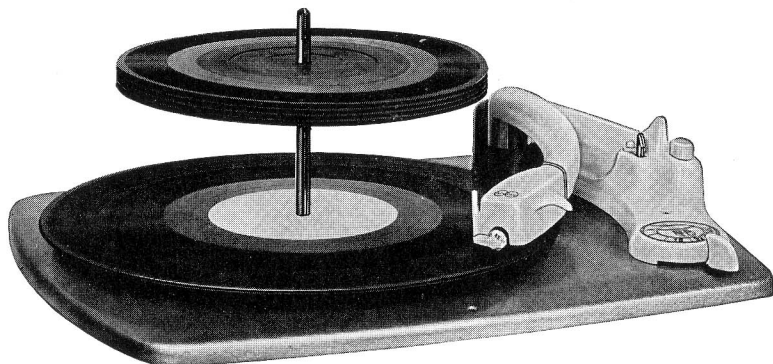


## Record Changers Rex Deluxe and Rex Deluxe Stereo



### Technical Data

Type of current:	alternating current
Operating voltage:	110/220 V., 110 V. or 220 V. or 110/125/160/220 V. 50 c.p.s. or 60 c.p.s.
Drive:	KM 7 asynchronous capacitor motor
Input:	13 W.
Speeds:	110/125/160/220 V., 13 to 26 W.
Pick-up:	16 <sup>2</sup> / <sub>3</sub> , 33 <sup>1</sup> / <sub>3</sub> , 45, 78 r.p.m.
Needle pressure:	see list of pick-ups (F)
Frequency response:	see pick-up specification (F)
Spring suspension:	4 built-in springs
Turntable:	210 mm (8 <sup>1</sup> / <sub>4</sub> in.) dia.
Chassis:	340 x 280 mm (13 <sup>3</sup> / <sub>8</sub> x 11 <sup>1</sup> / <sub>32</sub> in.)
Max height above mounting plate:	128 mm (5 <sup>1</sup> / <sub>8</sub> in.)
Max. height below mounting plate:	80 mm (3 <sup>5</sup> / <sub>32</sub> in.)
Mounting plate cutout:	303 x 214 mm (12 x 8 <sup>7</sup> / <sub>16</sub> in.)
Weight:	Approx. 3.7 kg (8 <sup>1</sup> / <sub>4</sub> lbs.)

### Technical Characteristics

Fully automatic record changer. Plays all 6 to 12 in. records automatically, intermixes all records of same speed. Mixed record discrimination at record edge by feeler at pick-up arm. Delicate record grooves are not touched for utmost protection.

## Record changers Rex Deluxe Sonderklasse and Rex Deluxe Stereo Sonderklasse

### Technical Data

Type of current:	alternating current
Operating voltage:	110/220 V. 110 or 220 V. 50 c.p.s. or 60 c.p.s.
Drive:	KM 6 asynchronous capacitor motor with magnetic brake for speed fine control
Input:	12 W.
Speeds:	16 <sup>2</sup> / <sub>3</sub> , 33 <sup>1</sup> / <sub>3</sub> , 45, 78 r.p.m.
Speed fine control:	between + 2 and — 4 %
Pick-up:	see list of pick-ups (F)
Needle pressure:	see pick-up specification (F)
Frequency response:	see pick-up specification (F)
Max. depth below mounting plate:	86 mm (3 <sup>3</sup> / <sub>8</sub> in.)

The Rex Deluxe Stereo Sonderklasse record changer is equipped with a cast-iron turntable. All other specifications are identical with those of the Rex Deluxe record changer.

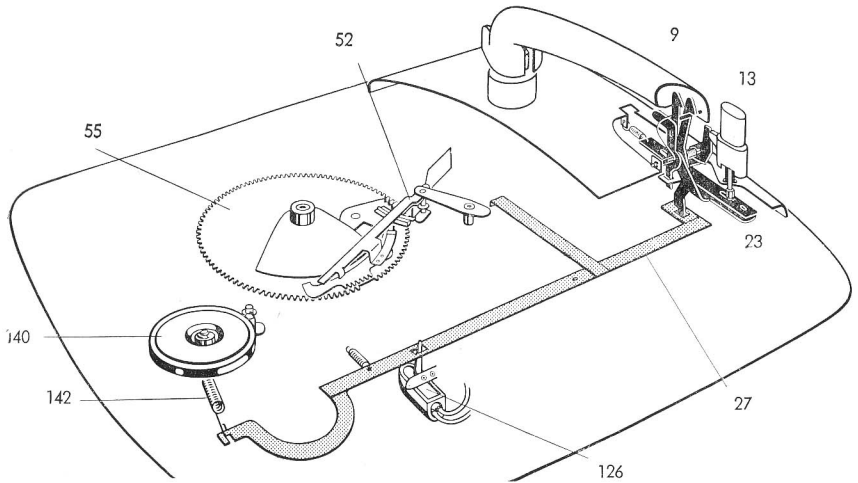
## Method of Operation

## 1) Driving mechanism

Pressure on the starter key (13) forces down the starter pin and moves the pick-up arm detent. The leg end above the base plate releases the pick-up arm while the leg end below the base plate operates the gear shift bar (27), tipping the mercury switch to start the motor. The starter slide (23) is at the same time brought in engagement with the groove of the starter pin. The friction wheel (140) is pressed against the driving pulley, turning the turntable in clockwise direction.

## 2) Mechanism release

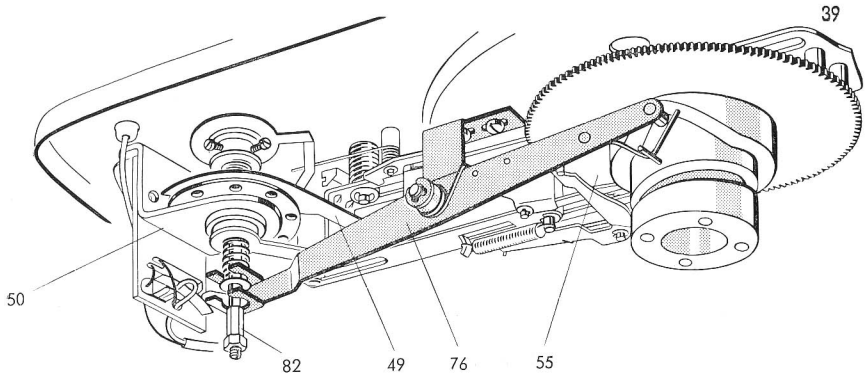
The lever of the gear shift bar (27) hits the trip link butt end (52), the trip link (52) is turned, the riveted reed spring is forced against the catch (179) and the toothed ratchet lever is released. The ratchet lever is caught by the turntable pinion and turns the gearwheel (55) with the cams (56) above. The turntable pinion (68) travels over the back of the toothed ratched lever and returns the ratchet lever to rest position.



## 3) Cam operation

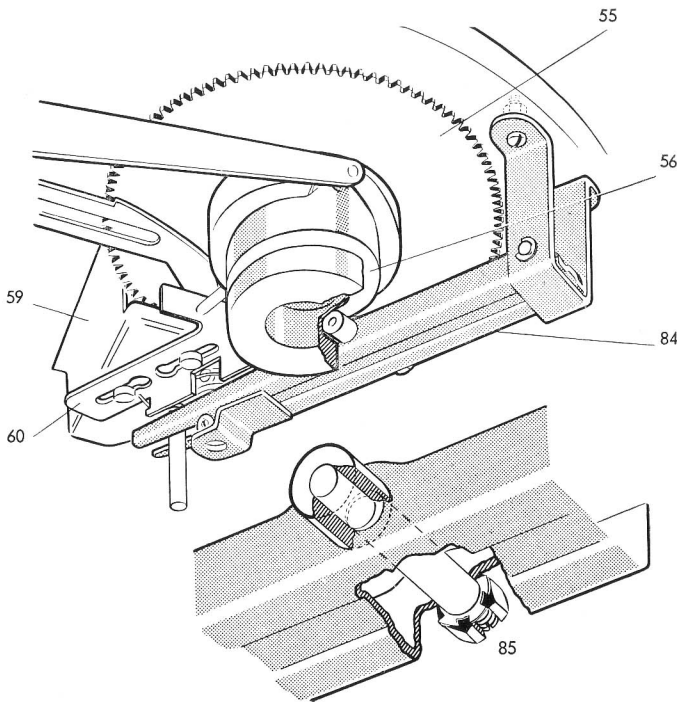
a) Raising the pick-up arm

Controlled by the cam assembly the rocker arm (76) is raised. Pressing against a washer at the lift pin (82) the rocker arm raises the lift pin with the pick-up arm (9). By means of a compression spring the clutch flange is at the same time forced against the trip finger (49) and the friction clutch of the tone arm is engaged.



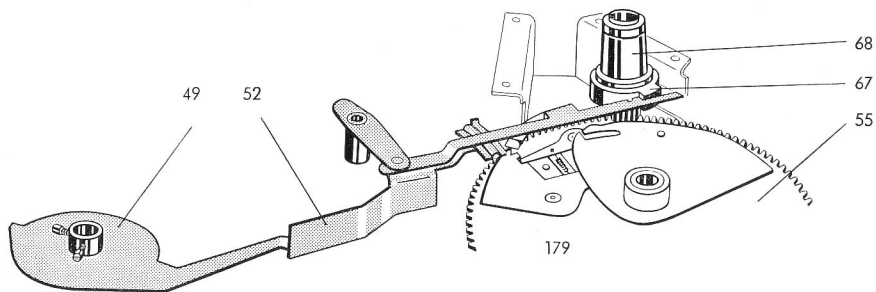
b) Record dropping

Controlled by the cam assembly (56) the ejector fork (84) is moved down. The ejector link, which is connected to the ejector fork (84) by means of the coupler link, is pulled down, the bottom record seated on the ejector springs is lowered while the rubberized spreader springs expand to hold the remaining records. The pick-up arm is at the same time moved toward the record by means of the set-down cam above the main lever (39). The friction-controlled main lever (39) moves the tone arm with its index feeler against the edge of the record. Depending on the size of the record the friction clutch is automatically adjusted. After indexing the outside diameter of the record, the main lever (39) is returned some  $\frac{1}{8}$  in. by means of a return spring riveted to the gear wheel to allow the record to drop freely. After the record has been deposited on the turntable, the set-down cam and main lever (39) move the pick-up arm towards the record center for a distance equal to the length between the index feeler and the needle point so that the pick-up arm is situated above the lead-in groove. The rocker arm (76) then enters the lowest point of the cam and the tone arm is seated on the record.



c) Automatic change cycle

The tone arm is impelled towards the center of the record by the recorded groove. On its path, the screw-secured trip finger (49) is also moved inwards, taking along the trip link (52). After the tone arm has traveled to a radius of  $2\frac{1}{4}$  in., the trip link tip enters the range of the rotating cam plate (67). As soon as the tone arm enters the high-pitched run-off groove, the trip link (52) is caught by the cam plate and repelled. The reed spring riveted to the trip link returns the catch (179) so that the toothed ratchet lever is allowed to protrude and mesh with the turntable pinion. The cams are rotated again. This is repeated as long as there are records on the spindle.



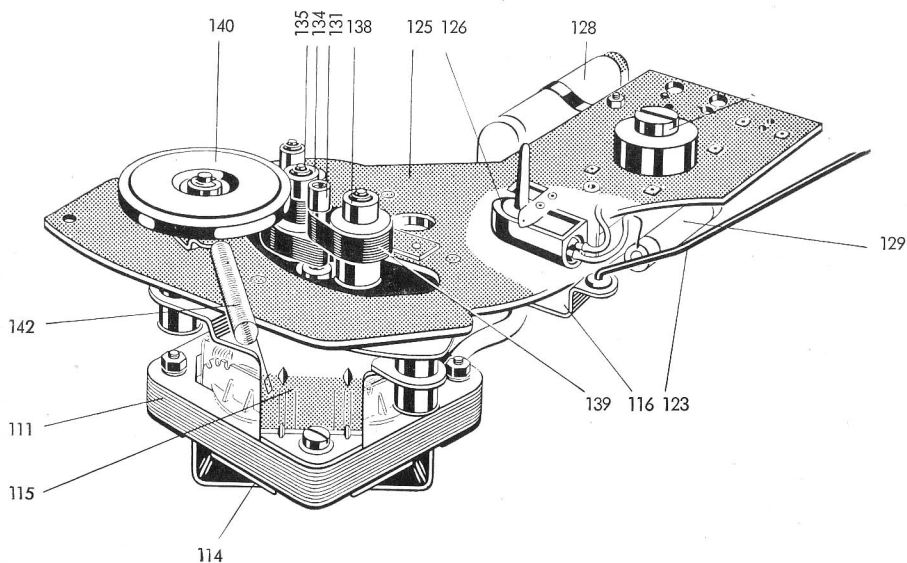
d) Automatic shut-off

After the last record has been played, the pick-up arm returns once more to the center of the turntable. In the process, the return switch side bar slides up along the incline of the segment right below the tone arm bearing. Controlled by the gear studs, the return locator lever is at the same time swung out and engages the side bar. The pick-up arm is returned up to the stop of the housing and lowers on the control pin. The control pin forces down the control switch while the control lever is at the same time moved to butt the starter slide, switching off the record changer. The pick-up arm is at the same time seated on the pick-up arm detent which locks the pick-up arm in place.

### Motor with friction wheel drive

The motor with driving pulleys for 4 speeds is swivel-mounted on the mounting plate (125). For driving the turntable, the friction wheel (140) is brought in engagement with the step rim of one driving pulley. Drive to the various pulleys is by belts (139) from the motor shaft.

For changing the speed, the speed-shifting plate (116) is operated by the speed selector lever via the tie rod (123). To assure smooth horizontal movement of the friction wheel, the friction wheel is provided with a ball-bearing on the opposite side. In the OFF position of the record changer, the friction wheel is disengaged.



## Adjustment Instructions

### 1) Pick-up arm height

Operate the starter key and rotate the turntable until the pick-up arm starts swinging in. In this position the upper edge of the index feeler must be 67.5 cm ( $2\frac{5}{8}$ " ) above the base plate.

In record changers with a serial number below 120.000 the distance between the upper edge of the index feeler and the base plate should be 70 mm ( $2\frac{3}{4}$ " ).

### 2) Pick-up arm friction

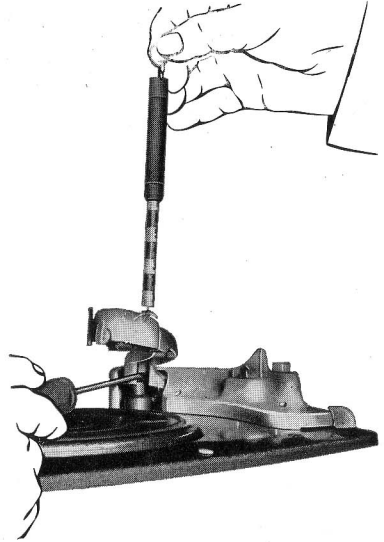
Tone arm friction should be 25 to 30 grams, measured at the index feeler. Adjust by shifting the trip finger on the vertical shaft of the cantilever as required.

### 3) Adjusting the needle pressure

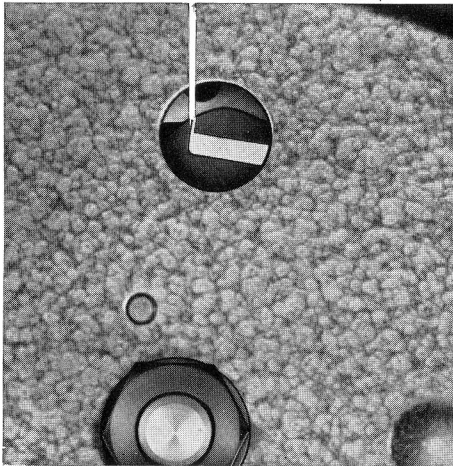
Lift the pick-up arm by hand and turn the screw in the pick-up arm end as required to adjust the stylus pressure to 9 p in monaural changers and to 6 p in binaural changers.

### 4) Checking the needle pressure

Hook the tone arm spring balance to the handle of the tone arm and lift the tone arm from the record. Read the needle pressure after the spring balance has steadied (see figure).



correcting tag



### 5) Adjusting the pick-up arm landing point

In the REX DELUXE record changer the tone arm landing point may be adjusted with or without the turntable on the changer. It is easier to adjust the landing point with the turntable removed.

a) Adjusting the landing point without turntable:

Remove the turntable, press the starter key, and rotate the turntable pinion until the correcting tag appears in the base plate opening (see figure). Bend the correcting tag inwards toward the set-down cam by means of a screwdriver if the tone arm lands

too close to the rim of the record. If the tone arm lands too far inside the record, bend the correcting tag outward, again using a screwdriver.

b) Adjusting the landing point with the turntable in place:

Lift the turntable matting as required to see the three holes in the turntable. Press the starter key and rotate the turntable until the correcting tag appears in the opening. Adjust the landing point as described in paragraph a) above.

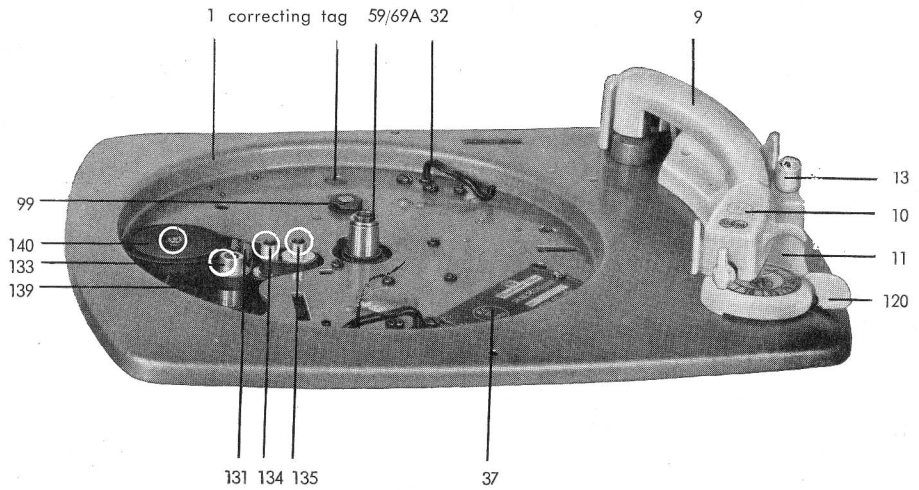
#### **6) Tripping release**

After the tone arm has traveled to a radius of  $2\frac{1}{4}$  in. the tripping cycle is initiated. Tripping is advanced or retarded by bending the trip link butt end in or out as required.

#### **7) Record dropping mechanism (ejector fork)**

Correct operation of the spindle is dependent on the proper adjustment of the ejector fork. The eccentric shaft borne in the ejector fork has to be adjusted to have a little play in the cam track. Adjust by loosening the nut and turning the eccentric shaft as required.

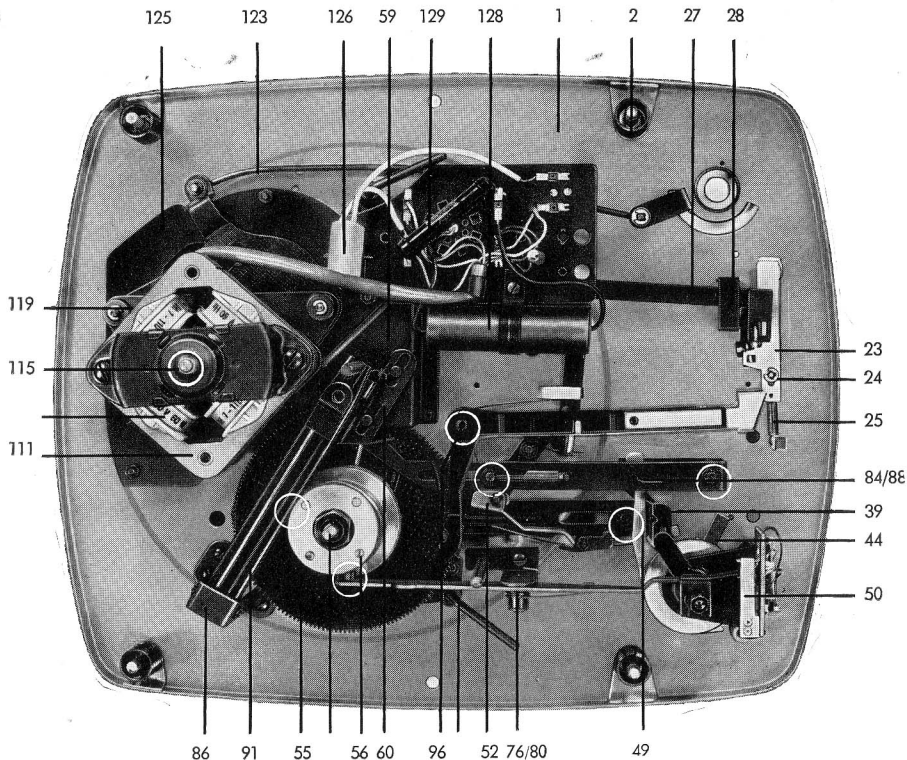




### Spare Parts

<b>1</b>	Base plate
<b>9</b>	Pick-up arm
<b>10</b>	Pick-up head with pick-up
<b>11</b>	Pick-up arm rest housing
<b>13</b>	Starter key
<b>32</b>	Locking lever
<b>37</b>	Nameplate
<b>59/69A</b>	Turntable bearing
<b>99</b>	Hexagon-head nut M 8 x 0.5 mm
<b>120</b>	Speed selector lever
<b>131</b>	Driving pulley 78 r.p.m.
<b>133</b>	Driving pulley 45 r.p.m.
<b>134</b>	Driving pulley 33 $\frac{1}{3}$ r.p.m.
<b>135</b>	Driving pulley 16 $\frac{2}{3}$ r.p.m.
<b>139</b>	Driving belt
<b>140—46</b>	Friction wheel with bearing

After an extended period of operation the bearing points of the white encircled parts should be lubricated with PE Special Oil (or grease).

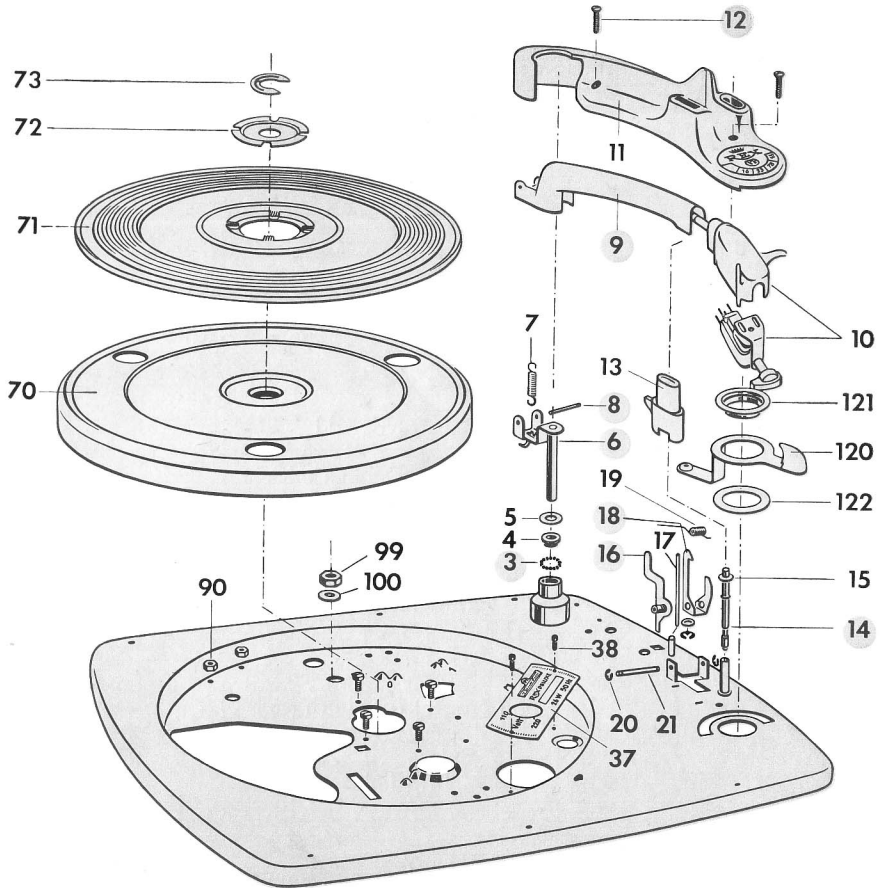


### Spare Parts

1	Base plate	59	Turntable bearing plate
2	Suspension spring	60	Lock bar
23	Starter slide	76/80	Rocker arm with support
24	Retainer 2.3	84-88	Return locator lever
25	Draw spring for starter slide	85	Bearing bracket
27	Gear shift bar	91	Ejector fork with bearing bracket
28	Protective yoke	96	Control lever
39	Main lever	111	Stator with coils
49	Trip finger	115	Upper bearing yoke
50	Supporting bracket for clutch	119	Retainer 2.3
52	Trip link, complete	125	Motor mounting plate
55	Gearwheel	126	Mercury switch
56	Main cam assembly	128	Capacitor
		129	Wire-wound resistor

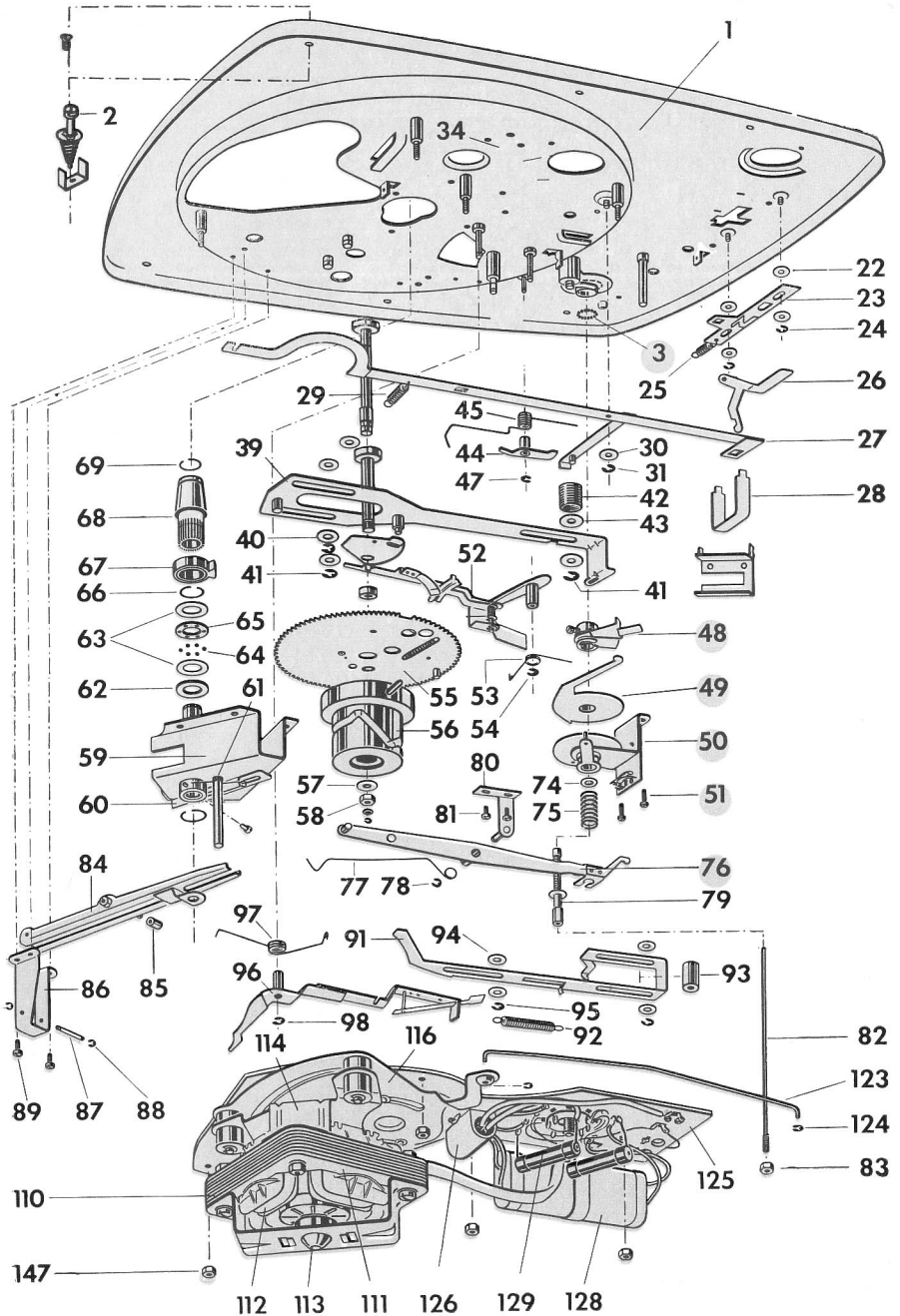
The bearing points of the white encircled parts should be lubricated with PE Special Oil (or grease) after an extended period of operation.

Spare Parts List



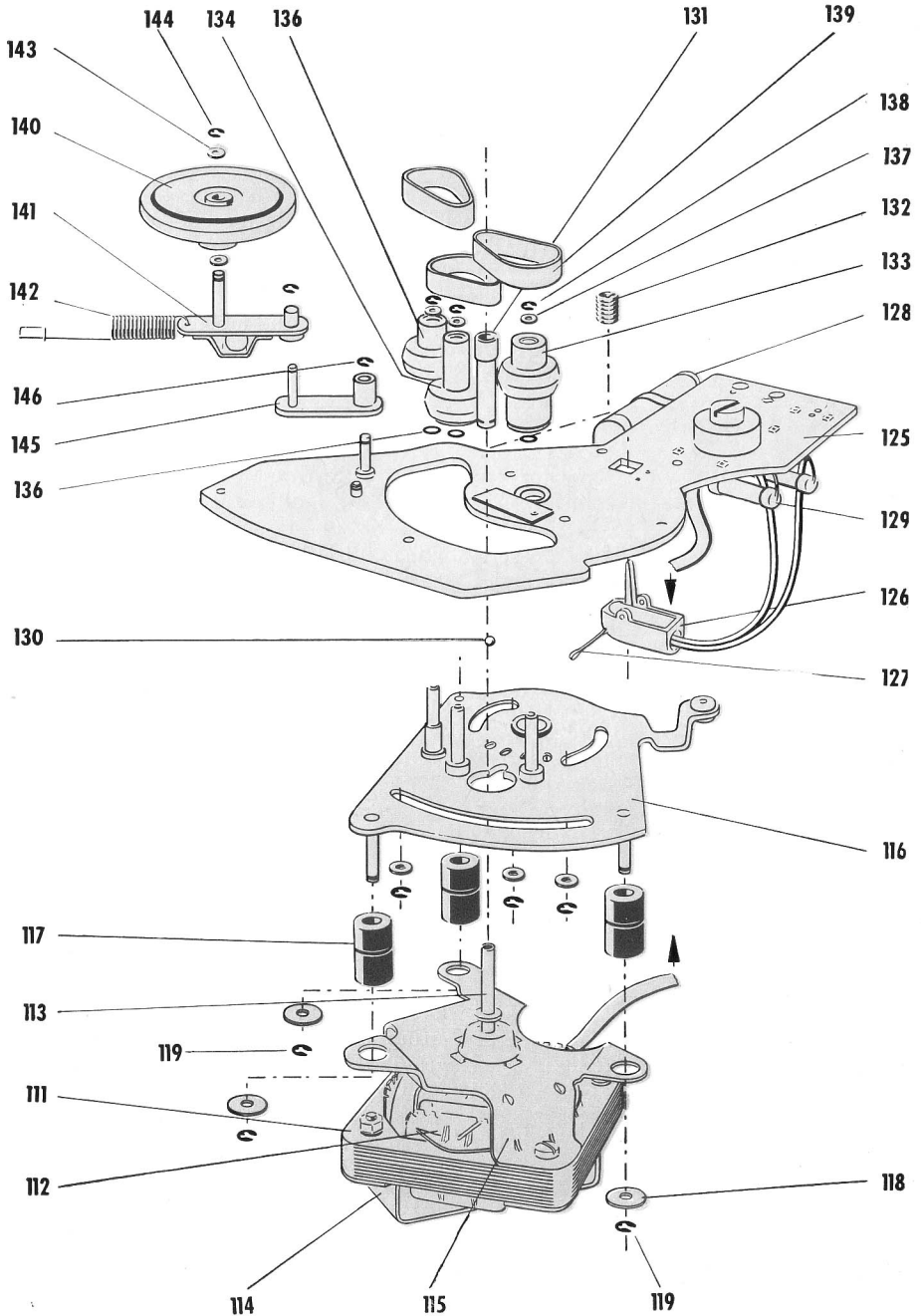
Item	Catalogue No.	Description
1	12502 U	Base plate . . . . .
2	12525	Suspension spring . . . . .
3	13057	Steel ball 2 mm dia. . . . .
4	13056	Upper cone . . . . .
5	13055	Spacer . . . . .
6	13052 U	Cantilever . . . . .
7	13092	Relieve spring . . . . .
8	13093	Bearing pin for cantilever . . . . .
9	13073 D	Pick-up arm . . . . .
10	9108	Pick-up arm with pick-up head . . . . .
11	13096 U	Pick-up arm rest housing . . . . .
12	13099	Oval-head countersunk screw M 3 x 15 . . . . .
13	13095	Starter key . . . . .
14	12710 U	Starter pin . . . . .

Item	Catalogue No.	Description
16	12687 U	Pawl . . . . .
17	12526 E	Control pin . . . . .
18	12699	Detent for tone arm . . . . .
19	12700	Torsion spring for detent . . . . .
20	12702	Retainer 1.9 . . . . .
21	12701	Bearing pin for detent and pawl . . . . .
22	12705	Washer for starter slide . . . . .
23	12703 E	Starter slide . . . . .
24	12706	Retainer 2.3 . . . . .
25	12704	Draw spring for starter slide . . . . .
26	12694 U	Starter lever . . . . .
27	12716 U	Gear shift bar . . . . .
28	12527	Protective yoke . . . . .
29	12721	Draw spring for gear shift bar . . . . .
30	12722	Washer 8 x 3.2 dia., 0.5 mm thick . . . . .
31	12723	Retainer 2.3 . . . . .
37	12768	Nameplate . . . . .
38	12769	Fillister head screw M 3 x 3.1 . . . . .
39	12552 U	Main lever . . . . .
40	12557	Washer 8 x 5.2 dia., 0.5 mm thick . . . . .
41	12558	Retainer 4 . . . . .
42	12560	Compression spring for main lever . . . . .
43	12561	Washer 13 x 5 dia., 0.5 mm thick . . . . .
44	12562 U	Lead-back catch for trip link . . . . .
45	12566	Lead-back spring for trip link . . . . .
47	12567	Retainer 1.9 . . . . .
48	13061 U	Return switch . . . . .
49	12544 U	Trip finger . . . . .
50	12571 U	Supporting bracket for clutch (stereo) . . . . .
51	12592	Fillister head screw M 3 x 5 . . . . .
52	12596 U	Trip link, complete . . . . .
53	12614	Bent spring for trip link . . . . .
54	12615	Retainer 2.3 . . . . .
55	12622 U	Gearwheel . . . . .
56	12641 U	Main cam assembly . . . . .
57	12646	Washer 13 x 5.2 dia., 0.5 mm thick . . . . .
58	12647	Hexagon-head nut M 4 . . . . .
59	12728 U	Turntable bearing plate . . . . .
60	12741	Lock bar . . . . .
61	12741 A	Bent spring for lock bar . . . . .
62	12735	Rubber grommet . . . . .
63	12736	Steel washer . . . . .
64	12738	Steel ball 2 mm dia. . . . .
65	12737	Race way . . . . .
66	12747	Lock washer . . . . .
67	12742 U	Cam plate . . . . .
68	12739	Pinion . . . . .
69	12748	Lock washer . . . . .
69 A	12749	Stop pin . . . . .
59—69 A	12727 U	Turntable bearing assembly, complete . . . . .
70	13152 U	Turntable . . . . .
71	13163	Turntable rubber matting . . . . .
72	13164	Washer . . . . .



Item	Catalogue No.	Description
73	13165	Retainer 12 . . . . .
74	12686	Washer . . . . .
75	12685	Compression spring . . . . .
76/80	12659 U	Rocker arm with support . . . . .
77	12667	Spring for rocker arm . . . . .
78	12672	Retainer 4 . . . . .
79/82	12673 U	Adjusting bushing with lift pin . . . . .
81	12684	Fillister head screw M 3 x 4 . . . . .
83	12683	Hexagon-head nut M 4 . . . . .
84/86/87/88	12752 U	Ejector fork with bearing yoke . . . . .
85	12763	Roller for ejector fork . . . . .
89	12764	Fillister head screw M 3 x 5 . . . . .
90	12765	Hexagon-head nut M 3 . . . . .
91	12650 U	Return locator lever . . . . .
92	12656	Draw spring . . . . .
93	12653	Rubber shock mount . . . . .
94	12654	Washer 8 x 4.2 dia., 0.5 mm thick . . . . .
95	12655	Retainer 3.2 . . . . .
96	12657 E	Control lever, complete . . . . .
97	12657 C	Torsion spring . . . . .
98	12657 D	Retainer 2.3 . . . . .
99	12649	Hexagon-head nut M 8-0.5 mm . . . . .
100	12648	Washer 16 x 8.2 dia., 1 mm thick . . . . .
110	12800	KM 7 motor, complete, 110/220 volts, with drive and voltage selector . . . . .
	12800/6	KM 7 motor, complete, 110 volts, with drive and mounting plate . . . . .
	128001/1	KM 7 motor, complete, 220 volts, with drive and mounting plate . . . . .
	128002/2	KM 7 motor, complete, 110/125/160/220 volts with drive and voltage selector . . . . .
111—115	12801 U	KM 7 motor, 110/220 volts without mounting plate, without drive and without voltage selector . . . . .
	12801/1 U	KM 7 motor, 220 volts without mounting plate and without drive . . . . .
	12801/6 U	KM 7 motor, 110 volts without mounting plate and without drive . . . . .
	12801/2	KM 7 motor, 110/125/160/220 volts, without mounting plate, without drive and without voltage selector . . . . .
111	12802 U	Stator with coils, 110/220 volts . . . . .
	12802/1 U	Stator with coils, 220 volts . . . . .
	12802/6 U	Stator with coils, 110 volts . . . . .
	12802/2 U	Stator with coils, 110/125/160/220 volts . . . . .
112	12810—44	1 complete set of coils, 110/220 volts . . . . .
	12810/1—44	1 complete set of coils, 220 volts . . . . .
	12810/2—44	1 complete set of coils, 110/125/160/220 volts and 110 volts . . . . .
113	12850 U	Armature . . . . .
114	12860 U	Lower bearing yoke . . . . .
115	12888 U	Upper bearing yoke . . . . .
116	12918 U	Speed-shifting plate without pulleys . . . . .
117	12900	Rubber bumper or conical coil spring . . . . .

# Record Changers Rex Deluxe and Rex Deluxe Stereo



Item	Catalogue No.	Description
118	12902	Washer 11.5 x 3.7 dia., 0.5 mm thick . . . . .
119	12903	Retainer 2.3 . . . . .
120	12528 U	Speed selector lever . . . . .
121	12530 B	Collar . . . . .
122	12532	Washer 28 x 18.2 dia., 0.4 mm thick . . . . .
123	13010	Tie rod . . . . .
124	13011	Retainer 2.3 . . . . .
125	12947 U	Mounting plate with voltage selector and mercury switch, 110/220 volts, without drive
	12947/1 U	Mounting plate with capacitor and mercury switch, 220 volts, without drive . . . . .
	12947/6 U	Mounting plate with capacitor and mercury switch, 110 volts, without drive . . . . .
	12947/2 U	Mounting plate with voltage selector and mercury switch, 110/125/160/220 volts, without drive . . . . .
126	12978 U	Mercury switch . . . . .
127	12982	Eyebolt . . . . .
128	12971	Capacitor 2 x 0.8 mfd for KM 7 motor, 110/220 volts .
	12971/1	Capacitor 0.4 mfd for KM7 motor, 220 volts . . . . .
	12971/2	Capacitor 1.6 mfd for KM7 motor 110/125/160/220 volts and 110 volts . . . . .
129	12970	Wire-wound resistor 1 k $\Omega$ , 2 watts for KM 7 motor, 110/220 volts . . . . .
	12970/1	Resistor 2560 ohms, 4 watts, for KM7 motor, 220 volts
	12970/2	Resistor 135/290/500 ohms for KM 7 motor, 110/125/160/220 volts . . . . .
	12970/2 A	Wire-wound resistor 700 ohms, 4 watts, for KM 7 motor, 110/125/160/220 volts and for 110 volts . . . . .
130	13014	Steel ball 5 mm dia. . . . .
131	12940	Motor pulley 78, 50 c.p.s. . . . .
132	12940/10	Motor pulley 78, 60 c.p.s. . . . .
133	12932 U	Driving pulley 45 . . . . .
134	12929 U	Driving pulley 33 $\frac{1}{3}$ . . . . .
135	12927 U	Driving pulley 16 $\frac{2}{3}$ . . . . .
136	12935	Big fiber washer . . . . .
137	12936	Small fiber washer . . . . .
138	12937	Retainer 1.9 . . . . .
139	12941	Driving belt . . . . .
140	12998 U	Friction wheel without bearing . . . . .
141	12992 U	Friction wheel bearing . . . . .
142	13008	Friction wheel spring . . . . .
143	13006	Washer 6 x 3.1 dia., 0.2 mm thick . . . . .
144	13007	Retainer 2.3 . . . . .
145	12986 U	Support link . . . . .
146	13009	Retainer 2.3 . . . . .
140—46	12985 U	Friction wheel with bearing, complete . . . . .
147	13200 U	Spindle 7 mm dia. . . . .
148	13250	45 DL special spindle . . . . .
149	13102 U	Pickup cable with banana plugs, 1200 mm long . . . . .
150	13023	AC cable with plug, 1500 mm long . . . . .
151	16020	Stereo pick-up cable with round plug . . . . .
152	16027	Tripolar round plug for stereo pick-up cable . . . . .



**Instructions for the conversion of monaural REX DELUXE and REX DELUXE  
Sonderklasse record changers (with magnetic pick-up) to stereo operation**

The figures encircled in the diagrams on pages 33 and 35 indicate the parts to be considered for the conversion to stereo operation.

**1) Removing pawl, detent and starter pin in record changers below serial number 120.000**

- a) Unscrew housing by removing the two fillister head screws (12).
- b) Remove retainer 1.9 (20) from bearing pin (21) for detent and pawl and remove the bearing pin. The pawl (16) and detent (18) for the tone arm can now be removed and replaced by the stereo pawl and detent.

**2) Removing the monaural pick-up arm**

- a) Unsolder the tone arm wire from the terminal plate (50) at the supporting bracket.
- b) Remove the bearing pin (8) for the cantilever and take off the pick-up arm (9).

**3) Removing the clutch supporting bracket (50) and short circuiter**

- a) Unscrew the clutch supporting bracket (50) by removing the two fillister head screws M3 (51).
- b) Unscrew the rocker arm (76).

**4) Removing the cantilever**

Remove the two cylindrical screws M3 at the return switch (48) and the two fillister head screws at the trip finger (49). The cantilever (6) can then be taken out. Care should be taken that the 13 steel balls (3) 2 mm at the upper cone and the 13 steel balls at the lower cone (3) are not lost.

**5) Mounting the stereo cantilever and stereo clutch supporting bracket**

Reverse the above procedure.

**6) Mount the stereo pick-up arm and pick-up arm wire plus stereo pick-up cable as shown in the diagram.**

**7) Adjusting the tone arm pressure**

Lift the pick-up arm, turn the screw in the pick-up arm end as required to adjust the tone arm pressure to 6 p (check with tone arm spring balance).

**8) Adjusting the tone arm landing point**

Proceed as described in the adjusting instructions.

The following parts are required for the conversion of the REX DELUXE and REX DELUXE Sonderklasse record changers to stereo operation in conjunction with the PE 90 stereo crystal turnover cartridge:

	<u>Catalogue No.</u>
1 Pick-up arm with plug-in pick-up head and PE 90 crystal turnover cartridge	13073 D— 13092
1 Cantilever	13829— 13831
1 Supporting bracket with clutch and short circuiter	12571 D— 12593 D
1 Starter pin	12710 D— 12712 A
1 Stop pawl	12687— 12691
1 Detent for tone arm	12699
1 Twin pick-up cable 1200 mm long with 4 banana plugs	13102 D

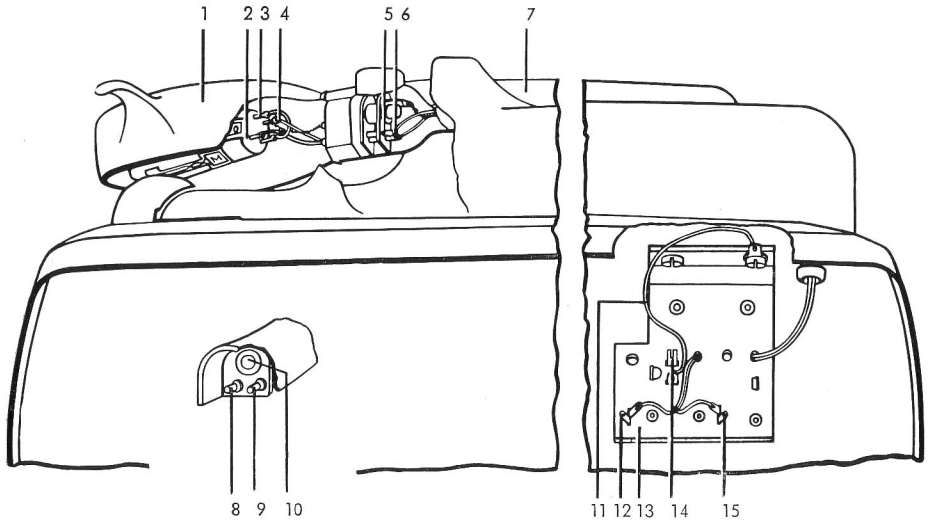
The following parts are required for the conversion of the REX DELUXE and REX DELUXE Sonderklasse record changers to stereo operation in conjunction with the PE 9000/2 stereo magnetic pick-up:

	<u>Catalogue No.</u>
1 TV 202 Transistor stereo preamplifier	
1 TO 75 A stereo pick-up arm with plug-in pick-up head and PE 9000/2 stereo magnetic pick-up	
1 Supporting bracket with clutch and short circuiter	12571 D— 12593 D
1 Twin pick-up cable 1200 mm long with 4 banana plugs or stereo pick-up cable with round plug	13102 D 16020

The monaural preamplifier incorporated in the Rex Deluxe Sonderklasse record changer has to be disconnected when the changer is converted to use with a stereo magnetic pick-up.

If requested, the stereo magnetic pick-up can be provided with a diamond armature against extra charge.

Wiring diagram for the pick-up wires



- |    |                                       |
|----|---------------------------------------|
| 1  | Pick-up head with pick-up system      |
| 2  | Channel 1, white or yellow wire, left |
| 3  | Screening                             |
| 4  | Channel 2, red wire, right            |
| 5  | Channel 2, right                      |
| 6  | Channel 1, left                       |
| 7  | Pick-up arm end                       |
| 8  | Channel 1, left, white or yellow wire |
| 9  | Channel 2, right, red wire            |
| 10 | Ground                                |
| 11 | Ground conductor brown                |
| 12 | Channel 1, left                       |
| 13 | Short circuiter                       |
| 14 | Screening                             |
| 15 | Channel 2, right                      |