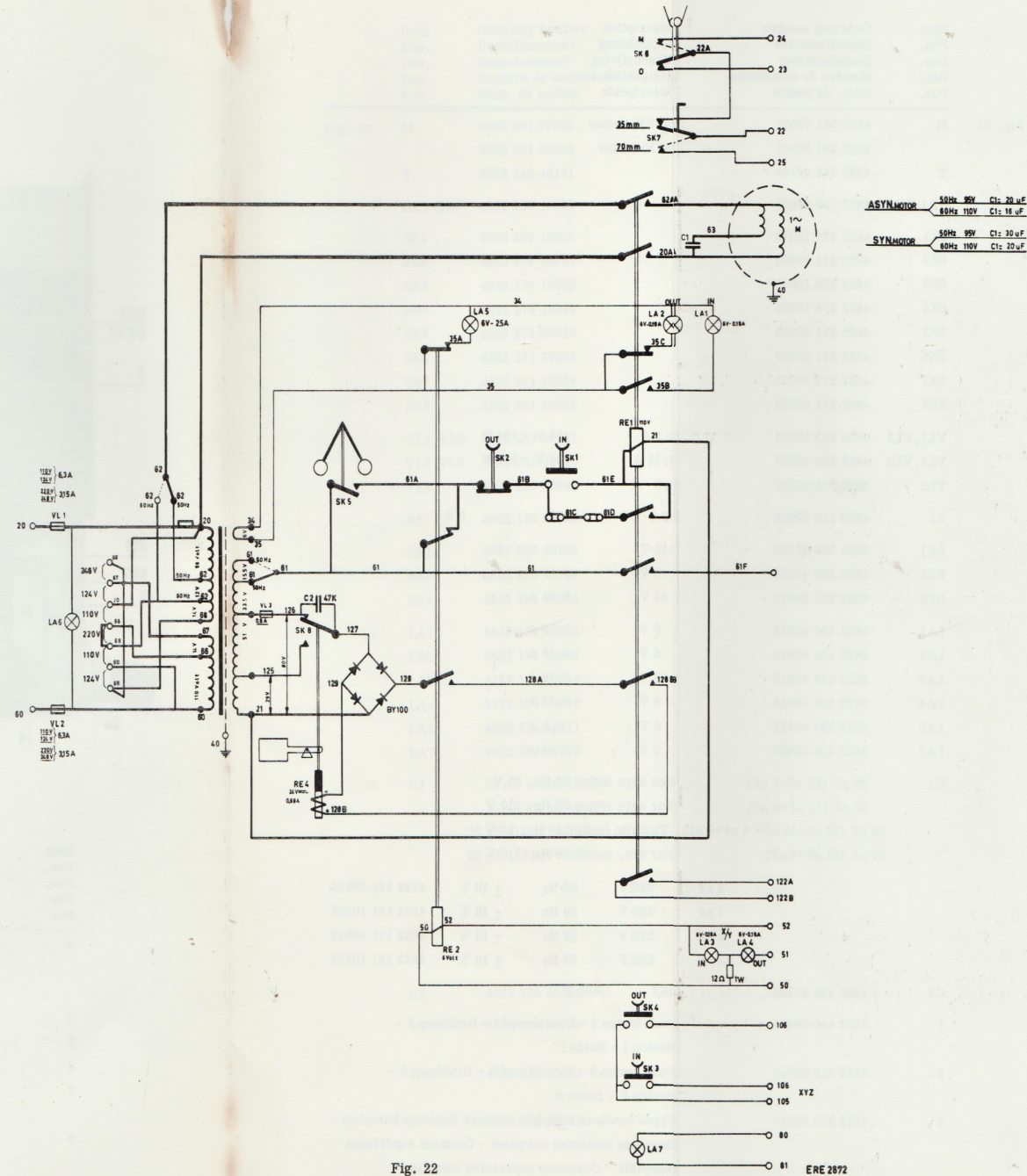


Fig. 21



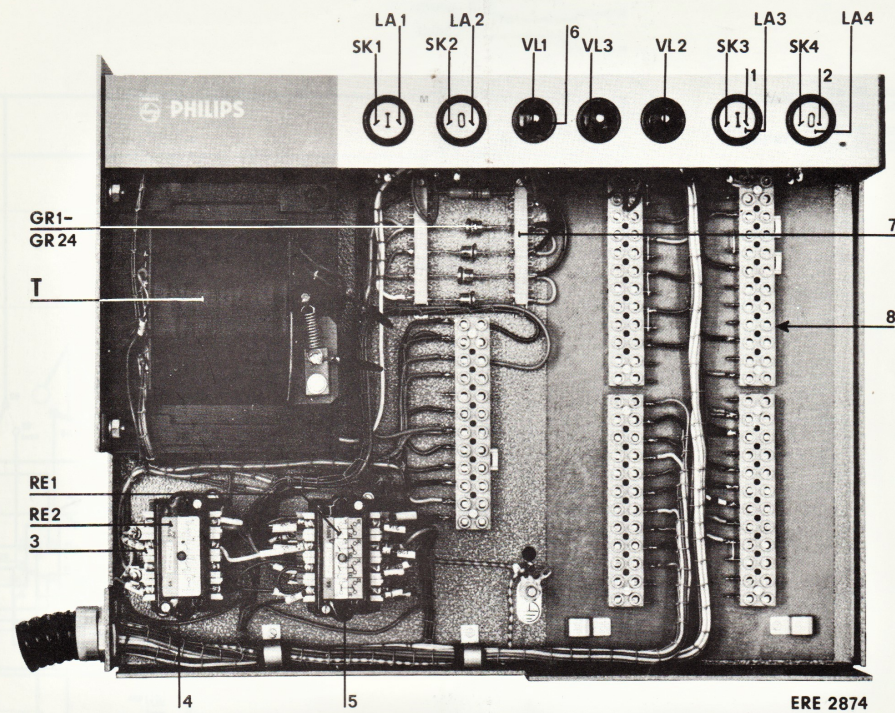


Fig. 23

Item Pos. Rep. Pos.	Ordering number Bestellnummer Bestellnummer Numéro de commande Núm. de pedido	Description Bezeichnung Omschrijving Désignation Descripción
3	4822 278 90214	Lower contacts complete - Untere Kontakte komplett, Onderste contacten, compleet - Contacts inférieurs complets - Contactos inferiores completo
4	4822 281 60081	Coil - Spule - Spoel - Bobine - Bobina
5	4822 281 60079	Coil - Spule - Spoel - Bobine - Bobina
6	4822 256 40001	Holder - Halter - Houder - Support - Portador
7	4822 290 60027	Chassis - Montageplatte - Montagesteun - Châssis - Chasis
8	4822 290 60044	Contact block - Kontaktblock - Aansluitblok - Contacteur - Bloque de contacto

	Item Pos. Pos. Rep. Pos.	Ordering number Bestellnummer Bestellnummer Numéro de commande Núm. de pedido	Description Bezeichnung Omschrijving Désignation Descripción
Fig. 23	M	4822 361 70085	(ASYN) motor
		4822 361 50042	(SYN) motor
	T	4822 146 40141	
	GR1-GR4	4822 130 40097	
	SK1	4822 276 10055	
	SK2	4822 276 10055	
	SK3	4822 276 10055	
	SK4	4822 276 10055	
	SK5	4822 271 30028	
	SK6	4822 271 30028	
	SK7	4822 271 30028	
	SK8	4822 271 30028	
	VL1,VL2	4822 253 30031	6,3 A 110 V - 124 V
	VL1,VL2	4822 253 30027	3,15 A 220 V - 248 V
	VL3	4822 253 30019	0,8 A
	R1	4822 110 20056	12 Ω 1 W 5 %
	RE1	4822 280 40105	110 V
	RE2	4822 280 40106	6 V
	RE4	4822 281 30016	24 V 0,68 A
	LA1	4822 134 40016	6 V 0,18 A
	LA2	4822 134 40016	6 V 0,18 A
	LA3	4822 134 40016	6 V 0,18 A
	LA4	4822 134 40016	6 V 0,18 A
	LA5	4822 134 40111	6 V 2,5 A
	LA7	4822 134 80008	5 V 4 A
	C1	20 μ F (12 μ F+8 μ F)	For asyn motor 50 Hz, 95 V
		16 μ F (12 μ F+4 μ F)	For asyn motor 60 Hz, 110 V
		30 μ F (12 μ F+12 μ F+ 4 μ F+2 μ F)	For syn. motor 50 Hz, 95 V
		20 μ F (12 μ F+8 μ F)	For syn. motor 60 Hz, 110 V
		2 μ F	220 V 50 Hz ± 10 % 4822 121 10134
		4 μ F	220 V 50 Hz ± 10 % 4822 121 10261
		8 μ F	220 V 50 Hz ± 10 % 4822 121 50012
		12 μ F	220 V 50 Hz ± 10 % 4822 121 10191
	C2	4822 120 40125	4K7 400 V
	1	4822 410 50001	Push button I - Druckknopf I - Drukknop I - Bouton I - Botón I
	2	4822 410 50002	Push button 0 - Druckknopf 0 - Drukknop 0 - Bouton 0 - Botón 0
	3	4822 278 90215	Upper contacts complete - Obere Kontakte komplett - Bovenste contacten compleet - Contacts supérieurs complèts - Contactos superiores completo

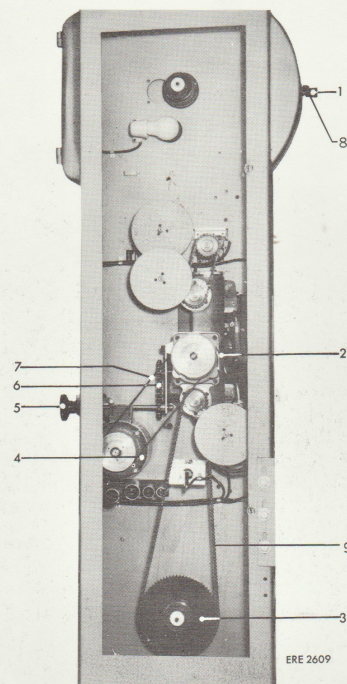


Fig. 24

Item Pos. Pos. Rep. Pos.	Ordering number Bestellnummer Bestellnummer Numéro de commande Núm. de pedido	Description Bezeichnung Omschrijving Désignation Descripción
1	4822 417 60045	Lock - Verschluss - Grendel - Verrou - Pestillo
2	4822 525 20015	Intermittent unit - Zaltgetriebe - Malteserkreis - Intermittent movement - Cruz de malta
3	4822 522 30105	Chain wheel - Kettenrad - Ketting wiel - Pignon - Píñon
4	4822 361 70085 (ASYN)	Motor - Motor - Motor - Moteur - Motor
	4822 361 50042 (SYN)	Motor - Motor - Motor - Moteur - Motor
5	4822 498 60133	Knob - Knopf - Knop - Bouton - Botón
6	4822 358 50029	Chain - Kette - Ketting - Chaine - Cadena
7	4822 358 10044	V-belt - Kellriemen - V-riem - Courroie-V - Correa en V
	4822 358 20027	Timing belt - Zahnriemen - Tandriem - Courroie dentée Correa dentada
8	4822 492 50067	Spring - Feder - Veer - Ressort - Resorte
9	4822 358 50032	Chain - Kette - Ketting - Chaine - Cadena

17-11-1967

EL 4075

Ed 18

Information

Mécanisme de projecteur

Démontage

Du côté arrière de fig. 1

- . Retirer courroie 1.
- . Retirer tuyaux d'eau de refroidissement 2
- . Retirer rondelle à ressort 3.
- . Dévisser roue à chaîne 4 et extraire axe 5.
- . Sortir chaîne 6 du projecteur.
- . Retirer roue à chaîne 7.
- . Retirer roue à chaîne 8.
- . Retirer chaîne 9 (détacher un maillon).
- . Retirer chaîne 10 (détacher un maillon).

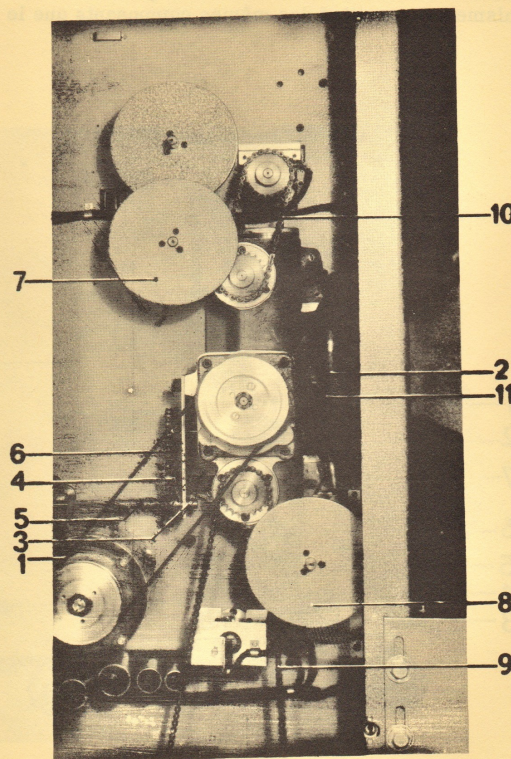
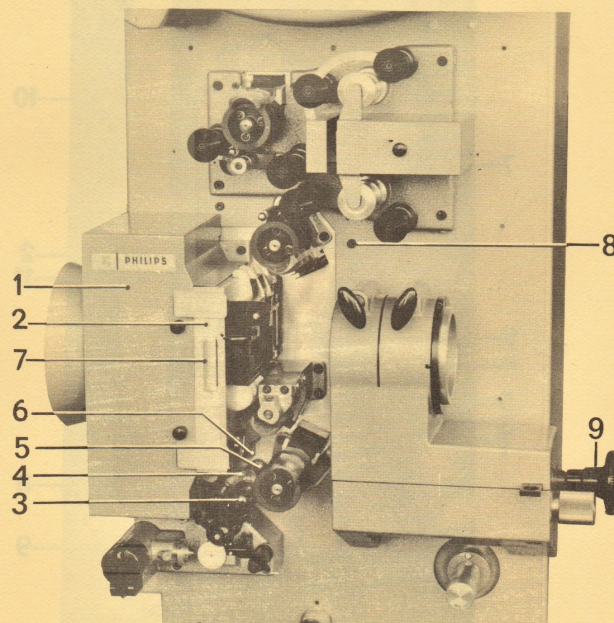


Fig. 1

ERE 3020

Du côté commande fig. 2

- . Oter capot d'obturateur 1 (2 vis d'ornement).
- . Oter cadre complet pour film (2).
- . Oter galets des tambours supérieur, inférieur et de croix de malte.
- . Oter tambours supérieur, inférieur et de croix de malte.
- . Replacer galets.
- . Retirer rouleau 3.
- . Retirer plaque 4 (1 vis).
- . Dévisser broche 5.
- . Enlever guide du cadre pour film 6 (3 vis).
- . Enlever support de lentille 7.
- . Pousser une équerre dans l'angle du socle avec mécanisme de projecteur.
- . Reposer équerre sur broche 1, fig. 3 et apporter un fin trait-repère sur le cabinet du projecteur.
- . Répéter ce qui précède selon fig. 4 et apporter un fin trait-repère en haut et en bas.
- . Desserrer les quatre vis 8. Veiller à ce le mécanisme ne tombe pas.
- . Sortir le mécanisme du côté arrière du cabinet.
- . Retirer 4 vis 11, fig. 1.
- . Retirer bague.
- . Retirer obturateur.
- . Repasser bague sur l'axe et refixer à l'aide des quatre vis 11.
- . L'ancien mécanisme est constitué des mêmes composants que le nouveau.



ERE 3021

Fig. 2

CS12674

Montage et ajustage

- . Monter obturateur sur nouveau mécanisme.
- . Placer mécanisme dans le cabinet du projecteur et resserrer quatre vis 11.
- . Déplacer mécanisme pour que repères correspondent aux équerres placées selon fig. 3 et 4.
- . Resserrer quatre vis.
- . Monter autres composants.

Ajuster papillon comme suit:

avec tambour 35 mm

- . Tourner tambour de croix de malte avec bouton 9, fig. 2 au début d'une période de commutation. Apporter repère.
- . Tourner avec bouton 9 tambour de 2 crans plus loin.
- . Dans cette position du tambour déplacer obturateur pour que trait sur obturateur se trouve au milieu du masque.
- . Contrôler sur écran si mécanisme est bien ajusté.
- . Retoucher au besoin.
- . Goupiller mécanisme (pratiquer dans nouveau mécanisme mêmes trous que ceux existant dans coffret du projecteur).

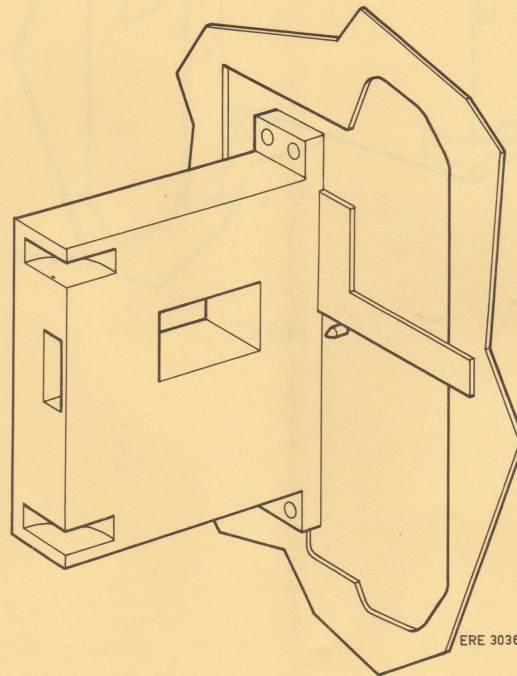


Fig. 3

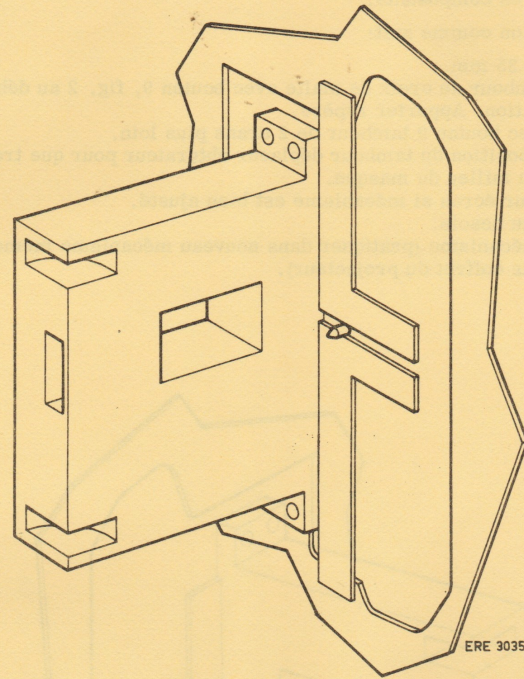


Bild 4



5-2-1968	EL4075	Ed 21
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Information

ERRATA

Page

4	C.S. (0.822" x 0.814")	read	C.S. (0.822" x 0.714").
9	Projector mechanism	read	Projector mechanism, oil capacity 0,7 l.
	Cardan oil 5867	read	Cardan oil 8657
12	Loosen screw G	read	Remove screw G
	It should be possible to		It should be possible to slide
	slide the sprocket smoothly	read	the sprocket smoothly onto the
	onto the shaft		shaft, if necessary heat the
			sprocket with a match.
14	Adjust intermittent sprocket	read	Adjust intermittent sprocket
	with knob E, Fig. 4		with motor knob.
15	Remove chain D fig. 4	read	Remove chain from D.
	Remove lower lid D	read	Remove lower lid F
16	Adjusting Fig. 4 page 11	read	Adjusting Fig. 16a
	Remove disc 4, handel 11	read	Remove disc 4, spring 11.
	Screw runner plate tight		
	Check that the aperture can		
	be shifted smoothly. If	read	Screw runner plate tight.
	necessary, slightly pile		
	off the ribs at the rear		
17	Capstan optical sound head	read	Capstan optical sound head Fig. 17.
	Remove cover	read	Remove solarcellholder
18	Next, place a rubber belt	read	Next, place a rubber band
19	Lock ring B	read	Lock ring B with screw 5.



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Information

Delrin skates and steel pressure strips (35 mm and 70 mm).
From now on the following code numbers will be available in boxes containing 20 skates or strips:

page 28	item 3	4822 463 30019	pressure strip
	item 10	4822 463 10017	skate
page 29	item 3	4822 463 30022	pressure strip
	item 10	4822 463 10015	skate

Orders should be placed for one box of 20 skates or strips or for multiples thereof.

Both the delrin skates and the steel strips are subject to wear and should, therefore, be regularly checked and timely replaced.

Do not project films with a projector whose skates and strips are worn too much. During projection they may break and damage the film.

Framing bushings.

If rattle is audible, when the projector is operated without film, and if this rattle disappears when pivot screw K is turned in slightly further, this means that framing bushing D does not fit tight. The bushing should be replaced (see Service Notes, page 11, Fig.3).

The following text belongs to Fig.11, page 32:

- . Insert the steel pressure strip in the groove (1). Ensure that it remains straight.
 - . Then pierce the rectangular opening at A (2) as shown by the dotted line.
 - . Next, tighten in direction of arrow and when pulling bend it at right angles(3).
- Cut off the protruding section at A with the aid of scissors.
A space of 2 mm (0.078") is required. (see Fig. a)

Asynchronous motor.

Run-in projectors may gain speed unnecessarily rapidly, so that during starting backlash occurs at the lower spool, especially when heavy spools are used (e.g. Goldring). In these cases the values of the starting capacitors should be decreased so much (in steps of 2 μ F) that the projector gains speed more slowly. When the values of the starting capacitors are too low, the projector may remain in the intermittent position, when starting.

The starting capacitors have the following values: 12-12-10-8-4-2 μ F. The first 25 projectors (serial numbers 501...525) have been equipped with motors with a reduced starting torque. When starting this should be increased by switching in an additional capacitor C3 (32 μ F).

When changing from one projector to another this capacitor is switched out (via a relay). If these motors should be replaced, check that:

1. C1 has the correct value (indicated on the motor).
2. Additional starting capacitor C3 (32 μ F) is removed.
3. A 34 Ω series resistor is added in auxiliary phase 63 (2x 68 Ω in parallel).

Ordering number resistor: 4822 115 60034.

From serial number 626 onwards the projectors have been provided with a motor with a higher starting torque. The 34 Ω resistor is then fitted in the projector base.

Film window 70 mm, page 29, Fig.13

The pressure piece of this window has been modified, see Fig.b.

Intermittent sprocket, page 12.

After line: "Slide a new intermittent sprocket onto the shaft",

add: "Slide bearing L onto the shaft and secure it with two screws."

Note: After adjusting the intermittent sprocket it is advisable to check the framing in various positions. Check by fitting the adjusting jig or a piece of 0.01 mm/0.000.393" paper between the rear side of the bearing and the sprocket.

New and modified spare parts.

Page 30, Fig. 14 (new)

Ordering number 4822 466 80357 spool latch

Ordering number 4822 492 50693 spring of the spool latch.

These two parts are fitted above and below item 13.

The same applies to the lower spool shaft, Fig.15, page 31.

Page 33, Fig.16a (new)

Tilting strip F, ordering number 4822 466 80358.

This strip is suitable both for the version with the split pin and for the one with the set screw.

Page 40, Fig.18 (modified)

Item 31 was bearing bushing, and will be bearing + bearing bushing + felt ring: one assembly to be ordered under the same ordering number.

Item 30 ordering number 4822 451 10019 (ring) should be

ordering number 4822 532 50473 (felt ring).

The projector mechanism (see ED18) has ordering number 4822 693 50075.

Gearwheel of the intermittent shaft mounted on shaft A, Fig.18, page 40, has ordering number 4822 522 30806.

Page 21. V-belt becomes timing-belt pulley, read V-belt becomes timing belt.

Motor timing-belt pulley 25 teeth, read intermittent timing-belt pulley 25 teeth.

Motor timing-belt pulley 24 teeth, read intermittent timing-belt pulley 24 teeth.

Delrin-Kufen und Stahl-Druckbänder für 35 und 70 mm.

Nachstehende Einzelteile mit den Bestellnummern

Seite 28	Pos. 3	4822 463 30019	Druckzahn
	Pos. 10	4822 463 10017	Kufe
Seite 29	Pos. 3	4822 463 30022	Druckband
	Pos. 10	4822 463 10015	Kufe

werden ab heute in Dosen mit 20 Stück geliefert. Die Bestellung muss minimal 20 Stück oder ein Vielfaches davon betragen. Sowohl die Delrin-Kufen als die Stahlbänder sind dem Verschleiss ausgesetzt. Diese Teile sind regelmässig zu überprüfen und rechtzeitig zu ersetzen.

Es ist nicht ratsam, einen Film zu projizieren, wenn die Kufen und Bänder zu stark abgenutzt sind, da diese den Film beschädigen können.

Bildverstellungsbuchsen.

Erzeugt der Projektor ohne Film einen rasselnden Ton, der bei geringem Eindrehen der Zapfenschraube K aufhört, so weist dies auf eine nicht ausreichend klemmende Bildverstellungsbuchse D. In solchem Falle ist die Buchse zu ersetzen (siehe Kundendienstanleitung Seite 11, Bild 3).

Zu Bild 16 auf Seite 32 gehört folgender Text:

- . Stahl-Druckband in geradem Stand in die Rille bringen (1)
 - . Danach gemäss punktierter Linie durch die rechteckige Öffnung bei A stecken (2)
 - . Anschliessend in Pfeilspitzenrichtung straffen und beim Straffen winkelrecht umbiegen (3)
- Der ausragende Teil wird mit einer Schere bei A abgeschnitten. Es ist ein Raum von 2 mm erforderlich (vgl. Bild a)

Asynchronmotor.

Es kann sich ereignen, dass eingefahrene Projektoren unnötig schnell die Betriebsgeschwindigkeit erreichen, wodurch beim Starten Schleifenbildung bei der Unterspule auftreten kann, insbesondere bei Verwendung von schweren Filmspulen (z.B. Goldring).

In diesen Fällen ist der Wert der Anlasskondensatoren soweit herabzusetzen (in Stufen von 2 μF), dass der Projektor langsamer die Betriebsgeschwindigkeit erreicht. Bei einem zu niedrig gewählten Wert besteht die Möglichkeit, dass der Projektor beim Starten im ersten Versuch steckenbleibt.

Die Anlasskondensatoren haben folgende Werte 12-12-10-8-4-2 μF . Bei den ersten 25 Projektoren (Seriennrn. 501...525) sind Motoren mit niedrigerem Anlaufmoment geliefert, das beim Starten durch Zuschalten eines zusätzlichen Kondensators C3 (32 μF) gesteigert wird. Bei der Übernahme wird dieser Kondensator (über ein Relais) abgeschaltet. Müssen diese Motoren ersetzt werden, sind folgende Punkte gut zu beachten:

1. Der richtige Wert von C1, auf dem Motor angegeben.
2. Zusätzlichen Anlasskondensator C3 (32 μF) entfernen.
3. In Hilfsphase 63 einen Serienwiderstand von 34 Ω einfügen (2x 68 Ω parallel). Bestellnummer Widerstand 4822 115 60034.

Ab Seriennummer 626 sind die Projektoren mit einem Motor mit höherem Anlaufmoment ausgerüstet. Dabei ist der 34- Ω -Widerstand in den

Projektorfuss eingebaut.

Filmfenster 70 mm, Seite 29, Bild 13

Das Druckstück dieses Fensters ist geändert worden, vgl. Bild b.

Schaltrolle, Seite 12.

Nach dem Satz "Neue Schaltrolle auf die Welle schieben" ist noch zu lesen: Lager L auf die Welle schieben und mit 2 Schrauben fixieren.

Bemerkung:

Es ist ratsam, nach Einstellung der Schaltrolle in mehreren Stellungen die Bildverstellung zu prüfen. Diese Prüfung erfolgt mit dem Versuch, ob die Einstelllehre oder das 0,01-mm-Papier zwischen Rückseite Lager und Rolle passen.

Neue und geänderte Ersatzteile.

Seite 30, Bild 14 (neu): Bestellnummer 4822 466 80357 Spulenverschluss
4822 492 50693 Feder des Spulen-
verschlusses.

Diese beiden Teile befinden sich über bzw. unter Pos. 13.

Dasselbe gilt für die Unterspulenachse Bild 15, Seite 31.

Seite 33, Bild 16a (neu):

Kippstreifen "F", Bestellnummer 4822 466 80358.

Dieser Streifen eignet sich sowohl für die Ausführung mit Splint wie auch mit Stellschraube.

Seite 40, Bild 18 (geändert)

Pos. 31 war Lagerbüchse, wird Lager + Lagerbüchse + Filzring in Zusammenstellung unter derselben Bestellnummer.

Pos. 30 Bestellnummer 4822 451 10019 (Ring) soll sein
Bestellnummer 4822 532 50473 (Filzring).

Der Projektormechanismus, siehe ED18, trägt Bestellnummer
4822 693 50075.

Fortschalt-Zahnrolle montiert auf Welle A, Bild 18, Seite 40 trägt
Bestellnummer 4822 522 30806.

Delrin schenen en stalen drukbandjes 35 mm en 70 mm.

De onderstaande bestelnummers op:

blz. 28	pos. 3	4822 463 30019	drukband
	pos. 10	4822 463 10017	scheen
blz. 29	pos. 3	4822 463 30022	drukband
	pos. 10	4822 463 10015	scheen

worden vanaf heden in een doosje van 20 stuks geleverd. De bestelling moet minimaal 20 stuks of een veelvoud daarvan bedragen.

Zowel de delrin schenen als de stalen bandjes zijn aan slijtage onderhevig. Deze onderdelen regelmatig controleren en op tijd vervangen. Projecteer geen film met te ver versleten schenen en bandjes, deze kunnen tijdens het projecteren doorslijten en zodoende de film beschadigen.

Koppelcadreerbus.

Wanneer de projector zonder film een ratelend geluid maakt, dat verdwijnt door een weinig verder indraaien van taatsschroef K, dan duidt dit op een te licht klemmende koppelcadreerbus D. Deze moet dan worden vervangen (zie Service documentatie pag.11 fig.3).

Bij fig.16 pag.32 behoort de volgende tekst:

- . Stalen drukbandje in rechte toestand in de gleuf brengen (1).
- . Daarna volgens stippellijn door de rechthoekige opening bij A steken (2).
- . Vervolgens in pijlrichting strak trekken en al trekkende haaks omzetten (3).

Het uitstekende deel met een schaar bij A afknippen.

Een ruimte van 2mm (0.078") is vereist (zie fig.a)

Asynchroon motor.

Het kan voorkomen dat ingelopen projectoren onnodig snel op toeren komen waardoor tijdens het starten lusvorming bij de onderspoel kan optreden, vooral bij gebruik van zware filmspoelen (b.v. Goldring). In deze gevallen dient men de waarde van de aanloopcondensatoren zover te verlagen (in stappen van 2 μF) dat de projector rustiger op toeren komt. Bij een te laag gekozen waarde kan de projector bij het starten in de opzet blijven steken.

De startcondensatoren hebben de volgende waarde: 12-12-10-8-4-2 μF . Bij de eerste 25 projectoren (serienr. 501 t/m 525) zijn motoren geleverd met een lager aanloopkoppel, dat tijdens het starten werd verhoogd door het bijschakelen van een extra condensator C3 (32 μF). Bij de overname wordt deze condensator (via een relais) afgeschakeld. Moeten deze motoren worden vervangen dan gelieve goed op de volgende punten te letten:

1. De juiste waarde van C1, vermeld op de motor.
2. Verwijder extra startcondensator C3 (32 μF).
3. In hulpfase 63 een serieweerstand van 34 Ω toevoegen (2x 68 Ω parallel).

Bestelnummer weerstand 4822 115 60034.

Vanaf serienummer 626 zijn de projectoren voorzien van een motor met een hoger aanloopkoppel. De 34 Ω weerstand is dan in de projector voet ingebouwd.

Filmvenster 70 mm, pag.29 fig.13.

Het drukstuk van dit venster is gewijzigd. Zie fig.b.

Opzetsprocket, pag.12.

Na de regel "schuif nieuw opzetsprocket op de as" moet men nog lezen "schuif lager L op de as" en zet het met 2 schroeven vast.

Opmerking:

Het is raadzaam na het instellen van het opzetsprocket in diverse standen de cadrering te controleren. Dit door te kijken of de instelmal eventueel 0,01 mm/0.000.393" papier tussen achterkant lager in het sprocket passen.

Nieuwe en gewijzigde reserve onderdelen.

pag.30 fig.14 (nieuw)

Bestelnummer 4822 466 80357 spoelknip

Bestelnummer 4822 492 50693 veer van de spoelknip.

Deze beide onderdelen zitten resp. boven en onder pos.13.
Het geldt ook voor de onderspoelas fig.15, pag.31.

Pag.33 Fig.16a (nieuw)
Kantelstrip "F" bestelnummer 4822 466 80358
deze is zowel geschikt voor de uitvoering met splitpen als met stel-
schroef.

pag.40, Fig.18 (gewijzigd).
Pos.31 was lagerbus, wordt lager + lagerbus + viltring in een samen-
stelling onder het zelfde bestelnummer.
Pos.30 bestelnummer 4822 451 10019 (ring) moet zijn
bestelnummer 4822 532 50473 (viltring).

Het projector mechanisme, zie ED18, heeft bestelnummer 4822 693 50075.

Tandwielopzetas gemonteerd op as A fig.18, blz. 40 heeft
bestelnummer 4822 522 30806.

Patins Delrin et bandes de pression en acier 35 mm et 70 mm.
Les numéros de commande

à la page 28	rep. 3	4822 463 30019	bande de pression
	rep. 10	4822 463 10017	patin
à la page 29	rep. 3	4822 463 30022	bande de pression
	rep. 10	4822 463 10015	patin

sont dorénavant fournis dans une boîte munie de 20 pièces.
La commande doit au moins s'élever à 20 pièces ou à plusieurs.
Tant les patins Delrin que les bandes en acier sont sujets à l'usure.
Contrôler ces pièces régulièrement et les remplacer à temps. Ne pas
projeter de film dont les patins et les bandes sont trop usés, parce
qu'ils peuvent se casser et ainsi endommager le film lors de la
projection.

Douille de cadrage d'accouplement.
Lorsque le projecteur sans film fait un cliquetis qui disparaît en
serrant davantage la vis pivot K, la douille de cadrage d'accouple-
ment se déplacera un peu vers le haut. Celle-ci doit alors être
remplacée (voir Documentation de Service page 11, fig.3).

Le texte suivant correspond à la fig.11, page 32.
• Placer les bandes de pression en acier droit dans la fente (1).
• Introduire les bandes dans l'ouverture rectangulaire près de A (2)
suivant la pointillée.
• Tendre les bandes dans le sens de la flèche et en tirant, les
courber en équerre (3).
Couper près de A la partie saillante avec une paire de ciseaux.
Assurer un jeu de 2 mm. (voir fig.a)

Moteur asynchrone

Il peut arriver qu'après rodage les projecteur démarrent trop vite, de sorte qu'il se forme des boucles près de la bobine inférieure, surtout dans le cas d'utilisation de bobines de film lourdes (par exemple Goldring).

Dans ces cas diminuer la valeur des condensateurs de démarrage (en pas de 2 μF) de façon que le démarrage du projecteur s'effectue plus lentement. La valeur étant trop basse, le projecteur pourrait s'accrocher au tambour à rainures lors du démarrage.

Les valeurs des condensateurs de démarrage sont les suivantes:

12-12-10-8-4-2 μF .

Les moteurs des 25 premiers projecteurs (no. de série 501 à 525) sont munis d'un couple de démarrage plus bas, qui est augmenté lors du démarrage en insérant un condensateur supplémentaire C3 (32 μF). Lors du transfert, ce condensateur est débranché (par l'intermédiaire d'un relais). Dans le cas de remplacement de ces moteurs, faire attention aux points suivants.

1. La valeur correcte de C1 indiquée sur le moteur.
2. Retirer le condensateur supplémentaire de démarrage C3 (32 μF).
3. En phase auxiliaire 63 insérer une résistance en série de 34 Ω (2x 68 Ω en parallèle).

No. de commande de la résistance: 4822 115 60034.

A partir du no. de série 626 les projecteurs sont nantis d'un moteur avec couple de démarrage plus élevé. La résistance de 34 Ω est alors encastrée dans la base du projecteur.

Couloir de film 70 mm page 29 fig.13.

La pièce de pression de ce couloir a été modifiée, voir fig.b.

Tambour à rainures, page 12.

Après la ligne "Placer un nouveau tambour à rainures sur l'axe" il faut encore lire: "Placer le palier L sur l'axe et le fixer par deux vis.

Observation.

Après réglage du tambour à rainures en diverses positions, il importe de contrôler le cadrage, en vérifiant que le gabarit (par exemple un morceau de papier de 0,01 mm/0,000.393") s'adapte entre le côté arrière du palier et le tambour.

Nouvelles pièces et pièces de rechange modifiées.

Page 30, fig.14 (nouvelles)

No. de commande 4822 466 80357 verrou de bobine

No. de commande 4822 492 50693 ressort du verrou de bobine

Ces deux pièces se trouvent respectivement au-dessus et en-dessous du rep.13. Ceci est aussi valable pour l'axe de bobine inférieure fig.15, page 31.

Page 33, fig.16a (nouvelles)

"Barrette escamotable "F" no. de commande 4822 466 80358.

qui convient tant pour la version avec goupille fendue que pour la version avec vis de réglage.

Page 40 fig.18 (modifiée)

Rep. 31 coussinet cylindrique est modifié en palier + coussinet cylindrique + feutre dans un ensemble livrable sous le même numéro de

commande.

Rep.30 número de commande 4822 451 10019 (rondelle) est modifié
en numéro de commande 4822 532 50473 (feutre).

Le mécanisme de projecteur (voir ED18) est livrable sous le numéro
de commande 4822 693 50075.

Le numéro de commande du tambour denté monté sur l'axe A fig.18,
page 40: 4822 522 30806.

Canillas Delvin y bandas presoras de acero para 35 y 70 mm.

Los números de pedido indicados en la

página 28, pos. 3 4822 463 30019 banda presora

pos. 10 4822 463 10017 canilla

página 29, pos. 3 4822 463 30022 banda presora

pos. 10 4822 463 10015 canilla

son suministrados a partir de hoy en una caja de 20 piezas. El pedido
mínimo ser 20 piezas o un múltiplo de 20.

Tanto las canillas delvin como las bandas presoras de acero están
sometidas a desgaste. Revisar regularmente dichas piezas y sustituir-
las a tiempo.

No proyectar ninguna película cuando las canillas y las bandas estén
demasiado gastadas, ya que estas piezas pueden gastarse más durante
la proyección y por lo tanto pueden deteriorar la película.

Manguito de encuadre de acoplo.

Cuando sin haber película el proyector hace un ruido de traquetreo
que desaparece la girar un poco más hacia dentro el tornillo de
pivote K, entonces esto indica que el manguito de encuadre de acoplo
D sube demasiado ligeramente. Entonces hay que sustituir dicho
manguito. (Véase la documentación de servicio, página 11, figura 3).

En la figura 11, página 32, debe estar el texto siguiente:

- . Colocar la banda presora de acero en posición derecha en la ranura
(1).
- . Luego introducirla por la abertura rectangular junto a A, siguiendo
la línea de puntos (2).
- . Después tensarla en la dirección de la flecha y, manteniéndola tensa,
doblarla perpendicularmente (3).
- . Cortar por A la parte sobresaliente con una tijera. Un de 2 mm
(0.078") es necesario.

Motor asíncrono.

Puede ocurrir que los proyectores en funcionamiento alcancen con
innecesaria rapidez su velocidad de régimen, con lo cual se pueden
formar lazos en la bobina inferior al poner en marcha, especialmente
en caso de utilizar bobinas de película pesadas (por ejemplo,
Goldring).

En estos casos se debe disminuir el valor de los condensadores de
arranque (en grupos de 2 μ F) hasta que el proyector alcance su veloci-
dad de régimen más lentamente. Si se elige un valor demasiado bajo, el
proyector puede atascarse al poner en marcha.

Los condensadores de arranque tienen el valor siguiente: 12-12-10-8-4-2- μF .

Con los primeros 25 proyectores (números de serie 501 a 525) se han suministrado motores con un par de arranque bajo, que al poner en marcha es aumentado mediante la conexión de un condensador extra C3 (32 μF). Dicho condensador es desconectado después (por un relé). Cuando haya que sustituir estos motores, se deben tener muy en cuenta los puntos siguientes:

1. El valor correcto de C1, indicado en el motor.
2. Quitar el condensador de arranque extra C3 (32 μF).
3. Añadir una resistencia serie de 34 ohmios (2x 68 ohmios, en paralelo) en la fase auxiliar 63.

Número de pedido de la resistencia: 4822 115 60034.

A partir del número de serie 626, los proyectores han sido equipados con un motor con un par de arranque más alto. Entonces la resistencia de 34 ohmios está montada en el pedestal del proyector.

Ventana de película de 70 mm, página 29, figura 13.

La pieza presora de esta ventana ha sido modificada; ver la figura.

Rodillo dentado de colocación, página 12.

Después del renglón "Poner el nuevo rodillo dentado de colocación en el eje", hay que poner el renglón "Poner el cojinete L en el eje y fijarlo con 2 tornillos".

Oberservación.

Después del ajuste del rodillo dentado de colocación se aconseja comprobar el encuadre en diversas posiciones. Esto puede hacerse mirando si el calibre de ajuste (o bien un trozo de papel de 0,01 mm de espesor) pasa entre la parte posterior del cojinete y el rodillo dentado.

Piezas de recambio nuevas y modificadas.

Página 30, figura 14 (nuevas)

Número de pedido 4822 466 80357 pasador de bobina

Número de pedido 4822 492 50693 resorte del pasador de bobina

Estas dos piezas están situadas encima y debajo, respectivamente, de las pos. 13. Esto vale también para el eje de bobina inferior, figura 15, página 31.

Página 33, figura 16a (nueva)

Tira basculante "F", número de pedido 4822 466 80358.

Esta tira es adecuada para la versión con pasador partido y para la versión con tornillo de ajuste.

Página 40, figura 18 (modificada)

Pos. 31 era buje de cojinete, pasa a ser cojinete + buje de cojinete + anillo de fieltro en un conjunto con el mismo número de pedido.

Pos. 30 número de pedido 4822 451 10019 (anillo) debe ser
número de pedido 4822 532 50473 (anillo de fieltro)

El mecanismo proyector (véase la Información Ed18) tiene el número de pedido 4822 693 50075.

La rueda dentada del eje de colocación montada en el eje A, figura 18, página 40, tiene el número de pedido 4822 522 30806.

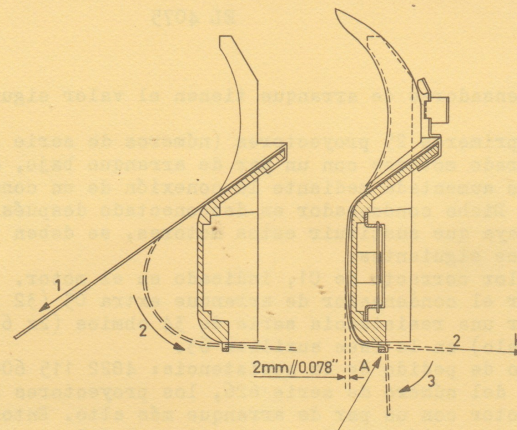


Fig. a

ERE 2598

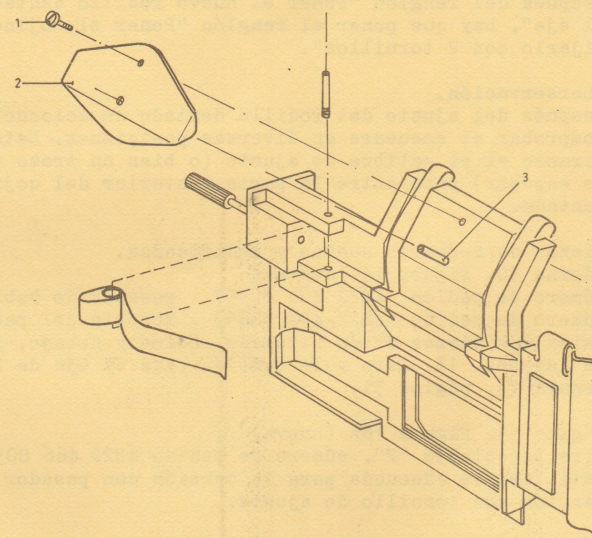


Fig. b

ERE 3367

- | | | |
|----|----------------|---|
| 1. | 4822 502 10895 | Screw - Schraube - Schroef - Vis- Tornillo. |
| 2. | 4822 404 50272 | Spring - Feder - Veer - Ressort - Resorte. |
| 3. | 4822 502 10896 | Pin - Stift - Pen - Broche - Clavija. |



6-6-1969	EL 4075	Ed 35
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Information

Already issued: Ed 18, Ed 21, Ed 26, Ed 28 and Ed 29.

- . In projectors as from serial number 724, a 4.7 ohm, 4.7 W resistor (4822 112 20045) has been included in the hold circuit of the dowser solenoid. As a result less heat is developed in the solenoid (see Figs. 2 and 3).
- . In projectors as from serial number 801 the grease damper of the dowser solenoid has been replaced by an oil damper. The value of capacitor C2, which supplies the energising voltage for the solenoid, has been reduced to 3 x 250 μ F (was 4 x 250 μ F). See Figs. 2 and 3.

. The construction of this oil damper is shown in Fig. 1 and the complete lifting mechanism is shown in Fig. 4.

The ordering numbers of the components are:

1. screw M4 x 12	4822 502 10069
2. washer	4822 530 80021
3. coupling piece	4822 404 50441
4. locking ring	4822 530 70043
5. pin	4822 535 90713
6. screw M x 8	4822 502 10693
7. ring	4822 532 50488
8. cover	4822 360 70054
9. cylinder	4822 360 40084
10. oil (50 cc)	4822 390 10057
11. screw M4 x 40	4822 502 10073
12. nut M4	4822 505 10326
13. O-ring 20,24 x 2.62	4822 530 50164
14. spacer	4822 532 80125
15. Gaco ring D1 031	4822 530 50462
16. plunger	4822 360 40083

Assembly:

1. Slide plunger rod 16 into cover 8; do not yet fit the sealing ring.
2. Mount cover 8 onto cylinder 9 with the aid of screws 11.
3. Check that the plunger moves smoothly in the cylinder.
4. Disassembly the components again.
5. Mount sealing rings 13 and 15 in cover 8.
6. Lubricate plunger rod 16 with some oil (10).
7. Slide piston rod 16 very carefully into cover 8 through sealing ring 15.
8. Fill cylinder 9 with oil (10).
9. Lower cover 8 into cylinder 9; the excess oil will be drained through the threaded hole for screw 6 (keep the cylinder in a vertical position).
10. Secure cover 8 with screws 11.
11. Move plunger 16 one time to and fro.
12. Fit screw 6 with ring 7 in the threaded hole.
13. Check for oil leakage by holding the damper upside down for a few minutes.
14. If no leaks occur, mount the damper at the rear of the solenoid (see Fig. 4).
15. Mount coupling piece 3 onto the armature of the solenoid in such a way that the armature can effect a stroke (A, Fig. 4) of 10 mm (25/64").

- . For the cores of the 6 and 10-channel heads a material is used which has a better resistance against wear (Vacodur instead of mu-metal).
These heads are marked with a cast-in "V".
The ordering code number of the new 6-channel head is 4822 249 30022.
The ordering code number of the new 10-channel head is 4822 249 30023.

Bereits veröffentlicht: Ed 18, Ed 21, Ed 26, Ed 28 und Ed 29.

- . In die Projektoren ab Seriennummer 724 wurde bei der Haltestromschaltung des Bildklappen-Hebemagneten ein Widerstand von 4,7 Ω und 4,7 W (4822 112 20045) eingefügt.
Anwendung dieses Widerstandes setzt die Wärmeentwicklung in der Hebemagnet-spule herab. Vgl. Bild 2 und 3.
- . In den Projektoren ab Seriennummer 801 wurde der Fettdämpfer im Bildklappen-Hebemagneten gegen einen Öldämpfer ausgetauscht.
Die Kapazität des Kondensators C2 für die Lieferung der Erregerspannung zum Hebemagneten wurde hierbei auf 3x 250 μ F herabgesetzt (war 4x 250 μ F).
Vgl. Bild 2 und 3.

. Der Aufbau dieses Öldämpfers zeigt Bild 1. Der vollständige Bildklappen-Hebe-mechanismus ist in Bild 4 dargestellt.
Lieferung der Einzelteile kann unter Angabe der einschlägigen Code-Nummern stattfinden:

1. Schraube M4 x 12	4822 502 10069
2. Scheibe	4822 530 80021
3. Kupplung	4822 404 50441
4. Sicherungsscheibe	4822 530 70043
5. Stift	4822 535 90713
6. Schraube M4 x 8	4822 502 10693
7. Scheibe	4822 532 50488
8. Deckel	4822 360 70054
9. Zylinder	4822 360 40084
10. Öl (50 cc)	4822 390 10057
11. Schraube M4 x 40	4822 502 10073
12. Mutter M4	4822 505 10326
13. O-Ring 20,24 x 2,62	4822 530 50164
14. Distanzstück	4822 532 80215
15. Gaco-Ring D1 031	4822 530 50462
16. Kolben	4822 360 40083

Aufbau:

1. Kolbenstange 16 wird in Deckel 8 eingeführt, ohne zunächst die Dichtringe einzusetzen.
2. Deckel 8 und Zylinder 9 zusammenschrauben (Schrauben 11).
3. Leichten Gang des Kolbens beim Schieben und Drehen im Zylinder prüfen.
4. Das Ganze wieder auseinandernehmen.
5. Dichtringe 13 und 15 in Deckel 8 einsetzen.
6. Kolbenstange 16 leicht mit Öl 10 schmieren.
7. Kolbenstange 16 ganz vorsichtig durch Dichtring 15 in Deckel 8 einführen.
8. Zylinder 9 mit Öl 10 abfüllen.
9. Deckel 8 in Zylinder 9 senken. Das Übermass an Öl entweicht dabei durch das Gewindeloch für Schraube 6 (Zylinder senkrecht halten).
10. Deckel 8 festschrauben (Schrauben 11).

11. Kolben 16 einmal auf und nieder bewegen.
 12. Überlaufloch jetzt mit Scheibe 7 und Schraube 6 verschliessen.
 13. Auf Ölleck prüfen, wenn der Dämpfer kurze Zeit auf dem Kopf gehalten wird.
 14. Wird kein Ölleck festgestellt, wird der Dämpfer an der Hinterseite auf den Hebemagneten montiert (vgl. Bild 4).
 15. Kupplung 3 so auf dem Anker des Hebemagneten befestigen, dass der Anker einen Hub von 10 mm ausführen kann (A, Bild 4).
- . Als Kernmaterial für die 6-Kanal- und für die 10-Kanal-Tonköpfe wird z. Z. ein verschleißfesteres Material verwendet (Vacodur statt Mumetall).
Die Tonköpfe sind an einem eingegossenen V kenntlich.
Code-Nummer des neuen 6-Kanal-Tonkopfes 4822 249 30022
Code-Nummer des neuen 10-Kanal-Tonkopfes 4822 249 30023.

Déjà publié: Ed 18, Ed 21, Ed 26, Ed 28 et Ed 29:

- . Pour les projecteurs marqués 724 et au-delà une résistance de 4,7 Ω , 4,7 W (4822 112 20045) est insérée dans le circuit de maintien de l'aimant de levage du volet d'image.
Grâce à cette résistance le dégagement de chaleur dans la bobine de l'aimant de levage est réduit, voir fig. 2 et 3.
- . Pour les projecteurs marqués 801 et au-delà l'amortisseur de graisse de l'aimant de levage du volet d'image a été remplacé par un amortisseur d'huile.
La capacité du condensateur C2 fournissant la tension d'excitation de l'aimant de levage est réduite à 3 x 250 μ F (était de 4 x 250 μ F) voir fig. 2 et 3.
- . La composition de cet amortisseur d'huile est représentée fig. 1.
La fig. 4 représente tout le mécanisme de levage du volet.
Les numéros de code de commande de ces pièces sont:
- | | |
|--------------------------------|----------------|
| 1. Vis M4 x 12 | 4822 502 10069 |
| 2. Rondelle | 4822 530 80021 |
| 3. Pièce d'accouplement | 4822 404 50441 |
| 4. Rondelle d'arrêt | 4822 530 70043 |
| 5. Goupille | 4822 535 90713 |
| 6. Vis M4 x 8 | 4822 502 10693 |
| 7. Rondelle | 4822 532 50488 |
| 8. Couvercle | 4822 360 70054 |
| 9. Cylindre | 4822 360 40084 |
| 10. Huile (50 cc) | 4822 390 10057 |
| 11. Vis M4 x 40 | 4822 502 10073 |
| 12. Ecrou M4 | 4822 505 10326 |
| 13. Joint torique 20,24 x 2,62 | 4822 530 50164 |
| 14. Entretoise | 4822 532 80215 |
| 15. Rondelle Gaco D1 031 | 4822 530 50462 |
| 16. Piston | 4822 360 40083 |

Composition:

1. Avant de monter les joints glisser la bielle 16 dans le couvercle 8.
2. Monter le couvercle 8 sur le cylindre 9 par les vis 11.
3. Contrôler si le piston glisse et tourne facilement dans le cylindre.
4. Démonter toutes les pièces susmentionnées.
5. Monter les joints 13 et 15 dans le couvercle 8.
6. Enduire la bielle 16 d'un peu d'huile 10.
7. En agissant avec précaution glisser la bielle 17 dans le couvercle 8 via le joint 15.
8. Remplir le cylindre 9 d'huile 10.

9. Abaisser le couvercle 8 dans le cylindre 9; la quantité superflue d'huile sortira alors via le trou taraudé pour la vis 6 (tenir le cylindre en position verticale).
 10. Fixer le couvercle 8 par les vis 11.
 11. Glisser le piston 16 de va-et-vient.
 12. Boucher le trou par la vis 6 et la bague 7.
 13. Contrôler s'il y a des fuites d'huile en tenant l'amortisseur sens dessus dessous.
 14. S'il n'en est pas ainsi, monter l'amortisseur à l'arrière sur l'aimant de levage (voir fig. 4).
 15. Fixer la pièce d'accouplement 3 à l'induit de l'aimant de levage de façon que l'induit puisse se déplacer sur 10 mm (A, Fig. 4).
- . Pour les nouveaux des têtes de 6 et 10 canaux, on utilise des matériaux qui résistent mieux à l'usure (Vacodur ou lieu de mumétal).
Les têtes se distinguent par un "V" moulé.
Le numéro de commande de la nouvelle tête pour 6 canaux est 4822 249 30022.
Le numéro de commande de la nouvelle tête pour 10 canaux est 4822 249 30023.

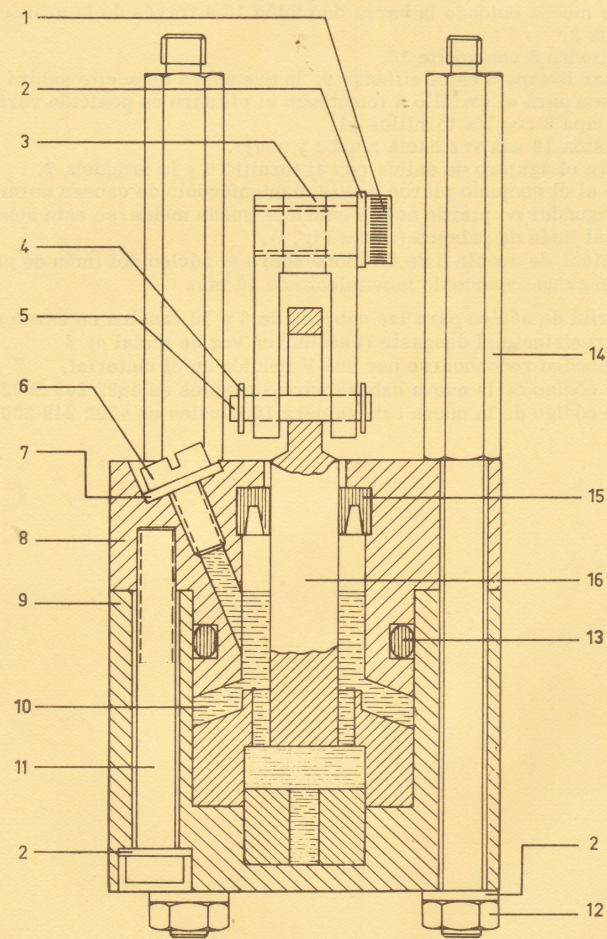
Publicadas ya: Ed 18, Ed 21, Ed 26, Ed 28 y Ed 29:

- . Para los proyectores con el número de serie 724 y más se ha introducido una resistencia de 4,7 Ω , 4,7 W (4822 112 20045) en el circuito de la corriente de mantención del imán de palanca para el vaivén de imán.
Aplicando esta resistencia se disminuye el desarrollo de calor en la bobina imán de palanca, véase Fig. 2 y 3.
- . Para los proyectores con el número de serie 801 y más el amortiguador de grasa del imán de palanca para el vaivén de imán ha sido reemplazado por un amortiguador a aceite.
Debido a esto la capacidad del condensador C2, el cual suministra la tensión de atracción para el imán palanca, es bajada a 3 x 250 μF (esto era 4 x 250 μF) véase Fig. 2 y 3.
- . El conjunto de este amortiguador a aceite es indicado en la fig. 1 y el mecanismo palanca para vaivén en la fig. 4.
El número de código de los componentes son:
- | | |
|-----------------------------|----------------|
| 1. Tornillo | 4822 502 10069 |
| 2. Arandela | 4822 530 80021 |
| 3. Pieza de acoplo | 4822 404 50441 |
| 4. Arandela de cierre | 4822 530 70043 |
| 5. Perno | 4822 535 90713 |
| 6. Tornillo M4 x 8 | 4822 502 10693 |
| 7. Arandela | 4822 532 50488 |
| 8. Tapa | 4822 360 70054 |
| 9. Cilindro | 4822 360 40084 |
| 10. Aceite (50 cc) | 4822 390 10057 |
| 11. Tornillo M4 x 40 | 4822 502 10073 |
| 12. Tuerca M4 | 4822 505 10326 |
| 13. Arandela o 20,24 x 2,62 | 4822 530 50164 |
| 14. Pieza de distancia | 4822 532 80215 |
| 15. Arandela Gaco | 4822 530 50462 |
| 16. Pistón | 4822 360 40083 |

Montaje del conjunto:

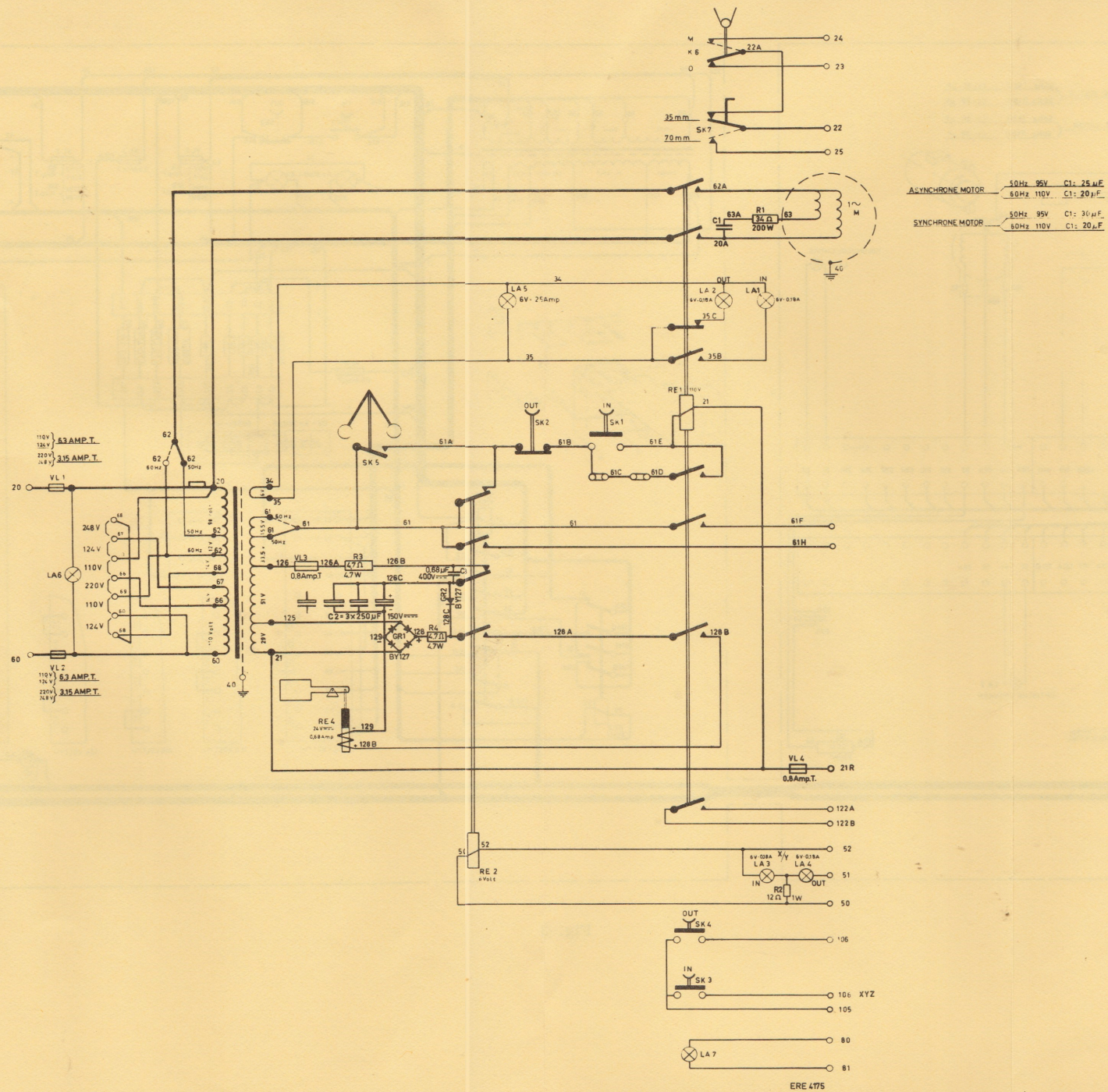
1. Deslice la barra de pistón 16 en la tapa 8 sin colocar primerolas arandelas de cierre.

2. Monte la tapa 8 sobre el cilindro 9 con ayuda de los tornillos 11.
 3. Compruebe si el pistón es fácilmente girable y deslizable en el cilindro.
 4. Demonte ahora todo.
 5. Monte las arandelas de cierre 13 y 15 en la tapa.
 6. Lubrique las barra de pistón 16 con un poco de aceite 10.
 7. Deslice con mucho cuidado la barra de pistón 16 a través de la arandela de cierre 15 en la tapa 8.
 8. Llene el cilindro 9 con aceite 10.
 9. Deje deslizar la tapa 8 en el cilindro 9, lo que sobra de aceite saldrá por el agujero rosca para el tornillo 6 (mantenga el cilindro en posición vertical).
 10. A firme la tapa 8 con los tornillos 11.
 11. Nueva el pistón 16 una vez hacia arriba y abajo.
 12. Cierre ahora el agujero de salida con el tornillo 6 y la arandela 7.
 13. Compruebe si el conjunto pierde aceite manteniéndolo de cabeza durante un rato.
 14. Si el amortiguador no pierde aceite entonces puede montarse esta sobre la parte posterior del imán de palanca (véase Fig. 4).
 15. Afirme la pieza de acoplo 3 de tal modo sobre el núcleo del imán de palanca que el núcleo tenga un espacio de movimiento de 10 mm.
- . Para el material de núcleo para las cabezas de 6 y 10 canales es usado ahora una materia más resistente al desgaste (Vacodur en vez de metal μ)
Las cabezas pueden reconocerse por una V fundida en el material.
El número de código de la nueva cabeza para 6 canales es 4822 249 30022.
El número de código de la nueva cabeza para 10 canales es 4822 249 30023.



ERE 4143

Fig. 1



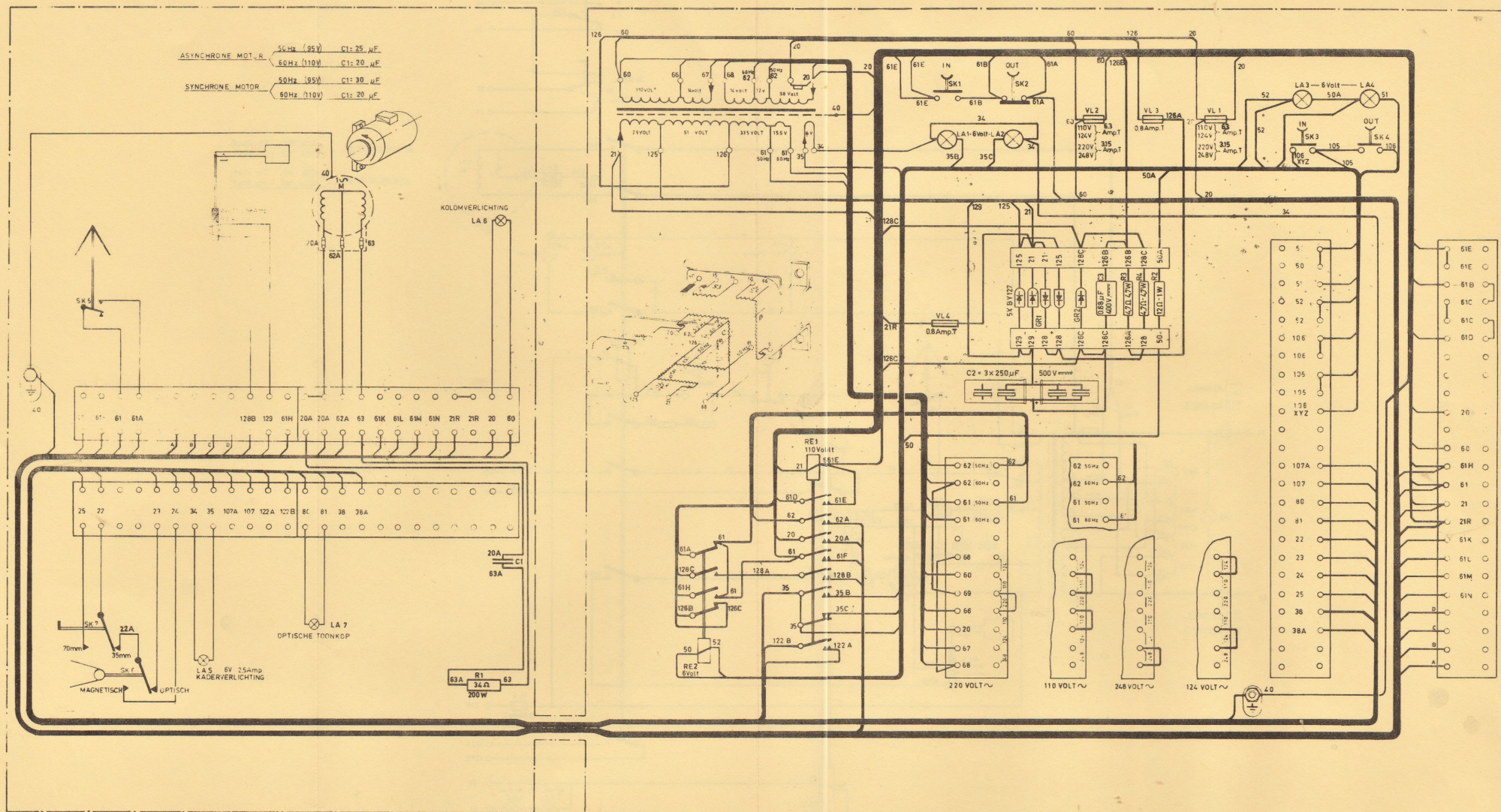


Fig. 3

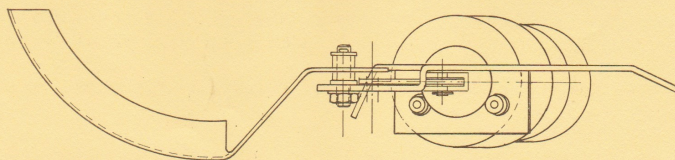
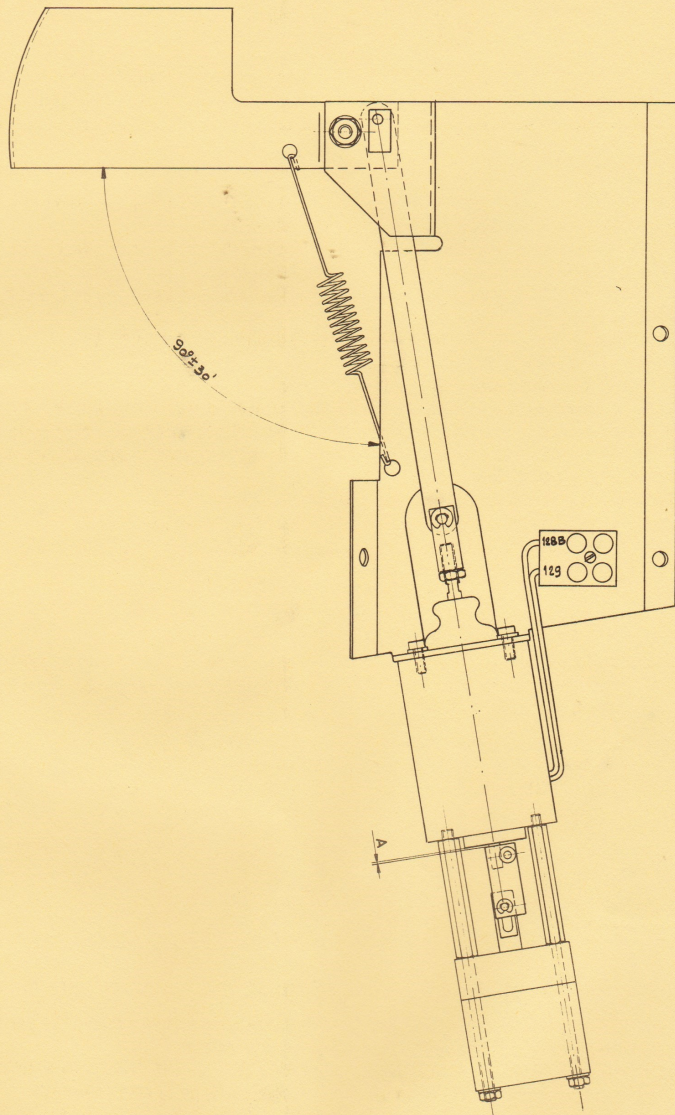


Fig. 4

ERE 4177

PHILIPS Service



18-6-1969	EL 4075	Ed 37
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Information

Already issued: Ed 18, Ed 21, Ed 26, Ed 28, Ed 29 and Ed 35

As from serial number 821 the pad shoes of projectors EL 4075 are provided with new tilting pieces (item 1 in accompanying figure).

- . As a result, the pad shoe pressure is considerably increased, and
- . The pad shoes can now be locked in the open position.

For this the shoes should be slightly lifted off the sprocket and be pulled slightly further than the stop.

To remove the pad shoes, they should be lifted and pulled out.

Mounting the tilting piece

- . Remove the pad shoe from the projector.
- . Loosen screws 4 approximately three turns (do not remove them).
- . Remove springs 2 and 3 together with the tilting piece to be replaced.
- . Fit the new tilting piece between the two springs as shown in the attached figure (bent edge facing the projector).
- . Refit the springs with tilting piece.
- . Tighten screws 4 so far that the springs can still be moved.
- . Press springs 2 and 3 as far as possible towards the spindle (direction of arrow A in the figure) and tighten screws 4.
- . Move the pad shoe in position.

Note:

The force required at D to open the 70-mm shoe approx. 0.2 mm (1/128") at B, should be 500 ± 50 grammes (1.1 lb ± 0.1 lb). When the pressure at D is less than 450 grammes (1 lb), springs 2 and 3 should be replaced.

Item	Description	Ordering number
1	Tilting piece	4822 404 50443
2	Leaf spring	4822 492 60744
3	Leaf spring	4822 492 60745
4	Screw M4x8	4822 502 10067

Bereits veröffentlicht: Ed 18, Ed 21, Ed 26, Ed 28, Ed 29 und Ed 35.

- . In den Projektoren EL 4075 ab Seriennummer 821 sind die Andruckschuhe mit neuen Kantelstücken (1 in beigelegtem Bilde) versehen
 - . Die Andruckkraft des Schuhs hat hierdurch erheblich zugenommen und
 - . Die Andruckschuhe können in offener Stellung arretiert werden.
- Die Schuhe werden hierzu etwas von der Schaltrolle abgehoben und bis gerade vorbei der Arretierung ausgezogen.
- Sie werden durch Anheben und kräftiges Ziehen entfernt.

Montage des Kantelstücks

- . Andruckschuh aus dem Projektor nehmen.
- . Schrauben 4 ungefähr 3 Umdrehungen lockern (nicht herausdrehen!)
- . Federn 2 und 3 mit dem zu ersetzenden Kantelstück zusammen aus dem Projektor nehmen.
- . Neues Kantelstück beigelegtem Bilde gemäss zwischen die Federn bringen (gebogene Kante dem Projektor zugekehrt).

- . Schrauben 4 soweit anziehen, dass die Feder eben noch verschoben werden können.
- . Federn 2 und 3 möglichst weit in Richtung der Achse drücken (Richtung der Pfeilspitze A im Bilde) und Schrauben 4 anziehen.
- . Andruckschuh auf seinen Platz bringen.

Bemerkung:

Die bei D benötigte Kraft, um den 70-mm-Andruckschuh bei B etwa 0,2 mm zu öffnen, soll 500 + 50 g betragen.

Untersteigt die bei D benötigte Kraft 450 g, müssen die Federn 2 und 3 ersetzt werden.

Pos.	Bezeichnung	Code-Nummer
1	Kantelstück	822 404 50443
2	Blattfeder	4822 492 60744
3	Blattfeder	4822 492 60745
4	Schraube M4x8	4822 502 10067

Déjà publié: Ed 18, Ed 21, Ed 26, Ed 28, Ed 29 et Ed 35.

A partir du numéro de série 821 les sabots presseurs des projecteurs EL 4075 sont nantis de nouvelles pièces à bascule (1. voir figure ajoutée).

- . La pression des sabots est ainsi considérablement augmentée, et
- . Les sabots sont mobiles.

Dans ce but, soulever un peu les sabots du tambour et les tirer jusque juste après l'arrêt, pour le remplacement, soulever les sabots et les tirer à toutes forces.

Mise en place de la pièce à bascule

- . Sortir le sabot presseur du projecteur.
- . Desserrer de 3 tours les vis 4 (ne pas desserrer à fond).
- . Sortir du projecteur les ressorts 2 et 3 et la pièce à bascule devant être remplacée.
- . Insérer la nouvelle pièce à bascule entre les ressorts selon la figure ajoutée. (bord courbé étant dirigé vers le projecteur).
- . Mettre les ressorts avec pièce à bascule en place.
- . Serrer les vis 4 de façon que les ressort restent juste mobiles.
- . Pousser les ressorts 2 et 3 le plus possible dans le sens de l'axe (selon la flèche A dans la figure) et serrer les vis 4.
- . Mettre le sabot presseur en place.

Observation:

La force nécessaire près de D à ouvrir d'environ 0,2 mm le sabot presseur pour film de 70 mm près de B doit s'élever à 500 + 50 g.

Si la force nécessaire près de D est inférieure à 450 g, remplacer les ressorts 2 et 3.

Rep.	Désignation	Numéro de commande
1	Pièce à bascule	4822 404 50443
2	Ressort à lame	4822 492 60744
3	Ressort à lame	4822 492 60475
4	Vis M4x8	4822 502 10067

Ya publicadas Ed 18, Ed 21, Ed 26, Ed 28, Ed 29 y Ed 35.

A partir del número de serie 821 las zapatas de los proyectores EL 4075 son provistos de una nueva palanca de volteo (1 en la figura adjunta).

- . Debido a esto la presión de la zapata es aumentado considerablemente y
- . Las zapatas pueden quedar ahora en la posición abierta.
- Para est las zapatas deben ser levantadas de los rodillos y ser tiradas hasta pasar justamente los puntos de retención.
- Para retirar las zapatas se deben levantarlas y tirarlas con fuerza.

Montaje de la palanca de volteo.

- . Retire la zapata del proyector.
- . Suelte los tornillos 4 con aprox. 3 vueltas (no destornillarlos del todo!)
- . Retire los muelles 2 y 3 junto con la palanca de volteo a reemplazar del proyector.
- . Introduzca la nueva palanca de volteo entre los muelles según la figura adjunta (borde torcido dirigido pues hacia el proyector).
- . Coloque los muelles con la palanca de volteo en su lugar.
- . Afirme los tornillos 4 suavemente de manera que apenas pueden deslizarse los muelles.
- . Empuje los muelles 2 y 3 lo más que es posible hacia el eje (dirección de la flecha A en la figura) y afirme los tornillos 4.
- . Deslize la zapata en su lugar.

Observación:

La fuerza necesaria en D para hacer abrir la zapata de 70 mm en B aproxim. 0,2 mm ($1/128''$) debe valer 500 ± 50 gramos.

Si la fuerza necesaria en D es menos que 450 gramos entonces deben ser reemplazados los muelles 2 y 3.

Pos.	Descripción	Número de código
1	Palanca de volteo	4822 404 50443
2	Muelle	4822 492 60744
3	Muelle	4822 492 60745
4	Tornillo M4x8	4822 502 10067

