

OPERATING AND SAFETY INSTRUCTIONS

Battery-hand tool for plastic strapping



**Before using the tool, read the operating
Instructions carefully.**

TABLE OF CONTENTS

1. Technical data	3
2. General information	4
2.1 Information on environmental protection	4
3. Safety instruction	5
3.1 Safety instruction for battery charge and battery	5
4. Description	6
4.1 Construction	6
4.2 Operating panel	6
4.3 Function	6
4.4 Battery charge indications	7
5. Initial operation	8
5.1 Battery charger	8
5.2 First battery charge	8
5.3 Charging the battery	8
6. Operation instructions	9
6.1 Operation the tool	9
6.2 Checking the seal	10
6.3 Operation panel	11
6.3.1 Checking battery charge	11
6.3.2 Checking strap tension	11
6.3.3 Setting welding time	11
6.3.4 Setting strap tension range	12
6.4 Setting strap width	12
7. Preventive and corrective maintenance	13
7.1 Cleaning/replacing tension wheel	13
7.2 Cleaning/replacing tooth plate	13
7.3 Replacing cutting knife	13
8. Recommended spare parts	14
8.1 Parts list	14

1-TECHNICAL DATA

BASIC DOCUMENT

Weight	3.9kg(8.6lbs) (incl.battery)
Dimensions(Length*Width*Height)	375mm*130mm*140mm
Strap tension	400-2000N
Tension speed	260mm/s(10.2" /s)
Sealing	Friction welded
Emission sound pressure levels,measurement	
Type A (EN ISO 11202) L _{PA}	82dB (A)
Vibrations at handle (EN ISO 8662-1) a _{h,w}	2.2ms ⁻²

BATTERY CHARGER/BATTERY

Voltage	Battery charger,100/240V
	(AL60DV1419)
	Bosch 12V/2.4Ah NiCd
Charging time	60 minutes
Strappings with	
One battery charge	100 to 200 depending on strap,strap tension and package
Service life	Up to approx 2000 chargings

PLASTIC STRAP

Strap quality	Polypropylene (PP) , Polyester (PET)
Strap width adjustable to	12-13, 15-16mm
Strap thickness	PP (0.6-1.0mm) 、 PET (0.5-1.0mm)

2 –GENERAL INFORMATION

These operating instructions are intended to simplify familiarisation with the strapping tool and its proper use for the intended purpose. The operating instructions contain important information concerning the safe, proper and efficient use of the strapping tool. Compliance with the instructions will help to avoid danger, reduce repairs and stoppages and increase the reliability and service life of the strapping tool.

The operating instructions must always be available at the place of operation of the strapping tool. They must be read and observed by all persons concerned with work on the strapping tool. This work specifically includes operation, refilling of operating material, fault elimination and maintenance.

In addition to the operating instructions and the regulations for accident prevention effective in the country of use and place of application, the recognised technical regulation for safety and proper operation must also be observed.

2.1 INFORMATION ON ENVIRONMENTAL PROTECTION

This tool is manufactured without any physical or chemical substances which could be dangerous to health.

For disposal of all the parts, the governmental instructions must be observed. The electrical assemblies should be dismantled so that the mechanical, electro-mechanical and electronic components can be disposed of separately.



Dealers provide an environmentally-friendly battery disposal service

- Do not open the battery.
- DO not throw the used battery into household waste, fire or water.

Defective or used batteries undergo a complete recycling process.



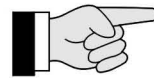
CAUTION!

Used where there is danger to life and health.



WARNING!

Used for danger which can cause material damage.



NOTE!

Used for general information and information which, if not followed, can cause faults in the operating sequence.

3-SAFETY INSTRUCTIONS



Inform yourself! Beued exclusively!
Read the operating instruction carefully.
Not using original spare parts will dis-
Preventive and corrective maintenance
on the tool may only be carried out by
trained personnel.



Original ORGAPACK spare parts must be
ued exclusively!
Not using original spare parts will dis-
solve the warranty and the liability



Protect yourself !
When operating the tool, wear eye, face
and hand protection (cut-proof gloves)



Power source!
Befor starting preventive or corrective
maintenance, remove battery from the
tool.



Warning :
Strap will snap forward!
When cutting the strap, hold the upper
portion and stand safely away from the
strap.
Caution:
The lower strap will snap forward.



Warning:
Strap could break
Do not stand in line with the strap while
itis tensioned.
The strap could break



Caution!
Only strap packed goods!
Do not put hands or others parts of the
body between the strap and the packags
during the strapping process.



Caution:
Danger of squeezing!
Do not put your fingers ito the tension
wheel area.



Do not use water!
Do not use water or steam to clean
the tool.

Use for the intended purpose
This tool is designed for strapping packages,
pallet loads and the like.

The tool was designed and manufactured to
Provide safe handling during the strapping
operation.

The tool is designed for use with plastic
straps (poly-propylene and polyester).

Possible misuse
The use of steel straps is not possible.

3.1 SAFETY INSTRUCTIONS FOR BATTERY CHARGER AND BATTERY



Always inspect the electrical plug and
cable before use, if damaged, they must
be replaced by qualified personnel.
Do not charge other types of batteries
(see chapter 5.1) and use original
accessories only.

Keep the battery charger slot free of foreign objects
and protect against dirt.

Protect the battery charger against humidity and use
it in dry areas only.

Do not open the battery, Protect the battery against
impact, heat and fire, Risk of explosion!

When the battery is outside the battery charger,
cover its battery terminals to avoid short circuits
with metal objects, risk of fire and explosion!

Keep battery dry and protected against frost..
Do not store it at temperatures over 50 °C or
below 10°C.

Damaged batteries should not be used longer.

4- DESCRIPTION

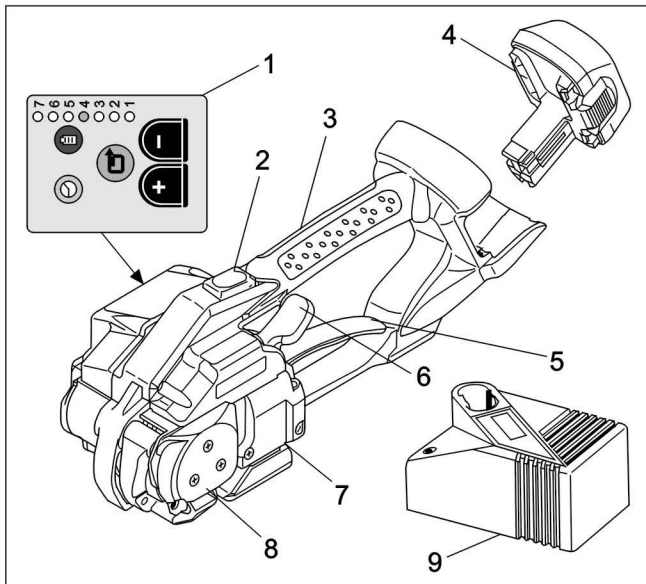


Fig.1

4.1 CONSTRUCTION

- 1 Operating panel
- 2 Strap tensioning push button
- 3 Handle
- 4 Battery lever
- 5 Rocker lever
- 6 Welding/cutting button
- 7 Welding/Cutting
- 8 Tensioning
- 9 Battery charger

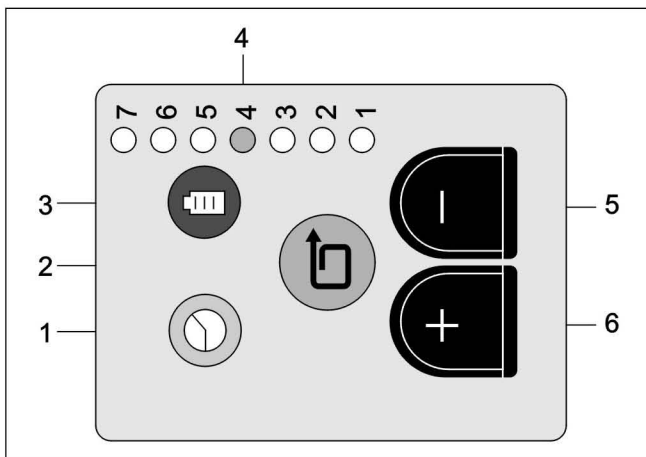


Fig.2

4.2 OPERATING PANEL

- 1 Welding time push button
- 2 Strap tension push button
- 3 Battery push button
- 4 LED-indicators 1-7
 - Green = Strap tension setting
 - Red = Battery empty indicator
- 5 Setting-push button
- 6 Setting+push button



For detailed information of the operating panel, refer to chapter 6.3

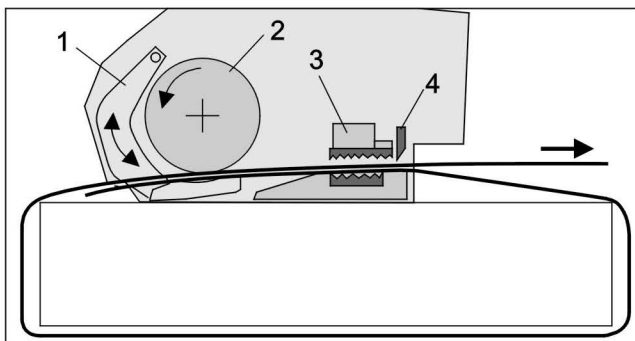




Fig.3


4.3 FUNCTION


- Clamping of the straps by tooth plate on rocker(3/1).
- Tensioning by feed wheel(3/2)anti-clockwise.
- Friction welding(3/3) of the straps.
- Upper strap is cut by knife(3/4).


4.4 BATTERYCHARGE INDICATION

Continuous green light  Ready for charging
Battery not inserted, mains supply is connected.

Flashing green light  Rapid charging
Rapid charging operates until the battery is fully re-charged. The battery charger then switches automatically to trickle charging.

Continuous green light  Trickle charging
Battery is fully charged. The battery charger is delivering only a trickle charge.

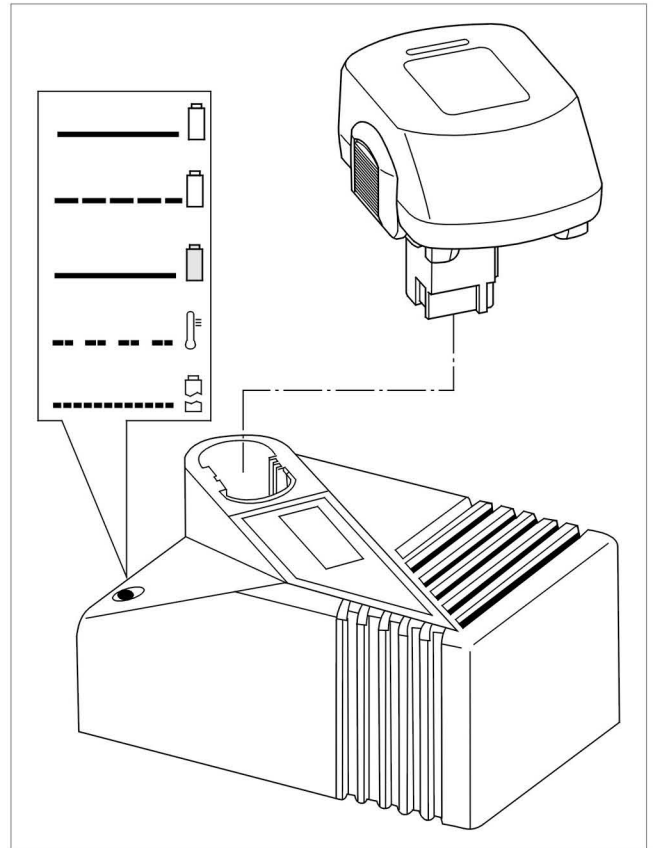
Double flashing green light  Temperature Warning:
the battery is too hot (or too cold). Trickle charging only. The battery charger switches automatically to rapid charging when the temperature is within the permitted range again.

Flashing green light  Error message
Warning: battery cannot be charged (battery or temperature sensor defective or not a BOSCH battery)

No indicator illuminated Mains supply not connected: electrical plug, cable or battery charger defective.



For detailed information, refer to the operating instructions for the battery charger.



5- INTIAL OPERATION

Input 230V 50/60 Hz/44W
Output 7.2-14.4 V $\overline{\text{---}}$ 1.9A

Fig.5

5.1 BATTERY CHARGER

The mains supply must comply with the specifications on the rating plate(Fig.5)
The battery charger is suitable only for charging batteries from the Bosch range of tools(NiCd/NiMH)with voltages between 7.2V and 14.4V.

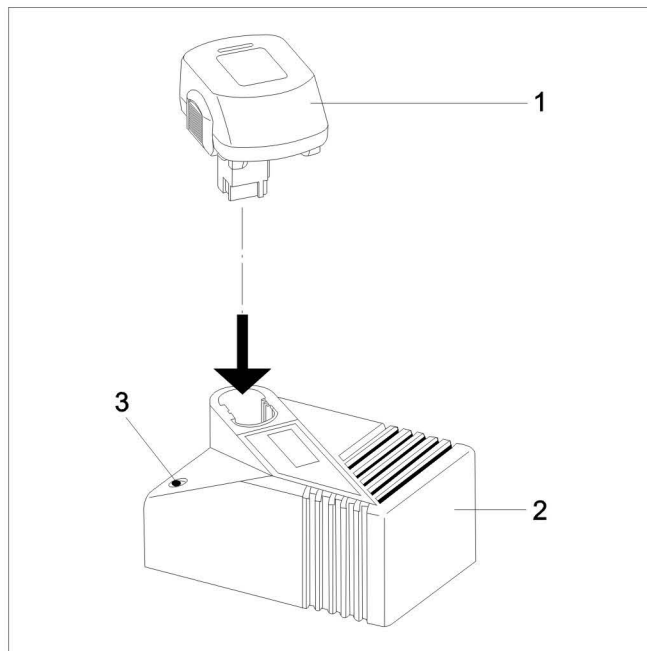



Fig.6

5.2 FIRST BATTERY CHARGE

-  Please observe the following points in order to ensure optimum battery life:
- Connect battery charger(6/2)to mains supply.
 - Insert battery (6/1) into battery charger slot.

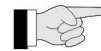
For the first charge,leave the battery in the charger for at least five hours,regardless of the battery indicator(the charging time for all subsequent charges is about 60 minutes).

For all subsequent charges,only recharge the battery when the LED indicator on the tool indicates battery empty(see Chapter6.3),Avoid charging when the battery is not yet discharged . This will ensure optimum battery capacity and life.

Maximum battery output will be reached after four or five charging/discharging cycles.

5.3 CHARGING THE BATTERY

The charging process and error function are indicated by a green light (6/3)(see chapter4.4)
The charging time is approximately 60 minutes.
The maximum charging current flows when the temperature of the battery is between 15-40°C,Avoid charging the battery at temperatures below 0 °C and above 40°C.

-  If the battery is not to be used for a longer period (several days),it should be removed from the tool and charged in/stored in the battery charger.

The intelligent is charger with fuzzy control charges the battery with the optimum rapid charging current, depending on temperature and capacity.If fully charged, a preserving charge will prevent self-discharge and thus guarantee a long battery life.

6- OPERATI INSTRUCTIONS

6.1 OPERATING THE TOOL

- Insert charged battery (7/1)into strapping tool.
- lace strap round goods to be packaged ,so that the straps lie one above the other on top of package.The beginning of the strap is underneath. Hold the straps with the left hand so that the strap beginningis approximately 20cm(8 ") ahead of the hand.

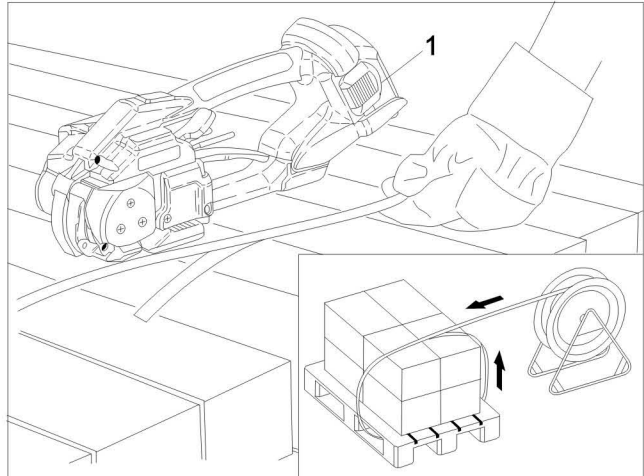



Fig.7 Place strap around package

- Take the tool in the right hand and lift the rocker lever (8/1)towards the handle.
- Slide the straps,one on top of the other,into the tool up to the stop.

 The strap lead is now spproximately 5 cm (2 ") beyond the tool.

- Release the rocker lever.

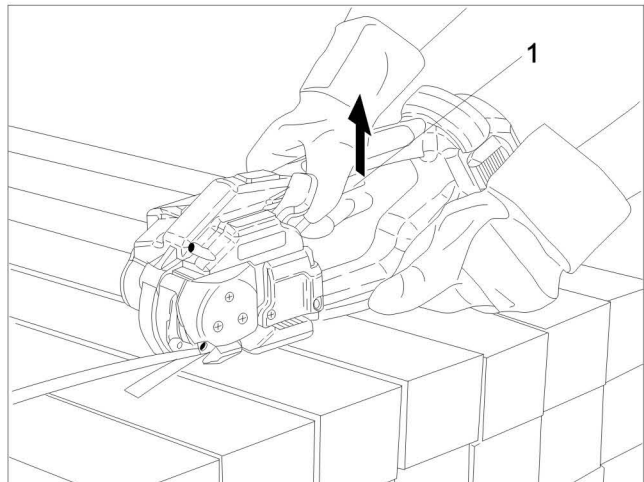



Fig.8 Slide straps into tool

- Press the push button (9/1).The strap is tensioned until the required or pre-selected strap tension is reached.
- The strap tension can be adjusted on the operating panel (see Chapter6.3.2)
- The strap can be re-tensioned at any time.

Releasing strap tension

In order to release the strap tension after the tensioning process,lift rocker lever(8/8) against handle.

 **Tensioning-welding:**
The welding process is started only when the minimum strap tension of 400N has been attained.

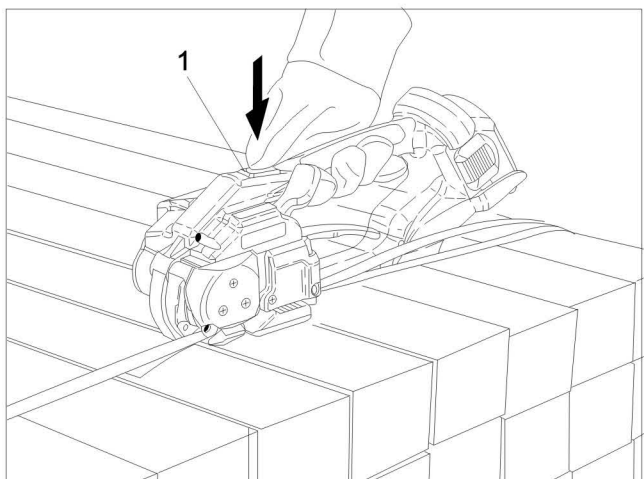


Fig.9 Strap tensioning

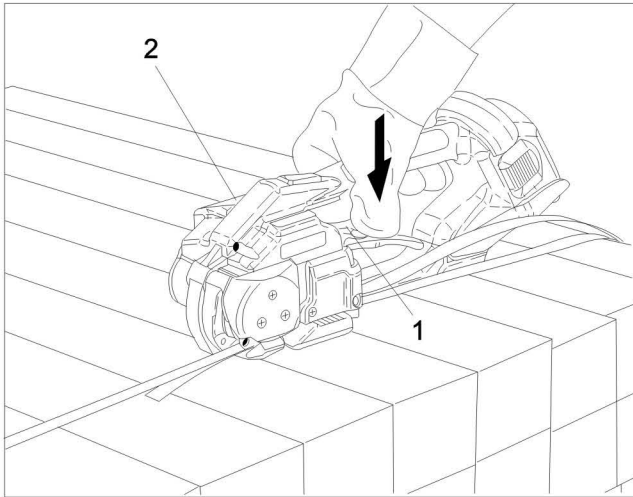


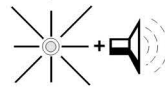
Fig.10 Welding straps

- Depress button (10/1) completely to the stop. The straps are welded together and the upper strap is out off. The LED indicator (10/2) indicates the cooling time of the sealing :



LED flashing
After finishing the friction welding , the green LED flashes for apprx,two seconds.Do not remove the tool during this time!

~2 sec.



Continuous LED and audible signal
The sealing cycle is finished.



If the straps have not been welded and an audible signal sounds, this means the minimum strap tension was not attained-re-tension.

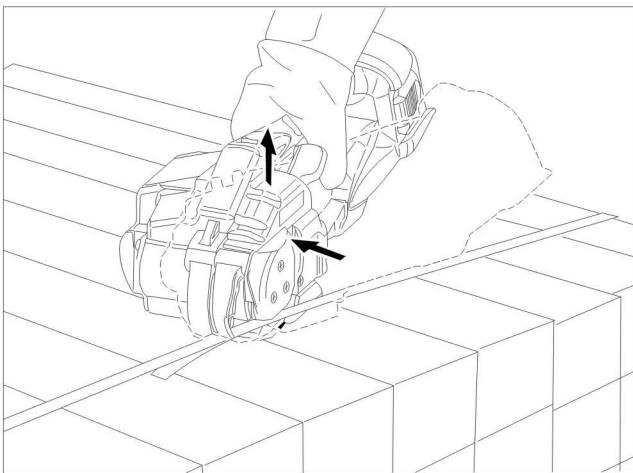


Fig.11 Removing tool

-After the LED has stopped flashing and the audible signal sounds,raise the rocker lever up to the handle.

-Swing the tool away from the strapping backwards and to the right.

-Check the seal (refer to chapter6.2).



If the tool is used in a dirty environment, it is particularly the tension wheel and the tooth plate should be checked for damage and kept clean. This is best performed by blasting with compressed air(wear goggles).

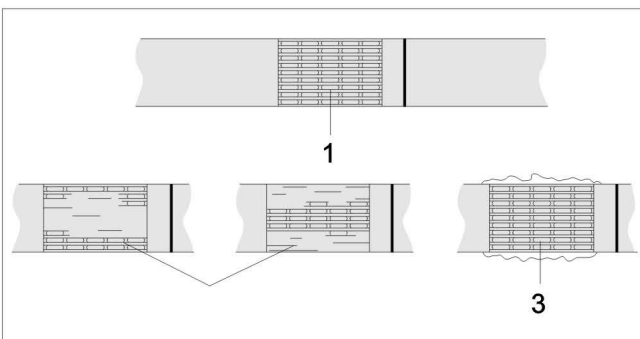


Fig.12 Cheching of seal

6.2 CHECKING THE SEAL

-Check appearance of seal (see fig.12) regularly.

If the straps are poorly welded,check the welding time setting (refer to chapter6.3.3).

1 Good seal (the complete surface is cleanly welded without excess material being forced out sideways).

2 Poorly welded seal (not welded over the complete surface),welding time too short.

3 Poorly welded seal (excess material is forced out sideways),welding time too long.



An incorrectly welded strapping cannot secure the package and can thus lead to injuries.

Never transport or move packaged goods with incorrectly welded seals.

6.3 OPERATING PANEL

a) Standard indication (green)

The current strap tension setting is monitored with inserted and charged battery

1=minimum strap tension (approx.400N)

7=maximum strap tension (approx.1200/2000N*) depending on strap tension, refer to chapter6.3.4

- For adjustment of strap tension, refer to chapter 6.3.2.

b) Battery empty indication (red)

if the inserted battery is empty, the LED switches to red and the battery must be charged, refer to chapter5.3.

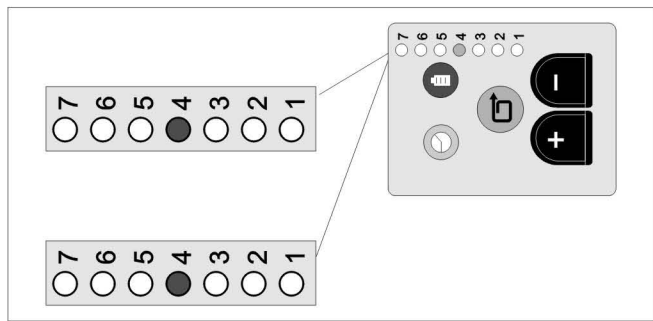


Fig. 13

6.3.1 CHECKING BATTERY CHARGE

- Depress battery push button (14/1) briefly. Read off battery charge on LED indicator(14/2).

1 = empty battery

1-3 = minimum charge (battery must be charged soon)

1-5 = decreasing charge (charging possible)

1-6 = good charge (charging would damage the battery)

1-7 = maximum battery charge (charging would damage the battery)

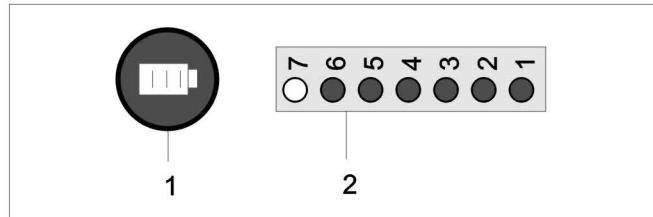


Fig. 14

6.3.2 SETTING STRAP TENSION

- Depress strap tension push button (15/1) briefly until LED indicator(15/3) flashes.

- Depress - or + push button (15/2) until flashing LED indicator shows required strap tension (wait two seconds until new setting is saved).

1=minimum strap tension (ca.400N)

7=maximum strap tension (ca.1200/2000N*)

*refer to Chapter6.3.4.

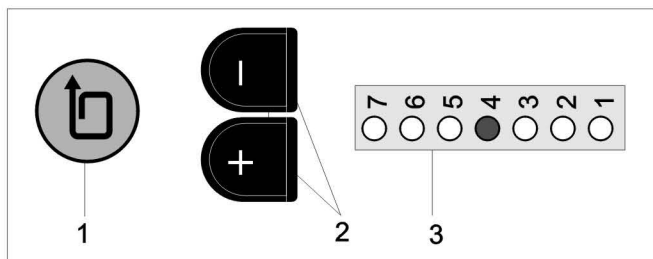


Fig. 15

6.3.3 SETTING WELDING TIME

- Depress welding time push button (16/1) briefly until LED indicator(16/3) flashes.

- Depress - or + push button (16/2) until flashing LED indicator shows required welding time (wait two seconds until new setting is saved).

1=minimum welding time

7=maximum welding time

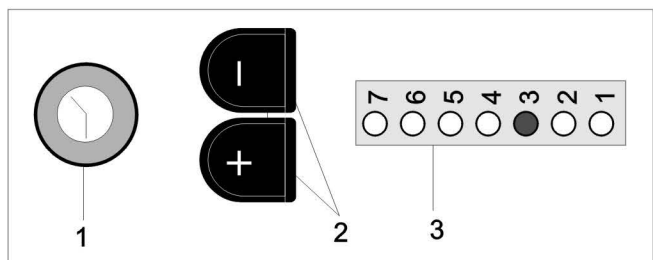


Fig. 16

✋ Cutting:

The cutting of the strap is influenced by the welding time. If the tool cuts badly, extend the welding time by one interval.

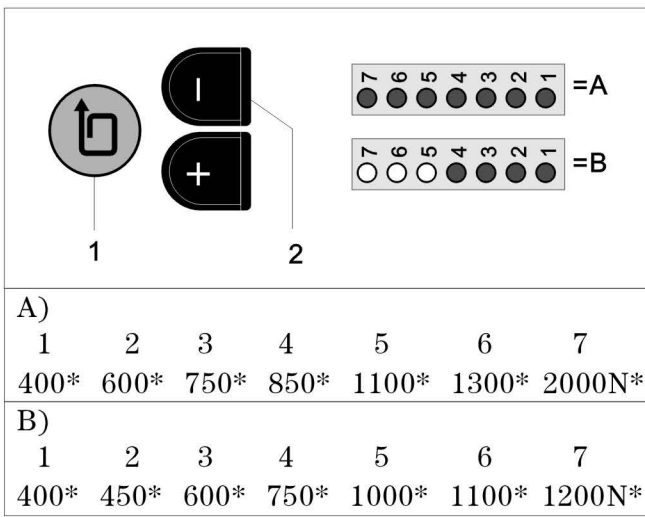


Fig.17

* Standard values! Actual value on package depends on strap and package.

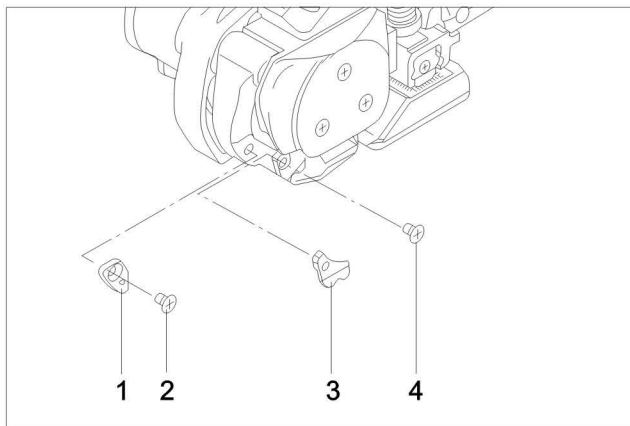


Fig.18

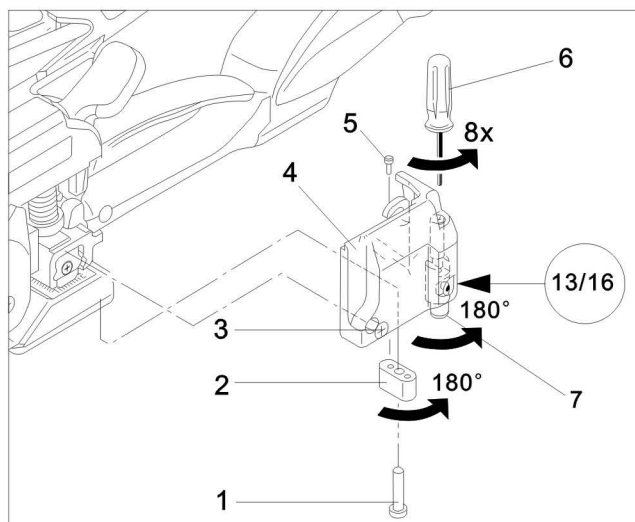


Fig.19

6.3.4 SETTING STRAP TENSION RANGE

The following two strap tension ranges can be set on the tool:

A=400–2000N(standard)

B=400–1200N(en for 13 mm straps)

Check strap tension range

- Depress and hold down “-” push button(17/2),and depress strap tension push button(17/1)for one second.
- If the LEDs 1–7 are flashing = A (400–2000N)
- If the LEDs 1–4 are flashing = B (400–1200N)

Change strap tension range

- Depress and hold down “-” push button (17/2),and depress strap tension push button (17/1) for one second.
- Depress “-” or “+” push button briefly so strap tension range changes(wait two seconds until new setting is saved).

6.4 SETTING STRAP WIDTH

The tool can be used with two different strap widths(12–13mm(1/2")or 15–16mm(5/8").

a) Change strap width from 12–13mm to 15–16mm

- Remove battery from tool.
- Release sunk screw(18/2) and remove strap stop 13mm(18/1).
- Lift the rocker lever towards the handle,release sunk screw(18/4) and remove strap guide 13mm (18/3).
- Release sunl screw(19/3)and cylinder screw(19/1) and remove cover(19/4).
- Release cylinder screw(19/5) turn strap stop (19/2) 180 and remount it.
- Unscrew threaded bolt eight turns with screwdriver (19/6).
- Pull down strap guide (19/7) and turn it 180 until 16mm indicator appears.
- Tighten threaded bolt with screwdriver(19/6) and mount cover(19/4).
- Secure screws (19/1)and (19/3) with Loctite222.

b) Change strap width from 15–16 mm to 12–13mm

- Sequence as described under point a).
- Mount 13mm strap stop (18/1) and secure sunk screw(18/2)with Loctite222
- Mount 13mm strap guide(18/3)and secure sunk screw(18/4)with Loctite222.
- Turn strap stop (19/2).
- Turn strap guide(19/7)until “13” indicator appears.

7- PREVENTIVE AND CORRECTIVE MAINTENANCE

7.1 CLEANING/REPLACING TENSION WHEEL

Removal


- Remove battery from tool.
- Release three sunk screws(20/2)and remove cover (20/3)with ball bearing.
- Lift rocker lever(20/4) and remove tension wheel (20/1).
- Clean the tension wheel with compressed air(wear goggles).
- If the tension wheel teeth are covered with heavy dirt,they must be carefully cleaned with the wire brush supplied.
- Check tension wheel for worn teeth.If a few teeth are broken,replace tension wheel (observe rotating direction,see arrow).



The tension wheel must not be cleaned while it is rotating. There is a risk of breakingteeth!

Installation

- Install the parts in reverse order.
- Grease gear teeth of tension wheel lightly with Kluber grease GBU Y131(Microlube).
- When mounting tension wheel lift rocker lever.
- Secure sunk screw(20/2)with Loctite 222.

 All preventive maintenance tasks can be performed with a Phillips screw driver!

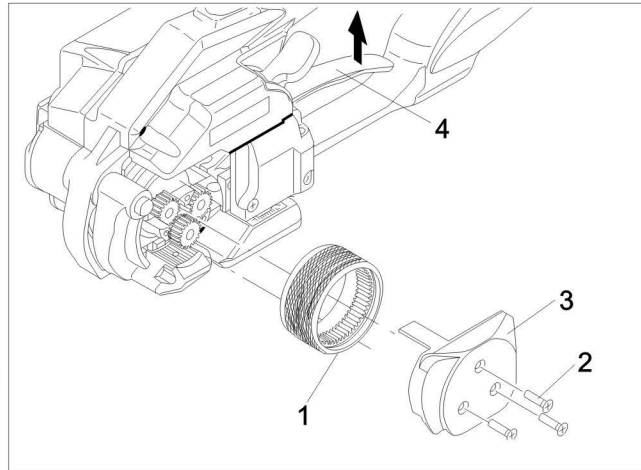


Fig.20

7.2 CLEANING/REPLACING TOOTH PLATE

Removal

- Remove battery from tool.
- Release sunk screw (21/1)and remove tooth plate (21/2).
- Clean tooth plate with compressed air (wear goggles).
- If the tooth plate teeth are covered with heavy dirt,they must be carefully cleaned with the wire brush supplied or a sharp tol.
- Check tooth plate for worn teeth,if necessary replace tooth plate.

Installation

- Install the parts in reverse order.
- Secure sunk screw(21/1)with Loctite222.

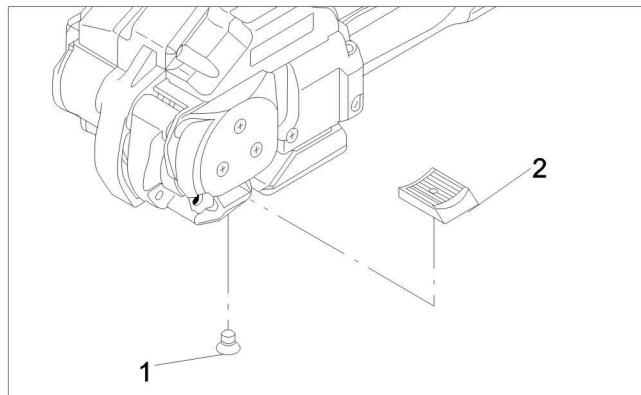


Fig.21

7.3 REPLACING CUTTING KNIFE

Removal

- Remove battery from tool.
- Release sunk screw(22/2) and screw (22/1) and remove cover(22/3).
- Release cylinder screw(22/6) and remove cutting knife(22/4) with flanged bushing(22/5).Replace cutting knife.

Installation

- Install he parte in reverse order.
- Befor install cutting knife,chenck that the compressing spring on top of knife is still mounted.
- Secure screw(22/1),(22/2) and (22/6) with Loctite222.

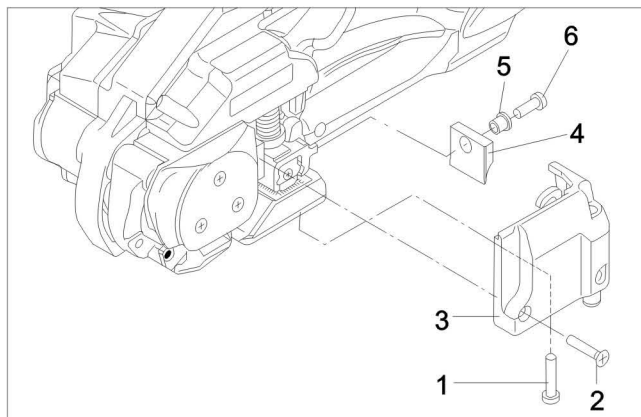


Fig.22

8– Recommended spare parts

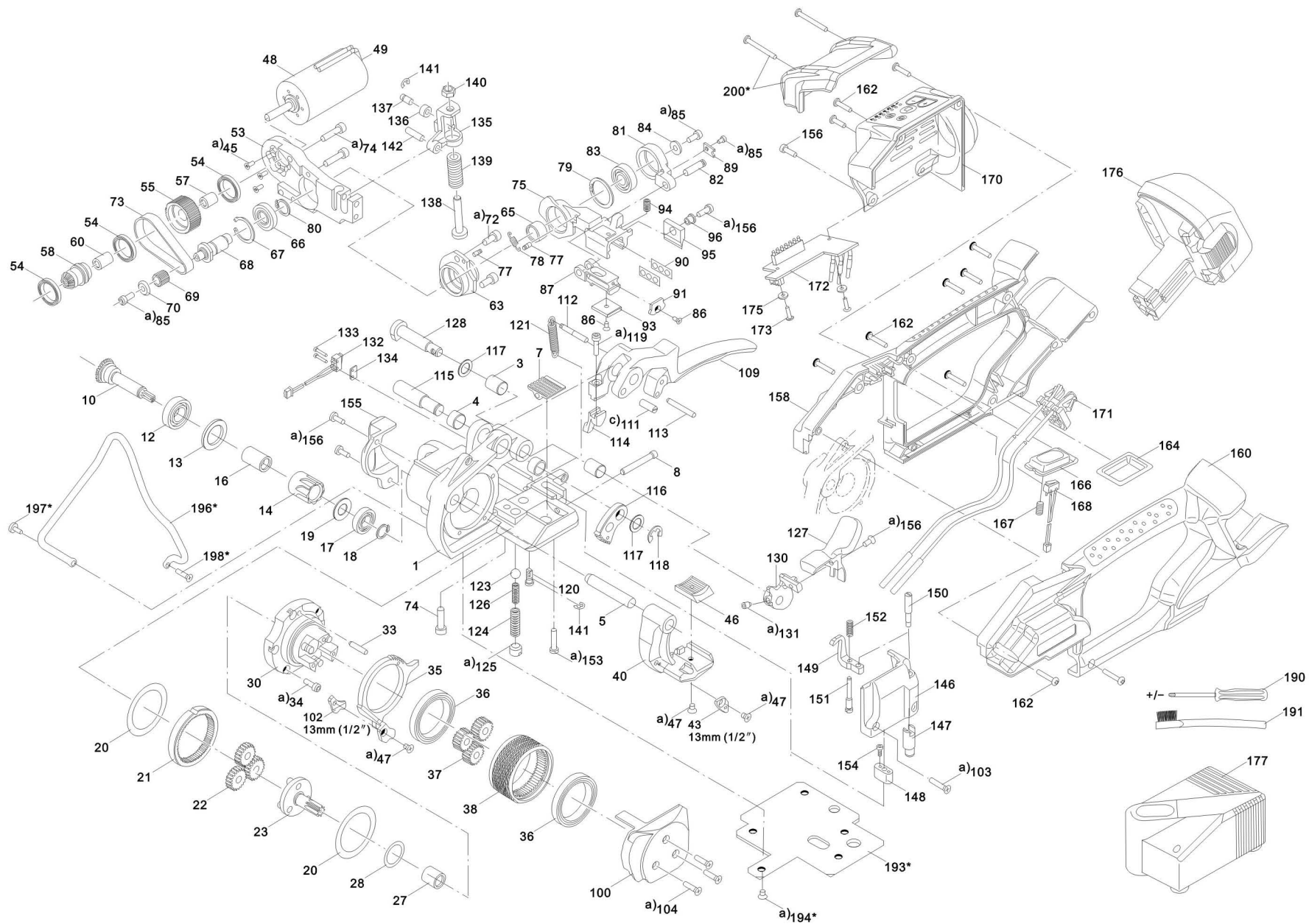
8.1 Parts list When ordering please indicate part number

Number	Part number	Part name	Attention
1	1832.001.095	Base plate complete,incl.pos.3–5	
3	1935.510.150	Slide bearing	
4	1935.512.080	Slide bearing	
5	1921.310.521	Cylinder pin	
7	1832.022.109	Tooth plate below	
8	1832.022.055	Set screw	
10	1821.061.009	Bevel wheel with pinion	
12	1930.190.154	Ball bearing	
13	1832.039.174	Spacer ring	
14	1832.039.180	Blocking wheel complete,incl.pos.16	
16	1926.502.100	Free–wheel needle bearing	
17	1930.190.102	Ball bearing	
18	1920.210.102	Retaining ring	
20	1917.401.365	Spacer disk	
21	1821.060.017	Internal gear ring	
22	1821.060.016	Planetary wheel,1 st step	
23	1832.039.165	Planetary support complete	
27	1933.710.150	Needle bushing	
28	1917.401.125	Spacer disk	
30	1832.039.177	Flange complete,incl.pos.33	
33	1921.304.200	Cylinder pin	
34	1911.004.128	Cylinder screw	
35	1832.039.185	Cam disk	
36	1930.180.350	Ball bearing	
37	1821.060.014	Planetary wheel,2 nd step	
38	1821.047.006	Tension wheel	Easily break
40	1832.031.037	Rocker	
43	1832.031.022	Strap stop,front,13mm	
45	1921.203.088	Counter sunk screw	
46	1821.048.008	Tooth plate	Easily break
47	1911.804.066	Counter sunk screw	

Number	Part number	Part name	Attention
49	1821.140.032	Brushcover-set	
53	1832.039.175	Carrier	
54	1930.180.152	Ball bearing	
55	1832.039.169	Tothed belt wheel complete,incl.pos.54,57	
57	1926.501.060	Bushing	
58	1821.061.012	Bevel wheel complete,incl.pos.54,60	
60	1926.502.060	Bushing	
63	1832.022.121	Bushing complete,incl.pos.77	
65	1933.712.100	Needle bushing	
66	1930.190.122	Ball bearing	
67	1920.324.124	Retaining ring	
68	1832.022.057	Eccentric shaft	
69	1832.022.062	Pinion	
70	1832.022.060	Disk	
72	1911.005.128	Cylinder screw	
73	1821.067.008	Tothed belt	
74	1911.005.208	Cylinder screw	
75	1832.022.084	Swivel bearing complete,incl.pos.77	
77	1922.103.083	Ridget pin	
78	1821.011.020	Tension spring	
79	1920.223.124	Retaining ring	
80	1920.212.102	Retaining ring	
81	1832.022.061	Connecting rod	
82	1832.022.058	Shaft	
83	1932.100.096	Ball bearing	
84	1821.020.104	Washer	
85	1911.004.108	Cylinder screw	
86	1911.803.066	Counter sunk screw	
87	1832.022.044	Welding shoe	
88	1912.403.056	Oval head screw	
89	1832.022.059	Safety plate	
90	1832.022.050	Ball guide	
91	1832.022.045	Cover plate	
93	1832.022.046	Tooth plate top	
94	1821.010.053	Compression spring	Easily break

Number	Part number	Part name	Attention
95	1821.209.019	Cutter knife	
96	1832.022.049	Flanged bushing	
100	1832.011.115	Cover tensioning	
102	1832.042.021	Strap guide,13mm	
103	1911.804.166	Counter sunk screw	
109	1832.031.027	Rocker lever complete,incl.pos.111-113	
111	1821.039.024	Threaded	
112	1922.104.303	Ridget pin	
113	1922.104.300	Cylinder pin	
114	1832.031.018	Blocking pawl	
115	1821.031.048	Bolt	
116	1832.039.163	Toothed segment	
117	1917.411.105	Spacer disk	
118	1920.108.102	Retaining ring	
119	1911.004.258	Cylinder screw	
120	1821.036.003	Tension spring bolt	
121	1821.011.021	Tension spring	
123	1925.010.802	Globule hardened	
124	1821.010.052	Compression spring	
125	1910.010.088	Threaded bolt	
126	1821.010.058	Compression spring	
127	1832.022.110	Welding button-set,incl.pos.156	
128	1832.022.099	Bolt	
130	1832.022.098	Cam	
131	1910.605.082	Set screw	
132	1821.151.004	Micro switch ,welding	
133	1912.401.106	Oval head screw	
134	1911.804.106	Shim plate	
135	1832.022.091	Spring bow	
136	1832.022.092	Roller	
137	1832.022.093	Shaft	
138	1832.022.094	Pressure bolt	
139	1821.010.056	Spring	
140	1916.306.062	Lock nut	
141	1920.104.072	Retaining ring	
142	1821.030.033	Shaft	

Number	Part number	Part name	Attention
146	1832.011.104	Cover welding	
147	1832.042.015	Strap guide,13/16mm	
148	1832.042.019	Strap stop 13/16mm	
149	1832.042.017	Hook	
150	1832.042.018	Threaded bolt	
151	1832.042.020	Pin screw	
152	1821.042.057	Compression spring	
153	1912.404.254	Oval head srew	
154	1912.403.126	Oval head srew	
155	1832.011.097	Gear cover	
156	1912.404.104	Oval head screw	
158	1832.011.124	Housing part right,blue	
160	1832.011.122	Housing part left,blue	
162	1914.635.200	PT-Screw	
164	1832.011.102	Protection plate	
166	1832.011.101	Swith button,yellow	
167	1821.010.054	Compression spring	
168	1821.151.003	Micro switch,tensioning	
170	1832.011.132	Motor cover complete,blue	
171	1821.152.038	Contact plate	
172	1821.152.036	Printed circuit board digital	
173	1914.630.100	PT-Screw	
175	1917.803.031	Washer	
176	2179.150	Battery	
177	2179.250	Charger	
180	1821.092.016	Indication plate	
181	1821.092.013	Indication plate	
183	1821.090.021	Name plate	
184	1821.091.017	Type plate	
190	1821.901.003	Screwdrive(Phillips)	
191	1821.901.004	Wire brush	
193	1832.001.120	Protection plate	
194	1911.705.089	Counter sunk screw	
196	1832.061.006	Suspension bow	
197	1912.405.106	Oval head screw	
198	1912.704.208	Oval head screw	



1832.002.017/1.8