



REPAIR MANUAL



NSU WERKE · NECKARSULM · GERMANY SERVICE-DEPARTMENT

Anhang zum PRINZ-Reparaturhandbuch

1. Technische Daten für 30 PS-Motor
für SPORT-PRINZ Fahrwerk und Aufbau
2. Anleitung zur Durchführung von Instandsetzungsarbeiten,
die beim SPORT-PRINZ von anderen PRINZ-Ausführungen
abweichen.

Sport-Prinz

INDEX

TECHNICAL DATA		Page
Cable key to the wiring diagram		4—8
Wiring diagrams		9+10
Group H — Rear axle		11+12
H 11 — SP	Shock absorber — removal and replacement	13
H 21 — SP	Rear spring — removal and replacement	14
Group E — Electrical unit, armatures		
E 13 — SP	Battery — removal and replacement	15
E 14 — SP	Horn — removal and replacement	15
E 15 — SP	Windscreen wiper motor — removal and replacement	15
E 41 — SP	Interior light — removal and replacement	16
E 42 — SP	Door contact switch — removal and replacement	16
Group A — Body		
A 71 — SP	Doors — removal and replacement	17
A 73 — SP	Door windows — removal and replacement	18+19
A 74 — SP	Door lock — removal and replacement	20
A 75 — SP	Door handle (outside) removal and replacement	20
A 77 — SP	Door lock cylinder — removal and replacement	21
A 78 — SP	Parallel arm window lifter — removal and replacement	21
A 79 — SP	Inside door panel — removal and replacement	22
A 81 — SP	Windshield — removal and replacement	23+24
A 82 — SP	Rear window — removal and replacement	24
A 83 — SP	Rear side window glass — removal and replacement	25
A 91 — SP	Moulding — removal and replacement	26
A 97 — SP	Front bumper — removal and replacement	27
A 98 — SP	Rear bumper — removal and replacement	27
	Additional fitting of bumper override	28+29
A 121 — SP	Headlining and bow — removal and replacement	30+31
A 141 — SP	Engine hood lock — removal and replacement	32
A 143 — SP	Engine hood — removal and replacement	32
A 144 — SP	Boot hood — removal and replacement	32

Technical data SPORT-PRINZ 30 PS-Motor

(Alterations are subject to revision)

Type	Air cooled two-cylinder 4 stroke carburettor block eng. In the back of the car approx. 90 kg (200 lb) two-cylinder 1 block (with hardened treads from Engine No. 41 06495) 76 mm (2.953") engine 41 19874, 75 mm ϕ 66 mm (2.598")
Enginge mounting	
Permissable load, dry	
Number of cylinders	
Bore ϕ	
Stroke	
Cyl. capacity	598 cc (35.6 cu. in) engine 41 19874, 583 cm ³
Compression chamber	46 c. c. engine 41 19874, 44 cm ³
Compression fuel throttle	10—11 atmos
Compression ratio	1: 7.5
HP	30 PS — at 5,500 r.p.m.
Max. revolutions	6600 r.p.m.
Max. torque	4,5 mkg/at 3500 r.p.m.
Cylinder capacity output	50 PS/ltr.
Mean effective pressure	8.45 mkg/cm ² at 5,500 r.p.m.
Mean piston speed	12.1 m/sek.
Cardan joint	pressed together of single parts 2 plain bearings (Glyco) 0 mm (synchromesh gears) 0.05—0.07 mm
Mounting bearings of cardan joint	
Axial play of cardan joint	
Radial play of cardan joint	
Connecting rods	forged with two T type shaft cross section 2 plain bearings (Glyco) 0.050—0.075 mm
Connecting rod bearing	
Radial play of connecting rod bearing	
Piston	Pin of the piston displaced; large part of the piston in moving direction. 0.055—0.065 mm (KS-piston) swimming with lock washer 19.9975—20 mm 20.02—20.033 mm 1 compression ring Impact — 0.3 — 0.4 mm Axial — 0.05 — 0.06 mm 1 Deflected oil control ring (slot downwards) Impact — 0.3 — 0.4 mm Axial — 0.05 — 0.06 mm 1 Deflected oil scraper ring } engine 47 64445 Impact — 0.3 — 0.35 mm Axial — 0.035 — 0.055 mm 1 U-Flex-ring } from engine 47 64446 Impact = 0 mm Axial = 0.035 — 0.055
Play on piston	
Gudgeon pin	
Gudgeon pin dia	
Bore of connecting rod box	
Piston rings	
Valve timing	Overhead camshaft operated by connecting rods and rockers 1 inlet valve and 1 outlet valve each cylinder in O.H.V. hard-faced (marked with „APS“ on the valve disc) with cold engine 0.1 mm 0.1 mm Inlet opens 48° before TDC Exhaust opens 72° after BDC Inlet shuts 78° BDC Exhaust shuts 42° after TDC
Valves	
Arrangement	
Exhaust valve	
Valve clearance	
Inlet valve	
Exhaust valve	
Steering times at a play of the valve of 0.1 mm	
Angle of valve seating	45°
Correction angle outer	15°
Correction angle inner	60°
Valve disc	35 mm inlet 32 mm outlet
Width of valve seating	1.2—1.4 mm
Diameter of valve stems	7.945—7.96 mm
Bore of valve guides	7.990—8.005 mm
Valve spring pressure at a length of 29 mm	25—26 kg
Cylinder head bolt torque moment	3.5 mkg (retighten when engine is cold)

Carburetor

Design

Manufacturer

Type

Adjustment

Downdraft with starting device
and accelerating pump

Solex

34 PCI

Air jet = 27

Main jet = 0135

Air correction jet = 230

Idling jet = 950

Idling air jet = 1,4

Float neecke valve = 1,5

Float weight = 5,7 gr

Injected fuel = 0,45—0,65 ccm/stroke

Air filter

Oil filling quantitates

oil-bath filter

about 100 cm³ engine oil**Fuel unit**

Axial play of con-rod

Fuel pump pressure

Fuel filter

Fuel tank and filler cap

Fuel tank capacity

Of which is reserve supply

Diaphragm pump, mechanical drive

0.05—0.1 mm

0.08—0.15 kg/cm²

Screen in fuel pump cover

Under hood luggage compartment

approx. 5 1/2 gal.

approx. 1 gal (indicator at dashboard

or reserve fuel cock under dashboard)

approx. 47 m.p.g.

Normal fuel consumption according to
DIN 70030**Electrical system (engine)**

Type

Battery

Ignition coils

Regulator switch

Idling voltage

Reverse current

Regulating voltage at 13 Amp.

Regulating resistor

Starting voltage

Ignition

Contact breaker gap

Closing angle

contact pressure

Ignition timing

Ignition marking

Ignition adjustment

12 V with voltage control
starter generator 12 V 130 W

AZ/DJ 2 T 130/12/1800 + 0.6 R 2

12 V 32 Ah

2 x 6 V/Bosch TJ6/4 DIN 72535

Bosch RS/ZD 60—130/12 A 4

14.5—15 V

4—9 Amp at 12.2 V battery voltage

13.7—14.8 V

7.5—8 Ohm

13.—13.6 V

Battery ignition

0.35—0.40 mm

206 ° 30

600—700 gr

TDC (Centrifugal governor shut)

on the fan wheel

0° at 1040—1100 r.p.m.

5° at 1100—1200 r.p.m.

10° at 1150—1250 r.p.m.

15° at 1500—1600 r.p.m.

20° at 2150—2250 r.p.m.

25° at 3000—3150 r.p.m.

30° at 3800—4000 r.p.m.

35° at 4800—5000 r.p.m.

as Bosch W 225 T 2 or 240 T 2, as way

of driving demands

Type of spark plugs

forced air cooling

about 0.45 m³/sek. at 6000 r.p.m.**Cooling system**

Supply quantity

pressure circulation/dry sump

Gear type (height of teeth 24 mm) (engine 47 02762—20 mm)

Lubricating system

Oil pump

Axial play of the toothed
wheels in the oil pump housingRadial play of the toothed
wheels in the oil pump housingTooth flank play of the toothed
wheels in the oil pump housing

Oil pressure

Max. 0.02 mm

Max. 0.02 mm

Max. 0.015 mm

approx. 3.0 atmos at 5500 r.p.m.,

oil temperature 90° C

light on dashboard

Micronic filter (interchangeable)

Oil pressure gauge

Oil filter

Lubricant	SAE 30 in summer SAE 20 normally SAE 10 for extremely deep temperatures or 10 W/30
Oil quantity (for engine – gearbox – differential)	(a) when the system is completely empty 2.75 l (b) when oil change with replacing the filter 2,75 l (c) quantity of oil between lower and upper marking on the oil dip pin about 1,25 l
Clutch	
Construction	Single plate dry clutch
Lining surface	198 cm ²
Outer diameter of clutch lining	160 mm
Inner diameter of clutch lining	110 mm
Play of disengaging lever	about 10 mm
Play of clutch pedal	about 20–30 mm
Clutch springs	9 pieces from engine 41 27956 from engine 47 21605 } central spring
Spring length (relieved)	37.14 mm
Gearbox – differential	
Gearbox	4 speed all forward speeds synchronised

Gear	Gearbox	Total reductions		
		Change speed gear	Rear axle drive	Total reduction
1st	2.07	4.14	2.31	19.8
2nd	2.07	2.21	2.31	10.57
3rd	2.07	1.41	2.31	6.74
4th	2.07	1.00	2.31	4.78
Reverse	2.07	5.38	2.31	25.73

Type	Rod linkage gear changing in the middle of the car
Fitting axial play of gearshafts	Max. 0.2 mm
Fitting axial play of differentials	0 mm
Fitting axial play of universal joint	0 mm

Steering

Type

Steering ratio

Diameter of turning circle

Steering lock

Steering play

Steering adjusting

Front Axles

Front Axles

Springing

Loading capacity

Dampers

Camber

Castor

Inclination

Toe-in

Steering swivel bolt diameter

Bore of steering swivel bush diameter

Rear Axles

Rear Axles

Springing

Loading capacity

Dampers

Foot brake

Brake drum diameter

Width of brake lining

Operating braking area

Wheel brake cylinder diameter

Wheel brake cylinder diameter

Braking retardation

Play of piston rod of main brake cylinder

Play of brake pedal

Brake fluid

Hand brake

Hand brake adjustment

Braking retardation

Wheels and Tyres

Type

Rim dimensions

Tyre dimensions

Tyre pressure (cold) front

Tyre pressure (cold) rear

Spare wheels

Chassis

Rack and pinion steering with equal length track rods

2.4 wheel revs from lock to lock

28.2 ft.

32° outside

40° inside

0 mm

by eccentric bolt

independent wheel suspension by wishbones

coil springs

Prinz I and II

333.0—351 kg

(734.1—773.8 lbs.)

351.1—369 kg

(774—813.5 lbs.)

369.1—387 kg

(813.7—853.2 lbs.)

Replace springs only in pairs

hydraulic

2°

6°

7°

} loaded (not adjustable)

At a load of 85 kg (187.4 lbs.)

(1 person 65 kg = 143.3 lbs and luggage 20 kg = 44.1 lbs.)

(without wheel spanner)

Prinz I and II, as well as Sport Prinz with the old

springing 1—2 mm (0.03937 to 0.07874")

Prinz III as well as Sport Prinz with the new springing

3—4 mm (0.1181—0.15748")

17.973—17.984 mm

18—18.027 mm

independent suspension by swing axles

coil springs

Prinz I and II

362.7—380.0 kg

(799.6—837.8 lbs.)

381.0—399.1 kg

(840—879.8 lbs.)

399.2—417.3 kg

(880—919.9 lbs.)

Replace springs only in pairs

hydraulic

hydraulic internal expanding shoe brake

operating on all four wheels

180 mm

30 mm

front 202 cm²rear 202 cm²

front 19.05 mm

rear 14.29 mm

8.0 m/sek² (when vehicle is totally loaded)

1—2 mm

10—20 mm

about 100 cm³ "Ate" "Lockheed"

cable brake operating on both rear wheels

3rd pinion

when vehicle is totally loaded 3.5 m/sek²

Steel disc wheels with well baser rims

3.00—12 (PRINZ I/II; PRINZ III 3.5—12)

4.40 x 12

1.3—1.5 atmos as load requires

1.5—1.7 atmos as load requires

in front — stowed under boot hood

Electrical equipment

Head lamp (type changeable)	1st Bosch LE 1556 A	asymmetric
	2nd Bosch LE 1551 A	symmetric
	3rd Hella TE 1.073500	symmetric
Light bulbs		
Head light	B 12 V 35/35 W	DIN 72601
Parking light	H 12 V 2 W	DIN 72601
Blink light, front	R 12 V 18 W	DIN 72601
Brake and blink light	R 12 V 18 W	DIN 72601
Tail light	G 12 V 3 W	DIN 72601
Number plate light	L 12 V 5 W	DIN 72601
Interior light	L 12 V 5 W	DIN 72601
Control light in combination rim	H 12 V 2 W	DIN 72601
Blinker (changeable)	Bosch Hella SWF	} 12 V 2x18 W
Signal horn (changeable)	Bosch HF 12 Hella B 31/12 V	
Windscreen wiper	Electrically operating double windscreen wipers	
Fuses	8 Amp fuse 5 Amp. fuse cutout (blinker)	

Dimensions and weights

Coachwork	chassisless all steel body
Type	coupe with two doors
Main measurements	
Overall length	3600 mm
Overall width	1480 mm
Overall height	1230 mm
Weights	
When empty (ready for driving, fuel tank)	560 kg
Permissible total weight	805 kg
Permissible axle load, front	375 kg
Permissible axle load, rear	430 kg
Pay-load	2 persons (each 75 kg) + 100 kg luggage
Power to weight ratio	18.5 kg/PS (unloaded)
Other datas	
Max speeds	1. 1st gear 20 m.p.h. 2. 2nd gear 40 m.p.h. 3. 3rd gear 60 m.p.h. 4. 4th gear 80 m.p.h.
Periods of acceleration	From 0 to 40 m.p.h. in 9.6 sec. From 0 to 50 m.p.h. in 16.5 sec.
Wheelbase	2000 mm
Track front	1203 mm
Track rear	1178 mm

Cable circuits switch diagram SPORT PRINZ

Lead from	Terminal	To	Terminal	Colour		Cross section mm ²
Battery	+	Regulator	30/51	Black	a	16
Regulator	30/51	Distributor	30	Black	a	2.5
Distributor	30	Ign. starter switch	30	Black/Yellow	q	1.5
Distributor	30	Light switch	30	Red	b	1.5
Distributor	15	Fuses	5	Black/Yellow	q	1.5
Ignition starter switch	30	Interior lighting	—	Yellow	d	1.5
Ignition starter switch	50	Regulator	50	Green	g	1.5
Distributor	15	Ign. St. Sw.	15/54	Black/Red	p	1.5
Distributor	15	Spark plug No. II	15	Red	b	1.5
Distributor	15	Charge indicator lamp	—	Light blue	f	0.75
Distributor	15	Fuses	6	Black	a	1.0
Charge indicator		Regulator	D + 61	Light blue	f	0.75
Double switch	56	Light switch	56	White/Black	w	1.0
Fuses	2	Light switch	58R	Grey	h	0.75
Fuses	5a	Double switch	15	Black	a	1.0
Fuses	5a	Switch wiper	53a	Black/lilac	o	0.75
Switch, wiper	53	Wiper motor	53	Light blue	f	0.75
Double switch	56a	Fuses	4	White	e	0.75
Fuses	4	Head light switch	—	White	e	0.75
Fuses	4a	Head light left	56a	White	e	1.0
Fuses	4a	Head light right	56a	White	e	1.0
Double switch	56b	Fuses	3	Yellow	d	1.0
Fuses	3a	Dimmer left	56b	Yellow	d	1.0
Fuses	3a	Dimmer right	56b	Yellow	d	1.0
Fuses	1a	Parking light left	—	Grey/Black	s	0.75
Fuses	2a	Parking light right	—	Grey/Red	t	0.75
Fuses	2a	Rear light right	—	Grey/Red	t	0.75
Rear light right	—	Number plate right	—	Grey/Red	t	0.75
Number plate right	—	Number plate left	—	Grey/Red	t	0.75
Fuses	1a	Rear light left	—	Grey/Black	s	0.75
Light switch	58R	Instrument panel I	—	Grey	h	0.75
Instrument panel	1	Instrument panel II	—	Grey	h	0.75
Double switch	71	Horn	—	Grey	h	1.0
Fuses	6a	Blinker 15 X	—	Grey/Green	r	0.75
Light switch	54	Blinker 54 L	—	Grey/Black	s	0.75
Blinker	KP	Blinker switch	—	Black/White	m	0.75
Double switch	L	Blinker front left	—	Black/White	m	0.75
Double switch	R	Blinker front right	—	Black/Green	n	0.75
Double switch rear	L54	Brake light left	—	Black/Red	p	0.75
Double switch rear	R54	Brake light right	—	Black/Yellow	q	0.75
Double switch	54f	Brake light switch	—	Black/lilac	o	0.75
Fuses	6a	Brake light switch	—	Grey/Green	r	0.75
Fuel gauge		Fuel gauge light	—	Yellow	d	1.5
Fuses	5	Fuel gauge light	—	Light Blue	f	1.5
Spark Plug No. I	15	Spark Plug No: II	1	Black	a	1.0
Dyno starter		Spark Plug No: I	1	Black	a	1.5
Dyno starter		Regulator	30b	Black	a	16.0
Interior lighting		Door contact switch		Brown	c	0.75
Door contact	left	Door contact	right	Brown	c	0.75
Wiper switch	53a	Wiper motor	53a	Black/lilac	o	0.75
Fuses	1	Light switch	58L	White	e	0.75
Wiper Switch	31b	Wiper motor	31b	Light blue/White	x	0.75
Wiper Switch	31	Wiper motor	31	Black	a	0.75
Distributor	15	Oil gauge lamp	—	Brown	c	0.75
Oil pressure switch		Oil gauge lamp	—	Brown	c	0.75
Distributor	30	Socket	—	Grey	h	1.5
Battery or motor	Masse			Bright		10.0
Horn	Masse			Brown	c	1.5
Wiper motor	Masse			Black	a	1.5
Head lamp	Masse			Brown	c	1.5
Regulator	Masse			Black	a	1.0
Rear light left		Switch, rear light lamp		Black	a	1.5
Switch, rear light lamp		Rear light lamp		Black	a	1.5

Interpretation of large letters on SPORT-PRINZ diagram

Large letters

A	Starter generator
B	Regulator
C	Battery
D	Ignition Starting switch
E	Spark plugs
F	Spark plugs
G	Head light
H	Blinker light front
I	Brake blinker light and rear light
K	Licence plate light
L	Interior lighting
L1	Door contact right
L2	Door contact left
M	Light switch
N	Fuse box
O	Cable junction
P	Twin lever switch on steering column
Q	Special fittings (reversing light, fog lamps)
R	Blinker
S	Wiper motor
T	Windshield wiper motor
U	Electric horn
U1	Signal ring for horn
V	Steering column fuse and ignition starter switch
W	Fuel gauge light
X	Brake light switch on main brake cylinder
Y	Radio
Z	Aerial

Small letters

a	Black
b	Red
c	Brown
d	Yellow
e	White
f	Light blue
g	Green
h	Grey
i	Lilac
m	Black/White
n	Black/Green
o	Black/Lilac
p	Black/Red
q	Black/Yellow
r	Grey/Green
s	Grey/Black
t	Grey/Red
u	Light blue/Black
w	White/Black
x	Light blue/White

CABLE DETAILS FOR SPORT PRINZ WIRING DIAGRAM

from vehicle No. 41 09691 / 4734900

Connected to	Clamp	from	Clamp	Colour		Cross section (sq. in.)
Dynamo	DF	Regulator	DF	yellow	d	.0012
Dynamo	D + /61	Regulator	D + /61	light blue	f	.0012
Dynamo	30h	Regulator	30h	black	a	.0248
Dynamo	1	Coil	1	black	a	.0023
Dynamo	Earth	Earth		bare		.0155
Regulator	D + /61	Charging Control Light		light blue	f	.0012
Regulator	D + /61	Dynamo	D + /61	light blue	f	.0012
Regulator	DF	Dynamo	DF	yellow	d	.0012
Regulator	50	Ignition Switch	50	green	g	.0023
Regulator	30/51	Battery	+	black	a	.0248
Regulator	30/51	Distributor	30	black	a	.0039
Regulator	30h	Dynamo	30h	black	a	.0248
Coil I	1	Dynamo	1	black	a	.0023
Coil I	15	Coil II	1	black	a	.0016
Coil II	15	Distributor	15	red	b	.0023
Coil II	15	Reversing Lamp Switch		black	a	.0016
Left Main Beam	56a	Fuse	4	white	e	.0016
Left Dipped Beam	56b	Fuse	3	yellow	d	.0016
Left Sidelight		Fuse	1	grey/black	s	.0012
Right Main Beam	56a	Fuse	4	white	e	.0016
Right Dipped Beam	56b	Fuse	3	yellow	d	.0016
Right Sidelight		Fuse	2	grey/red	t	.0012
Left Front Winker		Double Switch	L	black/white	m	.0012
Right Front Winker		Double Switch	R	black/green	n	.0012
Left Brake/Winker		Double Switch	54L	black/red	p	.0012
Left tail light		Fuse	1	grey/red	s	.0012
Right Brake/Winker		Double Switch	54R	black/yellow	q	.0012
Right tail light		Fuse	2	grey/red	t	.0012
Number Plate Light		Fuse	7	grey	h	.0012
Interior Light		Fuse	8	red	b	.0023
Interior Light		Door contacts left and right		brown	c	.0012
Screen Wiper Switch	54	Fuse	5	black/lilac	o	.0012
Screen Wiper Switch	54	Screen Wiper Motor	53a (54)	black/lilac	o	.0012
Screen Wiper Switch	54d	Screen Wiper Motor	53 (54d)	light blue	f	.0012
Screen Wiper Switch	31	Screen Wiper Motor	31	black	a	.0012
Screen Wiper Switch	31b	Screen Wiper Motor	31b	light blue/white	x	.0012
Light Switch	30	Distributor	30	red	b	.0023
Light Switch	56	Double Switch	56	white/black	w	.0016
Light Switch	58L	Fuse	1	grey/black	s	.0012
Light Switch	58R	Fuse	2	grey/red	t	.0012
Light Switch	K	Speedo Light		grey	h	.0012
Light Switch	K	Fuse	7	grey	h	.0012
Fuse Box		Fuse	8	red	b	.0023
Fuse	1 upper	Light Switch	58L	grey/black	s	.0012
Fuse	2 upper	Light Switch	58R	grey/red	t	.0012
Fuse	3 upper	Double Switch	56b	yellow	d	.0016
Fuse	4 upper	Main Beam Control		white	e	.0012
Fuse	4 upper	Double Switch	56a	white	e	.0016
Fuse	6 upper	Distributor	15	black	a	.0016
Fuse	7 upper	Light Switch	K	grey	h	.0012
Fuse	8 upper	Fuse Box		red	b	.0023
Fuse	8 upper	Interior Light		red	b	.0023
Fuse	8 upper	Horn		black	a	.0023
Fuse	1 lower	Left Tail Light		grey/black	s	.0012
Fuse	1 lower	Left Side Light		grey/black	s	.0012
Fuse	2 lower	Right Tail Light		grey/red	t	.0012
Fuse	2 lower	Right Side Light	56b	grey/red	t	.0016
Fuse	3 lower	Right Dipped Beam	56b	yellow	d	.0016
Fuse	3 lower	Left Dipped Beam	56a	yellow	d	.0012
Fuse	4 lower	Left Main Beam	56a	white	e	.0016
Fuse	4 lower	Right Main Beam	54	white	e	.0016
Fuse	5 lower	Screen Wiper Switch	15	black/lilac	o	.0012
Fuse	5 lower	Double Switch	56a	black	a	.0016

Connected to	Clamp	from	Clamp	Colour		Cross section (sq. in.)
Fuse	6 lower	Winker	15	grey/green	r	.0012
Fuse	6 lower	Brake-light switch		grey/green	r	.0012
Fuse	7 lower	Number plate light		grey	h	.0012
Fuse	7 lower	Fog lamp switch		grey/black	s	.0023
Fuse	8 lower	Distributor	30	red	b	.0023
Distributor	15	Ignition starter switch	15/54	black/red	p	.0023
Distributor	15	Coil II	15	red	b	.0023
Distributor	15	Charging control light		light blue	f	.0012
Distributor	15	Fuse	6	black	a	.0016
Distributor	15	Oil control light		brown	c	.0012
Distributor	30	Ignition starter switch	30	black/yellow	q	.0023
Distributor	30	Light switch	30	red	b	.0023
Distributor	30	Fuse	8	red	b	.0023
Distributor	30	Electric clock		black/white	m	.0012
Distributor	30	Regulator	30/51	black	a	.0039
Double switch	54	Winker	54L	grey/black	s	.0012
Double switch	54f	Brake light switch		black/lilac	o	.0012
Double switch	L	Left front winker		black/white	m	.0012
Double switch	R	Right front winker		black/green	n	.0012
Double switch	54R	Right brake light		black/yellow	q	.0012
Double switch	54L	Left brake light		black/red	p	.0012
Double switch	56	Light Switch	56	white/black	w	.0016
Double switch	H	Horn (ring)	—	grey	h	.0016
Double switch	71	Horn (normal)	+	grey	h	.0016
Double switch	15	Fuse	5	white	e	.0016
Double switch	56a	Fuse	4	black	a	.0016
Double switch	56b	Fuse	3	yellow	d	.0016
Winker	15	Fuse	6	grey/green	r	.0012
Winker	54L	Double switch	54	grey/black	s	.0012
Winker	KP	Winker control		black/white	m	.0012
INSTRUMENT PANEL						
Oil control light		Oil pressure switch		brown	c	.0012
Oil control light		Distributor	15	brown	c	.0012
Winker control		Winker	KP	black/white	m	.0012
Charging control light		Distributor	15	light blue	f	.0012
Charging control light		Regulator	D + /61	light blue	f	.0012
Main beam control		Fuse	4	white	e	.0012
Instrument panel light		Light switch	K	grey	h	.0012
Clock		Distributor	30	black/white	m	.0012
Horn	+	Fuse	8	black	a	.0023
Horn	—	Double switch	H	grey	h	.0016
Ignition starter switch	30	Distributor	30	black/grey	q	.0023
Ignition starter switch	15/54	Distributor	15	black/red	p	.0023
Ignition starter switch	50	Regulator	50	green	g	.0023
Ignition starter switch	R	Radio				
Oil pressure switch		Oil control light		brown	c	.0012
Brake light switch		Double switch	54f	black/lilac	o	.0012
Brake light switch		Fuse	6	grey/green	r	.0012

Meaning of the letters in the Sport Prinz Wiring diagram
from vehicle no. 41 09691 / 4734900

Capitals

A	Starter
B	Regulator
C	Battery
E	Coil
F	Spark-plug
G	Headlamp
H	Front winker
I	Stop, tail and rear winker
K	Number plate indicator
L	Interior light
L1	Right door contact
L2	Left door contact
M	Screenwiper switch
M1	Light switch
M2	Socket
N	Fuse box
O	Distributor
P	Double switch on steering column
Q	Special equipment (reversing and fog lamps)
R	Winker
S	Instrument panel
T	Screenwiper motor
U	Horn
U1	Horn ring
V	Steering column lock with ignition starter switch
W	Oil pressure switch
X	Brake light switch
Y	Radio
Z	Aerial

Small letters

a	black
b	red
c	brown
d	yellow
e	white
f	light blue
g	green
h	grey
i	lilac
k	black/grey
m	black/white
n	black/green
n	black/lilac
p	black/red
q	black/yellow
r	grey/green
s	grey/black
t	grey/red
u	light blue/black
w	white/black
x	light blue/white

Cable Connection Changes for Export

England (right-hand steering): Cable layout

Instrument lamp terminal directly on fuse 7 (light switch K)

Cable parking light, left grey/red

Cable parking light, right grey/black

Direction indicator, front, left black/green

Direction indicator, front right black/white

Italy, France, Portugal, Austria: Headlight flasher on dimmer.

Cable from double switch 56a to fuse 3 (4)

Cable from double switch 56b to fuse 4 (3)

France, Italy: with asymmetric dimmer, additional ground connection cable for full beam and dimmer.

Denmark: without clearance light switch Fuses 1 and 2 connected.

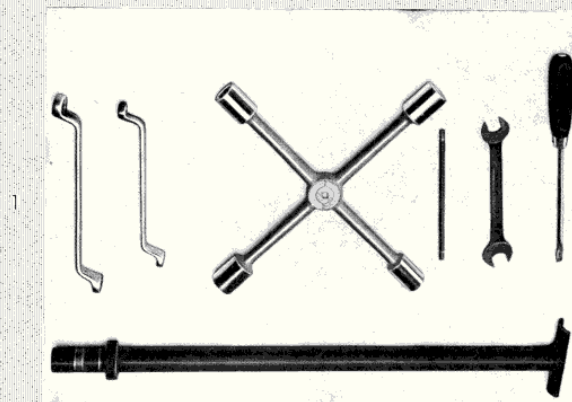
Licence plate lights (grey) on fuse 1 (7).

H 11 – SP Shock absorber removal and replacement

up to vehicle 41 05839 (PRINZ I/II)
from vehicle 41 05840 (PRINZ III)
See page 80a

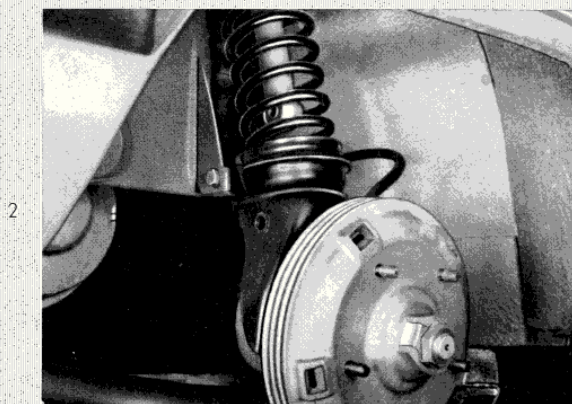
Tools: Box wrench 14, 17 mm
Open end wrench 17 mm
Wheel nut spanner
Punch $\varnothing$ 6 mm
Jack
Jack inset (see page 8 repair manual Prinz)
Screw driver
Angular screw driver
Special gum

Illustration No: 1



1. Remove rear spring as shown on page 14, H 21-SP. Loosen shock absorber lock nut below and push shock absorber completely upwards.

Illustration No: 2



2. Remove luggage compartment covering rear sideways.
3. Loosen cap nut.
4. Remove mounting nut (17 mm box wrench, hold with angular screw driver).

Illustration No: 3

NOTE: Shock absorber must be removed by an assistant.



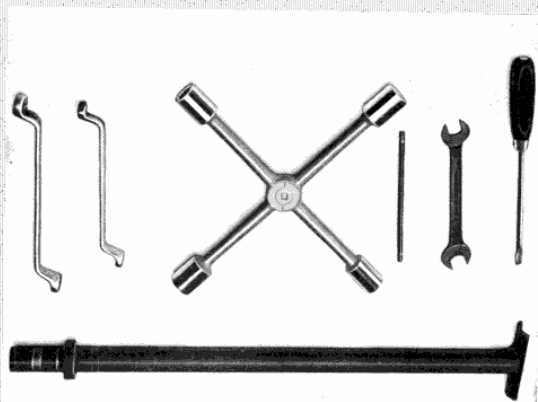
5. Remove cup, rubber ring and centering cup.
6. Re-assemble in the reverse order.

After re-assembly glue luggage compartment covering on again.

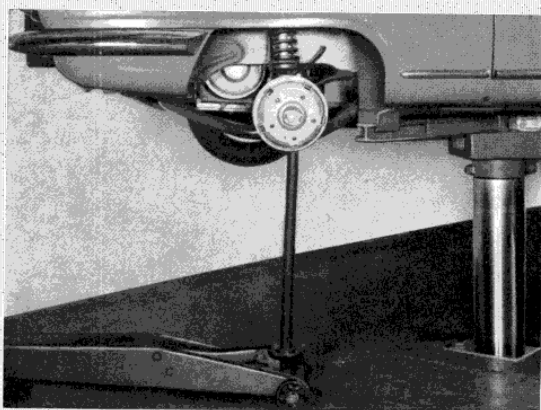
Illustration No: 4



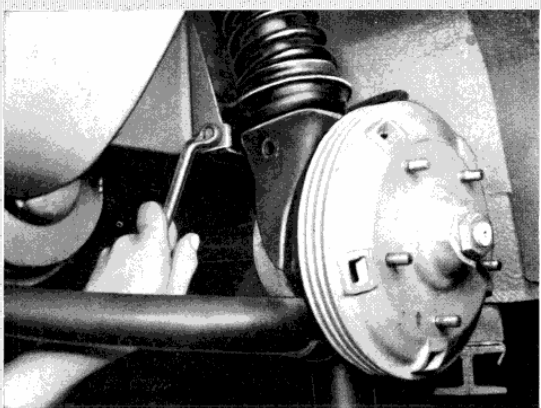
NOTE: Do not dirty inner equipment of car.



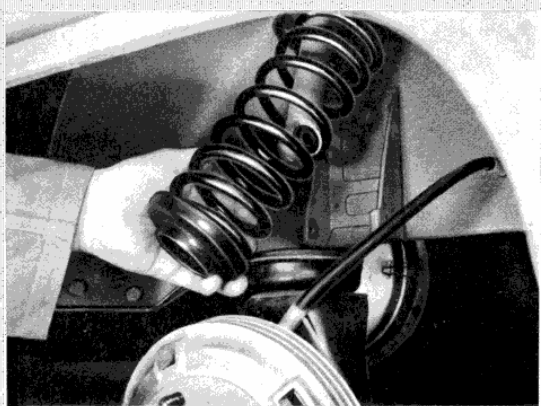
5



6



7



8

H 21 – SP Rear Spring removal and replacement

up to vehicle 41 05839 (PRINZ I/II)
 from vehicle 41 05840 (PRINZ III)
 see page 80 a

Tools: Box wrench 14, 17 mm
 Open end wrench 17 mm
 Wheel nut spanner
 Punch $\varnothing$ 6 mm
 Jack inset (see page 8 in repair manual PRINZ)
 Screw driver

Illustration No: 5

1. Remove wheel cap.
2. Loosen wheel nuts.
3. Jack up vehicle.
4. Remove wheel.
5. Compress spring till limit stop is free (jack with inset)

Illustration No: 6

6. Dismantle shock absorber, loosen screw and push shock absorber upwards.
7. Loosen locking screws over rubber stop (2 screws, 14 mm box wrench).

Illustration No: 7

8. Remove rubber stop.
9. Release spring tension tool.

NOTE: When releasing spring, watch tension of brake hose.

10. Remove spring downwards.
11. Reassemble in the reverse order.

NOTE: Replace springs only in pairs!

Illustration No: 8

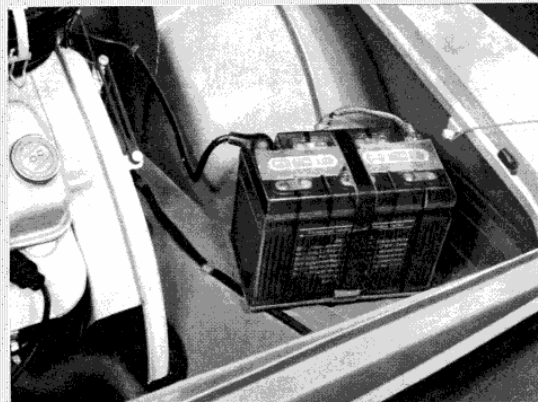
E 13 – SP Battery removal and replacement

1. Open engine hood.
2. Disconnect—clip from pole.
3. Disconnect+ clip from pole.
4. Open strap and remove battery.
5. Reassemble in the reverse order.

NOTE: In order to keep the transition rheostat low the pole heads and clips must be absolutely clean. Grease poles.

Illustration No: 9

9



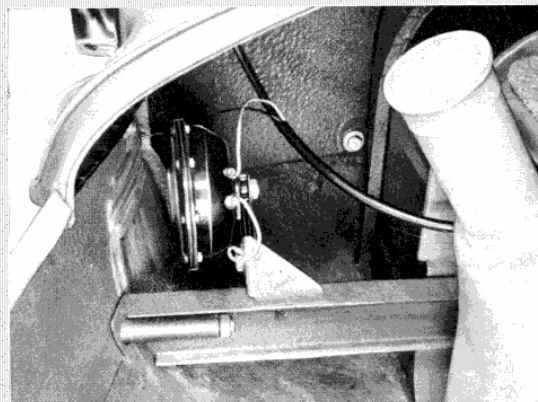
E 14 – SP Horn removal and replacement

1. Open engine hood.
2. Disconnect lead.
3. Remove horn.
4. Re-assemble in the reverse order.

NOTE: Make sure that the contacts fit well.

Illustration No: 10

10



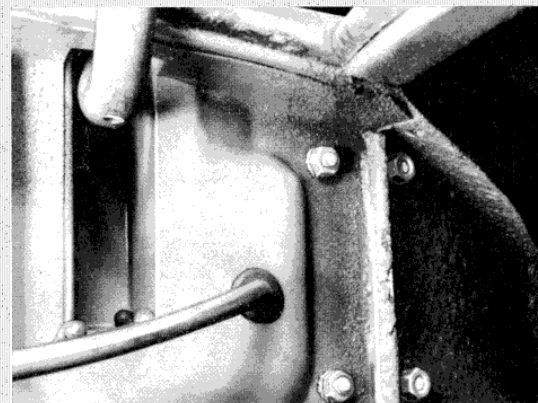
E 15 – SP Windscreen wiper motor removal and replacement

Tools: Box wrench 10 mm
Open end wrench 9, 10, 14 mm
Screw drive

1. Disconnect cable from motor and mark it.
2. Remove driving rod.
3. Remove holder for windscreen wiper motor in the luggage compartment.

Illustration No: 12

11

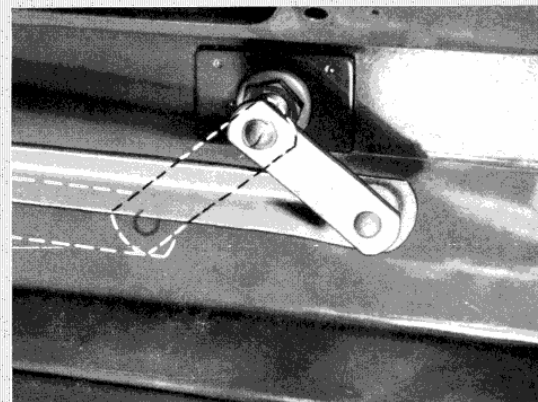


4. Remove windscreen wiper motor and holder.
5. Reassemble in the reverse order. Make sure of proper earth contact; wiring diagram page 11 and 12.

NOTE: After fitting the motor control the adjustment of the driving rod, the levers on the tandem bearings must move to the left and right hand equally.

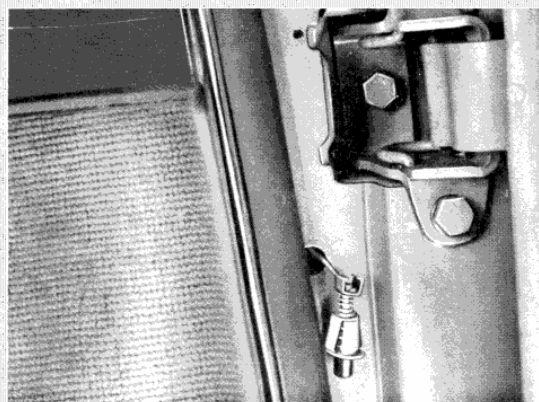
Illustration No: 12

12





13



14

E 41 – SP Interior lighting removal and replacement

1. Lift cap up carefully with a knife.
2. Remove bulb.
3. Remove screws, take base plate off and disconnect lead.
4. Reassemble in the reverse order.

■ **NOTE:** Watch earth contact.

Illustration No: 13

E 42 – SP Door contact switch removal and replacement

1. Pull switch out with a small screw driver (is clamped).
2. Disconnect lead.
3. Reassemble in the reverse order.

■ **NOTE:** Make sure that earth lead is fitted properly.

Illustration No: 14

A 71 – SP Door removal and replacement

Tools: Box wrench 14 mm
Open end wrench 14 mm
Box spanner 14 mm
Screw driver
Phillips screw driver
Angel tear needle
Special gum.

Removal: Remove door and linings

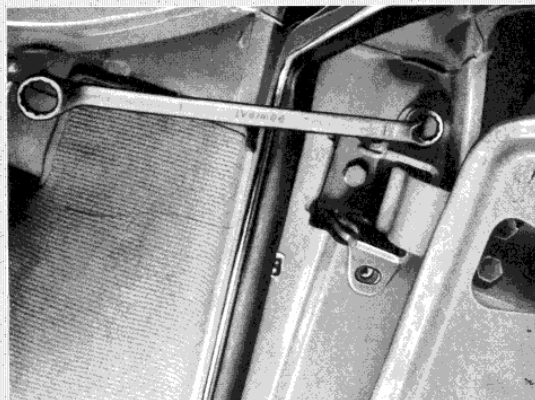
Fitting: Replace door and linings

NOTE: To align remove the door covering
A 79 SP Page 22.

1. In order to fit the door in the front close to the body there are linings with slotted holes.

Illustration No: 15

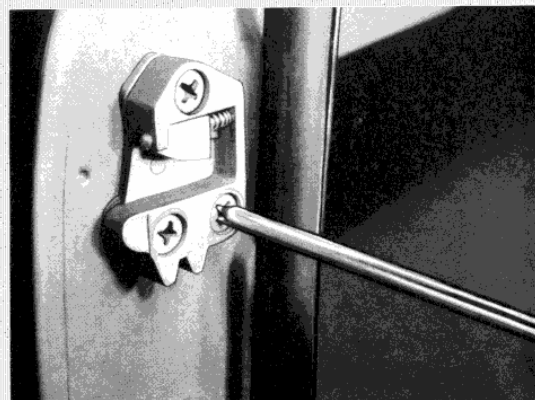
15



2. In order to fit the door in the back close to the body adjust the striker plate.

Illustration No: 16

16

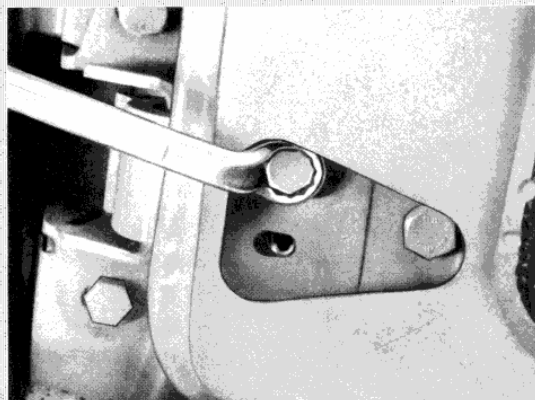


3. The gap must be in front and rear equally when the door is closed. Therefore there are slotted holes on the door lining.

Illustration No: 17

NOTE: If you find the slotted holes are not enough when fitting the door to the body, use in addition to this distance discs.

17



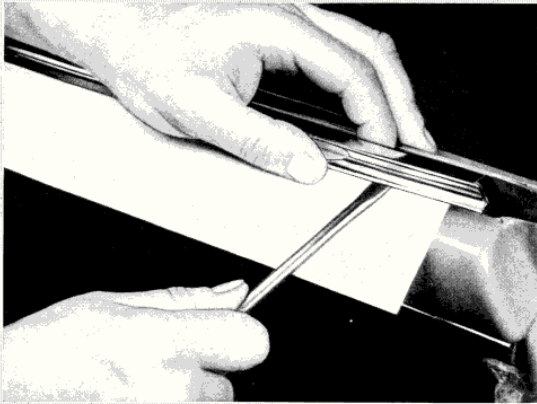
4. Do not wind door window glass up before adjusting the door.

Adjusting of door window glass A 73 SP — page 18 and 19.

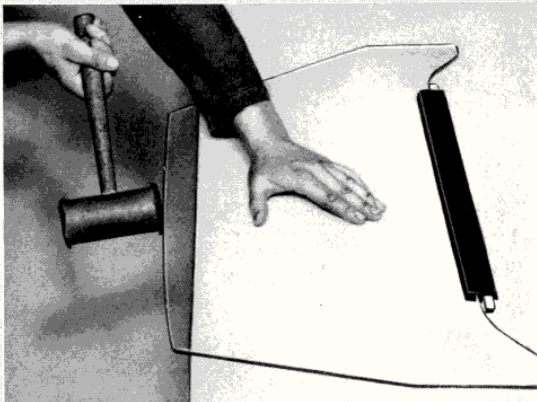
Illustration No: 18

18

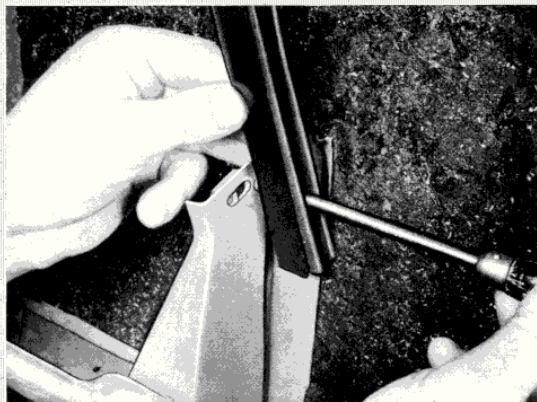




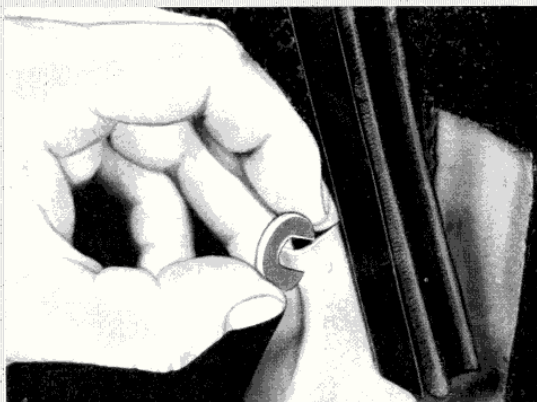
19



20



21



22

A 73 – SP Door window glass removal and replacement

Tools: Open end wrench 14 mm
Screw driver
Phillips screw driver
Angle tear needle
Special gum
Talcum

Removal:

1. Remove door covering A 79-SP, Page 22.
2. Remove remote control A 74-SP, Page 20.
3. Remove parallel arm window regulator A 78-SP, Page 21.
4. Wind window down, push outer and inner weather felt strap out watching felt and paintwork.
5. Take door window glass out upwards.

Illustration No: 19

Reassembly:

1. If it is a new door fit at first the mat inside with glue.
2. Before assembling the door window glass put glue on lifting rail and rubber profile and knock it in with a rubber hammer.

■ **NOTE:** Watch left and right and do not damage the window glass rail.

Illustration No: 20

3. The two window glass rails are on top and both are adjustable in slotted holes in order to fit the door window glass equally close to the weather felt strap.

Illustration No: 21

4. Natural play must be removed by distance discs under the window glass rails.

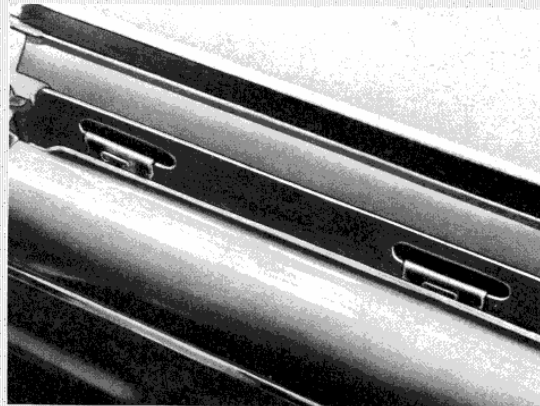
■ **NOTE:** Put talcum on window glass rails.

Illustration No: 22

5. After assembling the door window glass fit weather felt strap at inside and outside.

Illustration No: 23

23



6. Fit parallel arm window regulator A 78 SP page 21.
7. Wind window glass up till the lock.
The gap must be even at all sides.

Illustration No: 24

NOTE: Do not wind door window glass too far up as it will touch the roof when closing the door and be damaged.

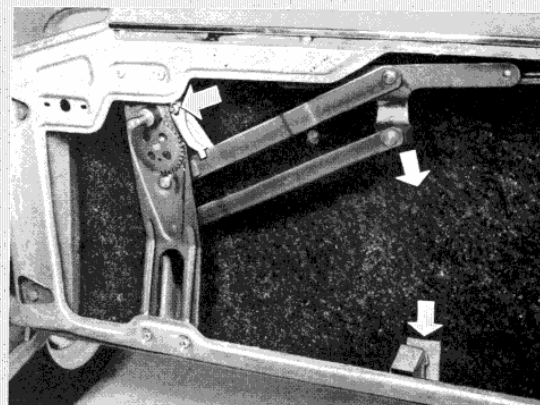
24



The upper catch has a slotted hole and is adjustable.
The lower catch is not moveable.

Illustration No: 25

25

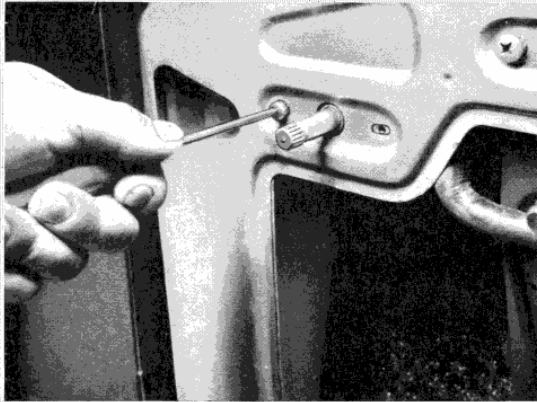


8. In order to be able to adjust the upper gap parallelly there is a slotted hole and a clip nut on the parallel arm. Adjust and tighten nut.

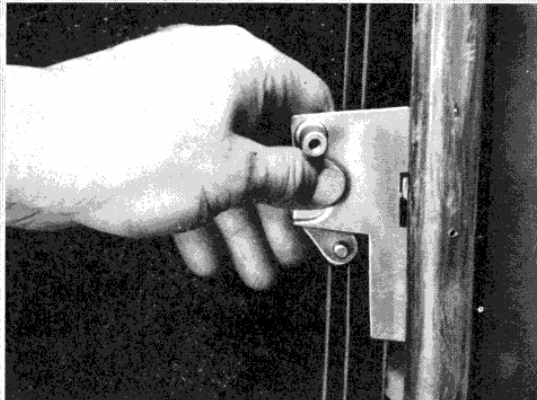
Illustration No: 26

26





27



28



29



30

A 74 – SP Door lock removal and replacement

Tools: Phillips screwdriver
Screwdriver
Angle tear needle
Special gum

1. Remove door covering A 79-SP – page 22.
2. Remove remote control.

NOTE: The remote control is fitted in slotted holes.
To adjust loosen mounting screws.

Illustration No: 27

3. Wind door window glass up completely and remove window glass rail from lock side below.
4. Unscrew door lock and take off downwards.
5. Reassemble in the reverse order.

Illustration No: 28

A 75 – SP Door handle (outside) removal and replacement

1. Remove door covering A 79-SP – page 22.
2. Wind door window glass up completely.
3. Take mounting screw off.

Illustration No: 29

4. Remove spring clip from handle (outside) and take handle off.
5. Reassembly in the reverse order.
Adjust both rubber plates of the door handle (outside) with key cylinder A 77 SP – page 21.

Illustration No: 30

A 77 – SP Door key cylinder (outside) removal and replacement

1. Remove door covering A 79-SP – page 22.
2. Remove door handle (outside) A 75-SP – page 20.
3. Unscrew inner operating pin.

Illustration No: 31

NOTE: When locking the eccentric seated operating pin comes up and is not pressing anymore on the inner operating knob.

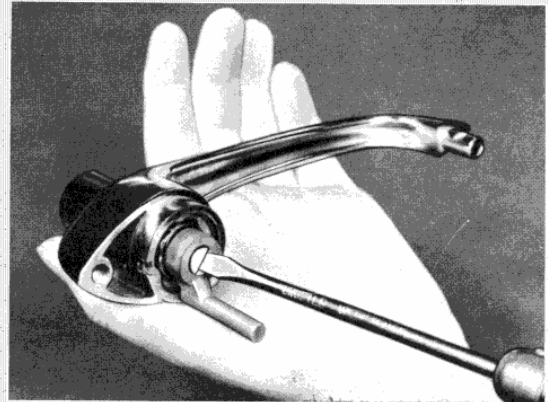
4. Remove key cylinder.

■ **NOTE:** When fitting use the key.

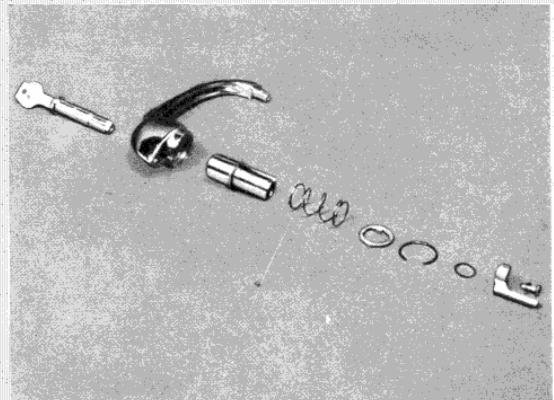
Assembly order: Illustration No: 32

5. Reassemble in the reverse order.
When changing the key cylinder at the door handle key-No of ignition lock key cylinder should be observed that only one key will be necessary.

31



32

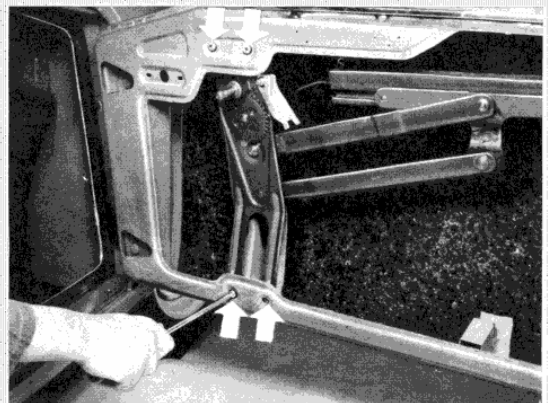


A 78 – Parallel arm window regulator removal and replacement

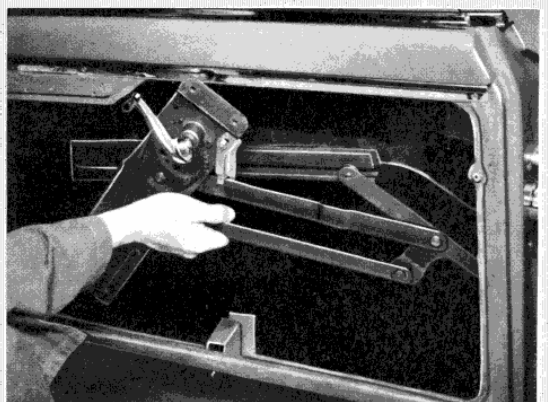
1. Remove door covering A 79-SP – page 22.
2. Remove remote control A 74-SP – page 20.
3. Wind door window glass not up completely.
4. Remove mounting screws.

Illustration No: 33

33



34



5. Holding the glass drive window regulator out in direction to the lock.

Illustration No: 34

6. Reassemble in the reverse order, grease sliding rail. Adjust door window glass A 73-SP, page 18 and 19.



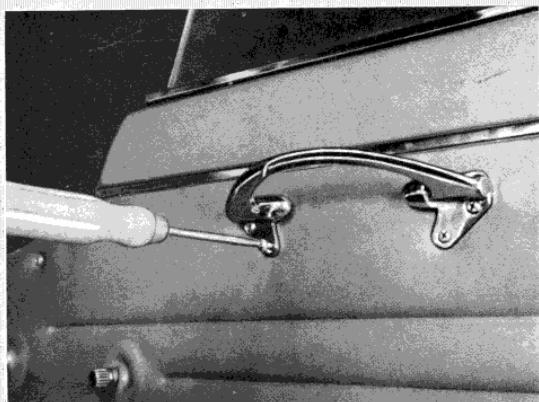
35

A 79 — SP Türverkleidung aus- und einbauen

Werkzeug: Winkelreißnadel, Kreuzschraubenzieher, Spezialkleber.

1. Innentürgriff und Kurbelgriff abnehmen, hierzu Lyrafedern entfernen.

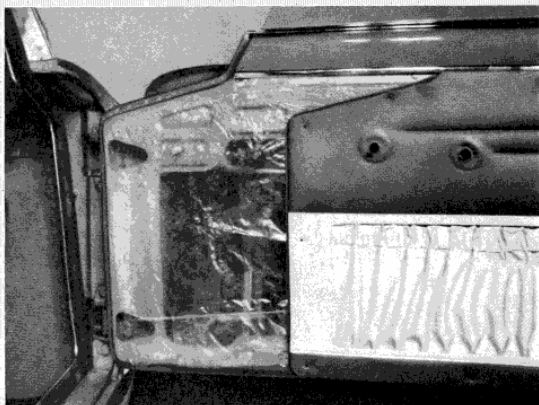
Bild 35



36

2. Innengriff abschrauben.

Bild 36

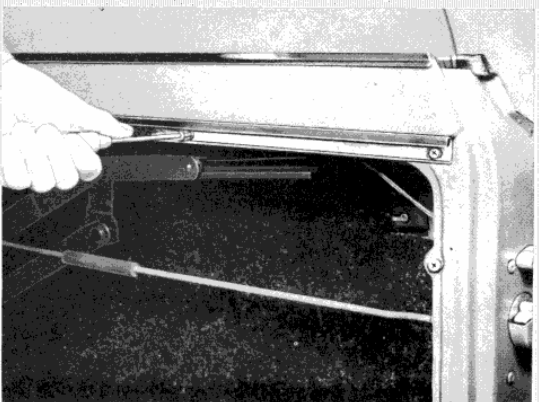


37

3. Türverkleidung abschrauben.

Achtung: Unter der Türverkleidung ist eine Abdichtfolie aufgeklebt.

Bild 37



38

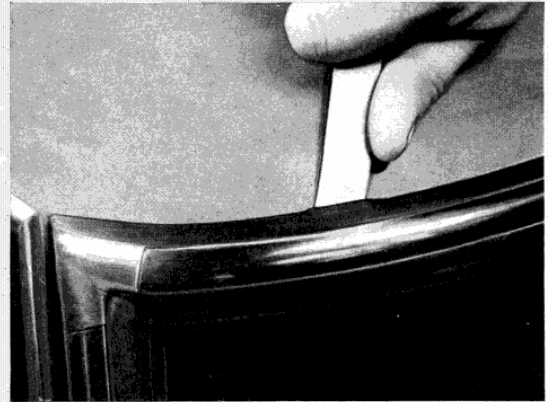
4. Die Zierleiste für Türverkleidung muß nur beim Auswechseln der Türe abgeschraubt werden.

Bild 38

5. Einbau in umgekehrter Reihenfolge.

306

37



40



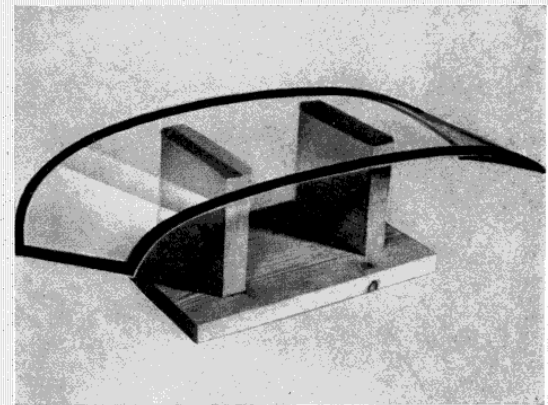
A 81—4 Windshield Panel, Removal and Installation

Removal:

1. Remove both windshield wiper arms.
2. Loosen rubber frame from body.
Use flat wooden wedge.

Fig. 81

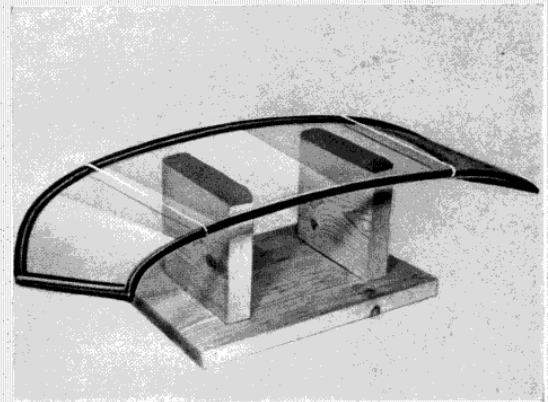
41



3. Push out windshield pane, exerting outside counter-pressure.

Fig. 82

42



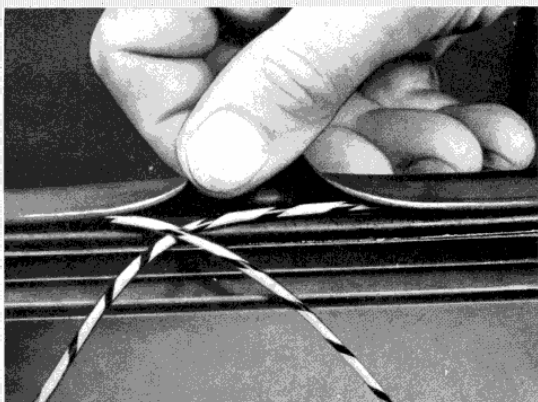
4. Clean window frame; do not soil roof paneling.

Installation:

1. Place pane on wooden frame covered with felt.
2. Place rubber frame around pane.

Fig. 83

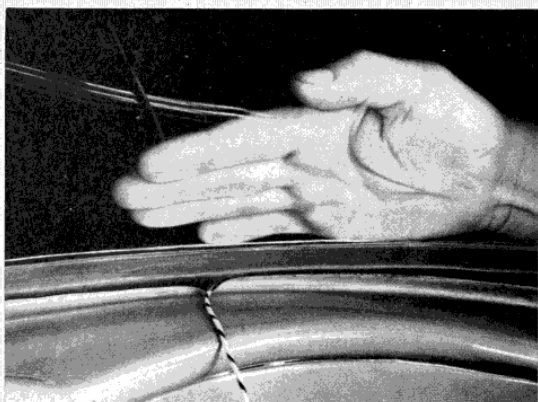
Caution: Hard and brittle rubber frames should be replaced.



43

4. Lay curtain cord in channel of rubber frame with ends crossing.

Illustration No: 43



44

5. Fit windshield with rubber frame in metal frame in equal distances.
6. Tighten cord so that the inner edge of the rubber frame fits over the metal frame. Press down glass evenly.

Illustration No: 44

■ **NOTE:** To make the rubber sliding easily moisten frame rubber with glycerine.



45

7. Caulk window glass. Press window glass cement between chassis (outside) and rubber frame.

■ **NOTE:** Remove immediately if pressed in too much.

Illustration No: 45



46

A 82 — SP Rear window glass removal and replacement

According to A 81 SP

When fitting the mouldings adjust the shock cover with a piece of wood.

Illustration No: 46

A 83 – SP Rear side window glass removal and replacement

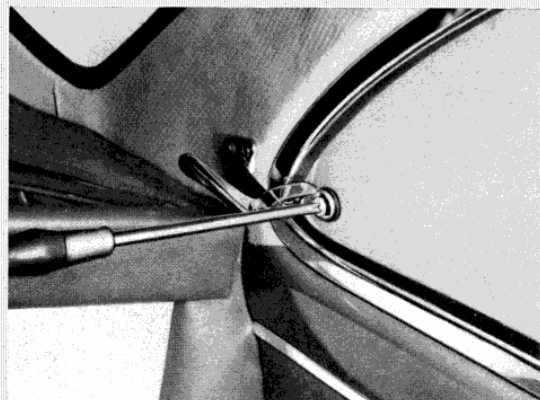
Tools: Phillips screwdriver, Screwdriver, Special glue, Chassis glue.

1. Remove rear side window cath.

NOTE: Do not open the window further in order to prevent the fastening on the middle stay from deformation.

Illustration No: 47

47



2. Remove inner moulding from middle stay and take side window glass off.

Illustration No: 48

NOTE: The side window glass is tuck to the chassis in front.

48



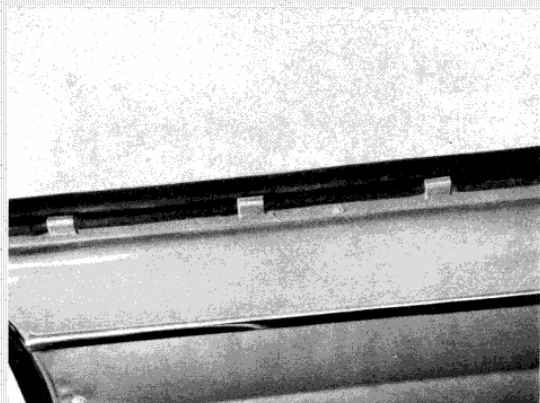
3. When replacing the window sealing remove the edge connection and moulding from inside. Stick the rubber sealing to the chassis and fit it with clips.

4. Reassembly in the reverse order.

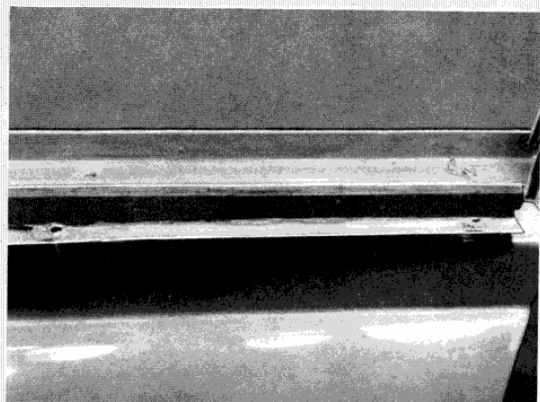
Watch the interior equipment.

Illustration No: 49

49



50



When fitting the mouldings etc. use sealing strap or chassis glue to prevent it from water coming in.

Illustration No: 50



51

A 91 – SP Decorative parts – removal and replacement

Fitting the moulding on front hood.

1. Insert moulding pin and fit to holes.
2. Fit and adjust moulding.
3. Pull sleeves over pins from inside and lock with nuts M 3.

Illustration No: 51

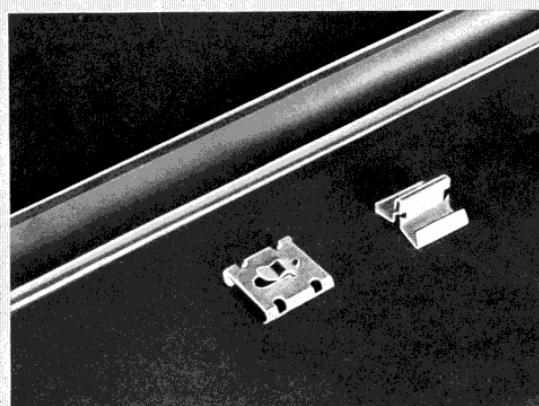


52

Fitting the mouldings on top of mudguards and doors.

1. Fix clamps to moulding and fit to holes.
2. Put chassis glue on clamps to seal.
3. Insert mouldings, press down evenly at all fitting points.

Illustration No: 52

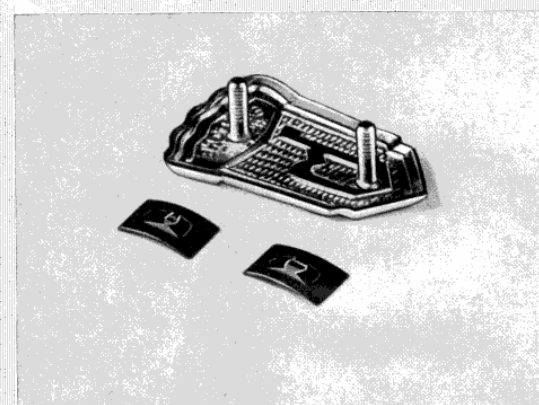


53

Fitting the mouldings at bottom of window and doors.

1. Fix moulding clamps to the bores at the bottom of the doors (left).
2. Push mouldings in and adjust.
1. Fix moulding clamps at bottom of mudguard over the weld seam (right).
2. Push mouldings in and adjust.

Illustration No: 53



54

Fitting the Bertone motive.

1. Fix mounting bolts in bores (if necessary use chassis glue to seal)
2. Pull spring nuts over from inside.

Illustration No: 54

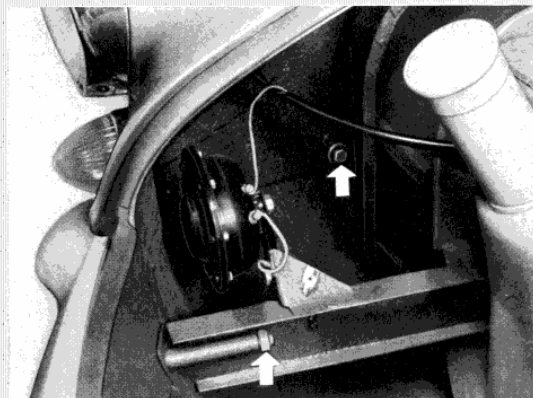
A 97 – SP Front bumper – removal and replacement

Tools: Box wrench 10, 14, 17 mm
Screwdriver

1. Remove number plate.
2. Unscrew both right supports and remove spacer piece.

Illustration No: 55

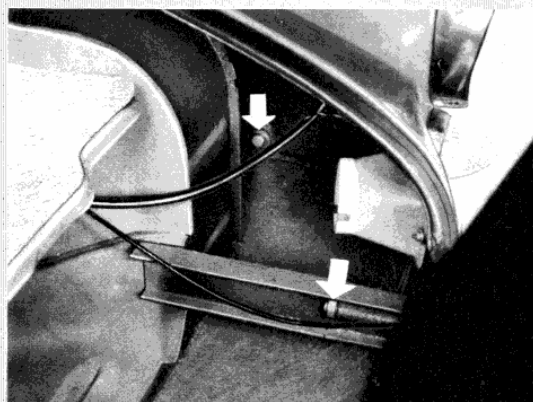
55



3. Unscrew both left supports and remove spacer piece.

Illustration No: 56

56



4. Take bumper off frontwards.

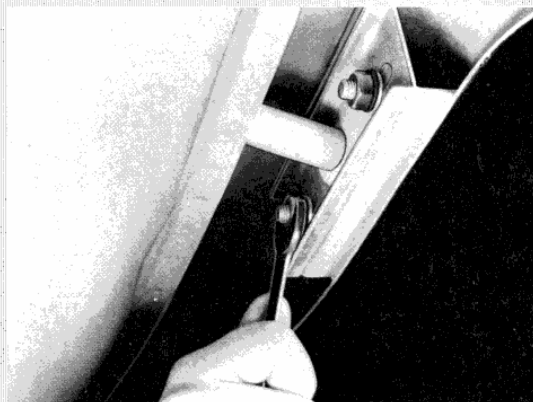
■ **NOTE:** Watch paintwork.

5. Reassemble in the reverse order.

To adjust the lateral difference tighten the supporters properly when reassembling.

Illustration No: 57

57



A 98 – SP Rear bumper – removal and replacement

According to A 97 SP

■ **NOTE:** Before removing disconnect number plate lighting.

Illustration No: 58

58





59

Additional fitting of overdrive on Sport PRINZ

Overriders with accessories for subsequent fitting on Sport Prinz models can be supplied by the spare part service under the Part No: 41 66 00 906 907.

Illustration No: 59

Assembly instruction:

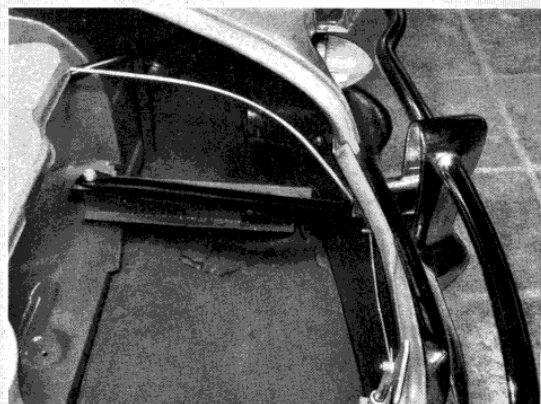
Front:

1. Bolt both horns with overriders.
2. Hold the mounted overrider on the bumper and adjust. Mark two corners for the two bores of the horn on the profile edge of the bumper and bore (8.5 mm $\varnothing$). (Illustration No: 60 point a).
3. Fit the mounted overrider into the bores and mark two corners in the front part of the chassis. Bore (8.5 mm $\varnothing$). (Illustration No: 60 point b).
4. Tighten both horns provisionally. Adjust overriders and mark two corners. Take the complete overrider off again and bore (8.5 mm $\varnothing$). (Illustration No: 60 point c).

Illustration No: 60



60



61

5. When finally fitting remember rubber washers and screw the inner stays together too.

Illustration No: 61

6. Adjust both stays, bore 8.5 mm $\varnothing$ and bolt.

Remove fuel tank and heating hose before.

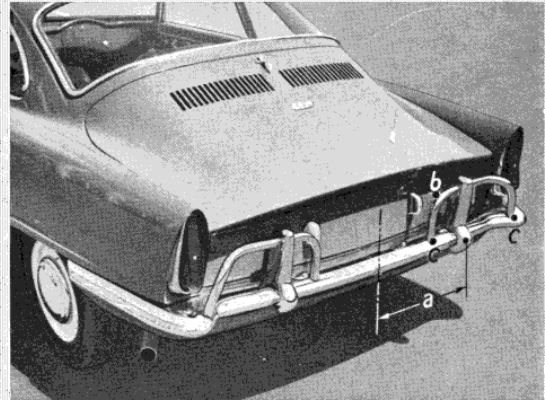
NOTE: When fitting on the original Bertone chassis (Bertone motive **on both** mudguards) readjust the stays.

Rear:

1. Bolt left and right overrider half with horns.
2. Mark two corners for the two bores of the horn on the profile edge of the bumper and bore 8.5 mm $\varnothing$ (a = 332 mm from the middle of the vehicle to the left and right). (Illustration No: 62 point a)
3. Fix overriders accordingly left and right, adjust, mark the holes on the back of the chassis by corners and bore 8.5 mm (Illustration No: 62 point b).
4. Bolt both horns provisionally. Adjust overriders and mark two corners and bore 8.5 mm. (Illustration No: 62 point c).

Illustration No: 62

62

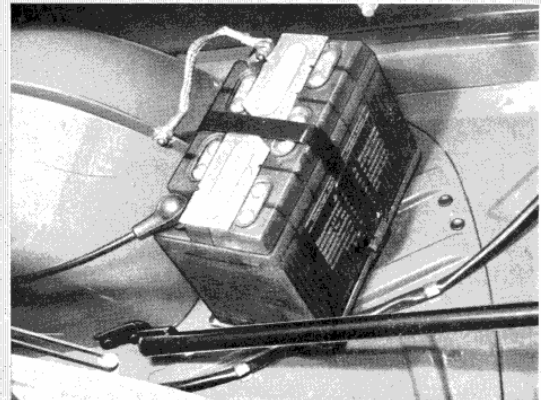


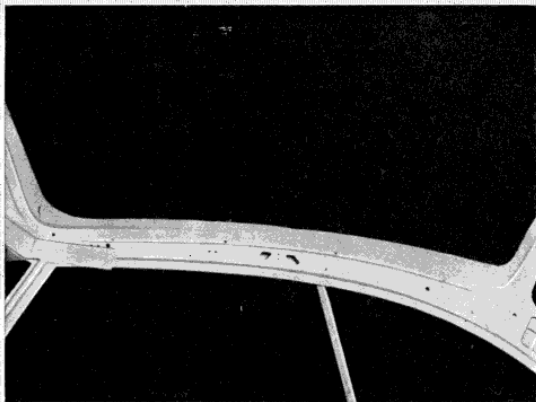
5. Remove bumper. Bolt overriders and horns with rubber washers. Fit bumper again bolting at the same time, also the inner stays on the back.
6. Adjust both stays, mark with corners, bore 8.5 mm $\varnothing$ (using an angle bore machine) and screw together. Remove cooling air funnel and covering plate before.

NOTE: Fit the bores as deep as possible because it is necessary to bolt also the chassis stiffening of the wheel rim. If necessary adjust the kerb of the stiffening slightly.

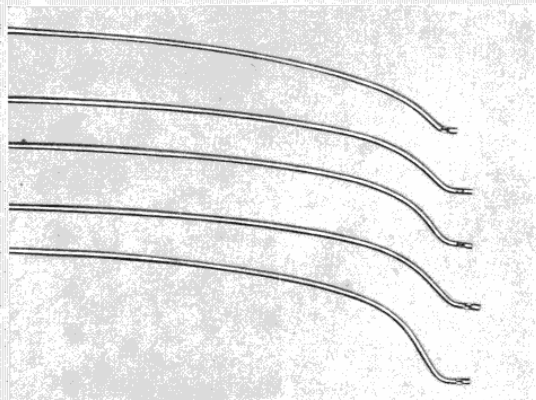
Illustration No: 63

63

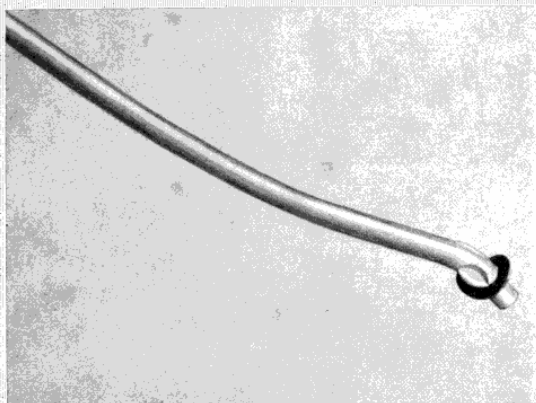




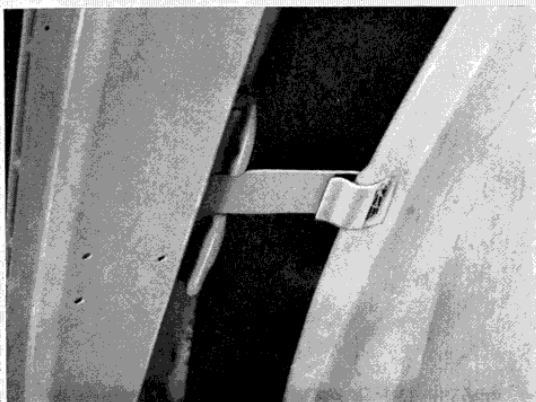
64



65



66



67

NSU MOTORENWERKE AKTIENGESELLSCHAFT

A 121 – SP Headlining – removal and replacement

Tools: Phillips screwdriver
Screwdriver
Curtain cord 100" long or tool for window removal and replacement 40 91 00 933
Glycerine
Window glass cement
Special glue
Scissors
Tear needle.

Removal:

1. Remove windshield A 81-SP, page 23 and 24.
2. Remove rear window glass A 82-SP, page 24.
3. Remove side window glasses (left and right) A 83-SP page 25.
4. Loosen door sealing frame (top left and right)
5. Take both seats out.
6. Remove inner mirror, interior light, hand grips and eventually assembled accessories.
7. Loosen headlining. We recommend to replace the headlining on principal.
8. Disconnect struts and take headlining off.

Assembly:

1. Before reassembling stick the noise absorbing mat and the rear covering.

Illustration No: 64

2. Fit 5 struts into the headlining.

NOTE: Make sure that the struts are in the right order. Struts seen from behind.

Illustration No: 65

3. Replace first the front strut. Fit a spring washer on the end of each strut.

Illustration No: 66

4. Fasten front strut, the strut must be seated vertically.

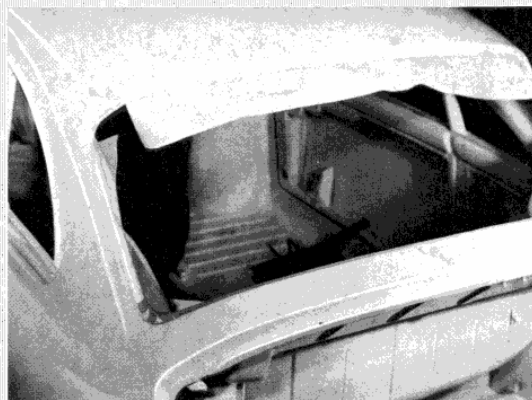
Illustration No: 67

5. Fit all struts from the front side.

6. Stretch headlining backwards and stick it to the window cut out.

Illustration No: 68

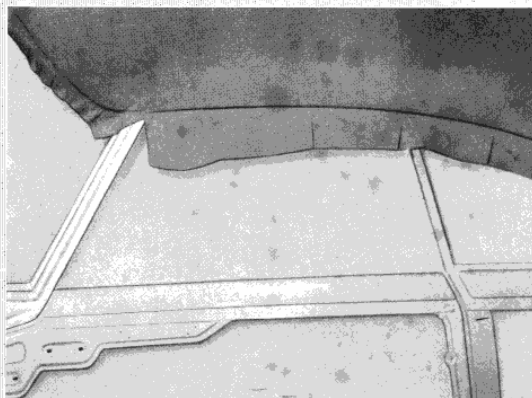
68



7. Stretch headlining to the front and stick it to the windshield cut out.
8. Stretch headlining to the left and right and stick it. Make sure that there are no wrinkles. Cut bent parts in.

Illustration No: 69

69

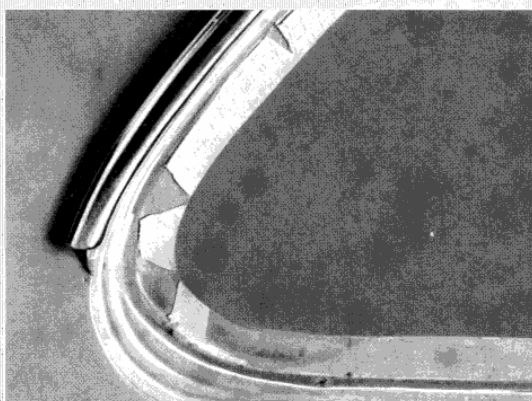


NOTE: Special glue must be slightly dry to make sure that it sticks immediately.

9. Cut unnecessary ends off and fold them round.

Illustration No: 70

70



10. Seek bores for interior lighting, handgrips, struts and other accessories by means of a needle mark out with holes and replace. If necessary make a stencil of paper before sticking.
11. Replace windshield A 81-SP, page 23 and 24.
Replace rear window glass A 82-SP, page 24.
Replace side window glasses A 83-SP, page 25.

12. Stick door sealing on left and right on.

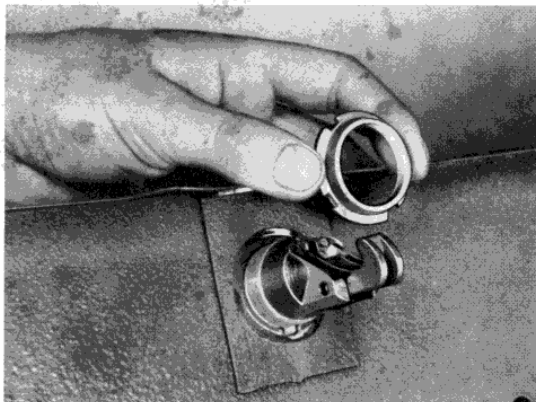
13. Assemble seats.

NOTE: For any interior work see that your hands are clean.

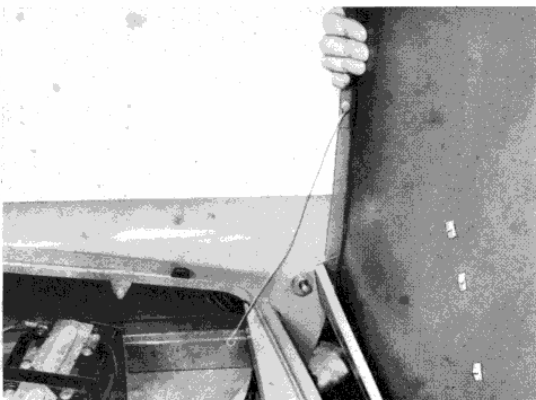
Illustration No: 71

71





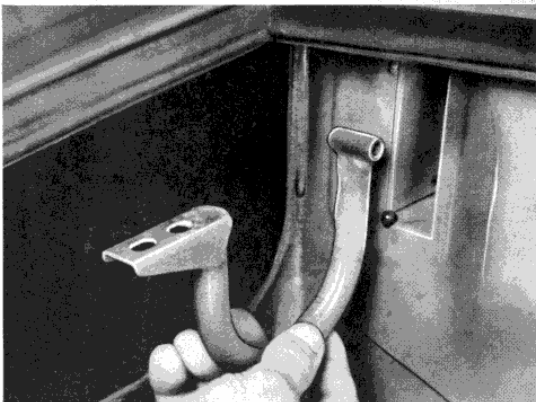
72



73



74



75

A 141 – SP Engine hood lock removal and replacement

1. Open engine hood.
2. Remove ring nut.
3. Remove engine hood lock.
4. Reassemble in the reverse order – watch retaining baffle.

Illustration No: 72

A 143 – Engine hood – removal and replacement

1. Open engine hood.
2. Remove lock washers.
3. Disconnect hood cables.
4. Press bolts out and take engine hood off.
5. Reassemble in the reverse order.

Illustration No: 73

NOTE: For removal and fitting the engine remove the engine hood.

A 144 – SP Trunk compartment hood – removal and replacement

1. Open trunk compartment hood.
2. Remove left and right hinge.

Illustration No: 74

3. Reassemble in the reverse order.
To fit the hood close to the body there are slotted holes.
If necessary readjust the lining stays slightly.

When removing lining stays remove first locking washers and the lining bolts under the parcel board.

Illustration No: 75

**Diagram for SPORT-PRINZ**

(Model with six fuses)

Sport-Prinz

PORT-PRINZ

(Sicherungen)

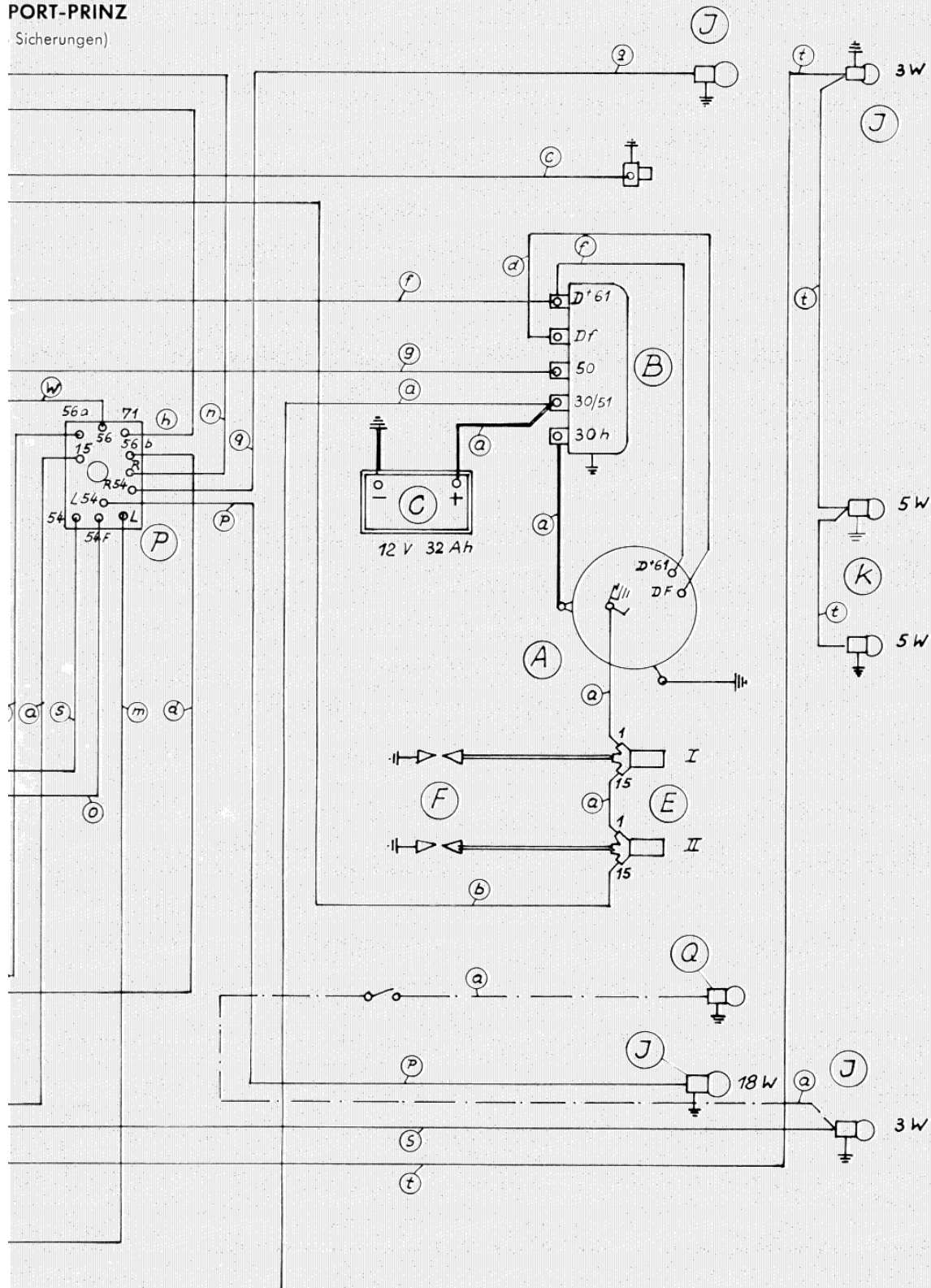


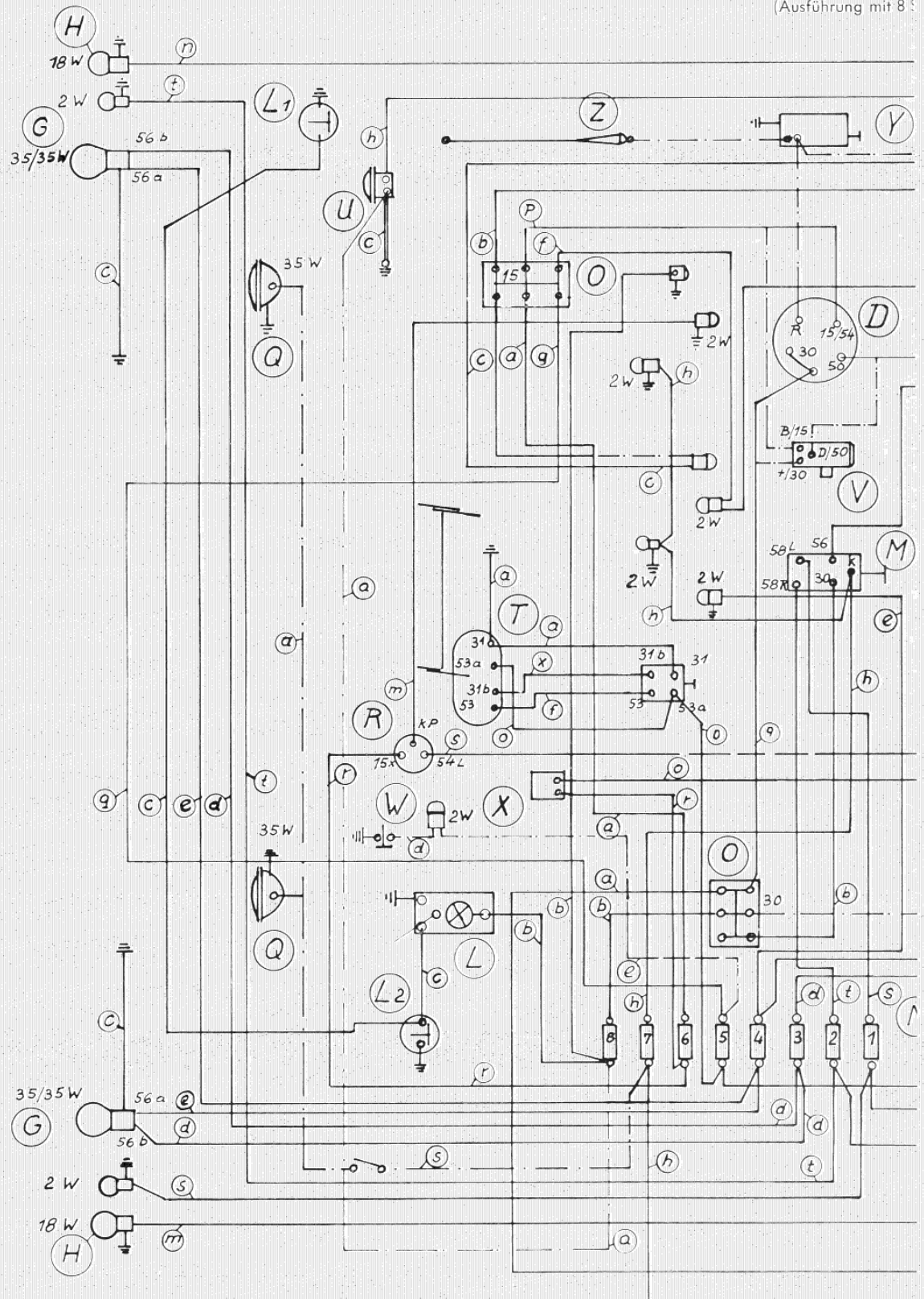
Diagram for SPORT-PRINZ

(Model with eight fuses)

Sport-Prinz

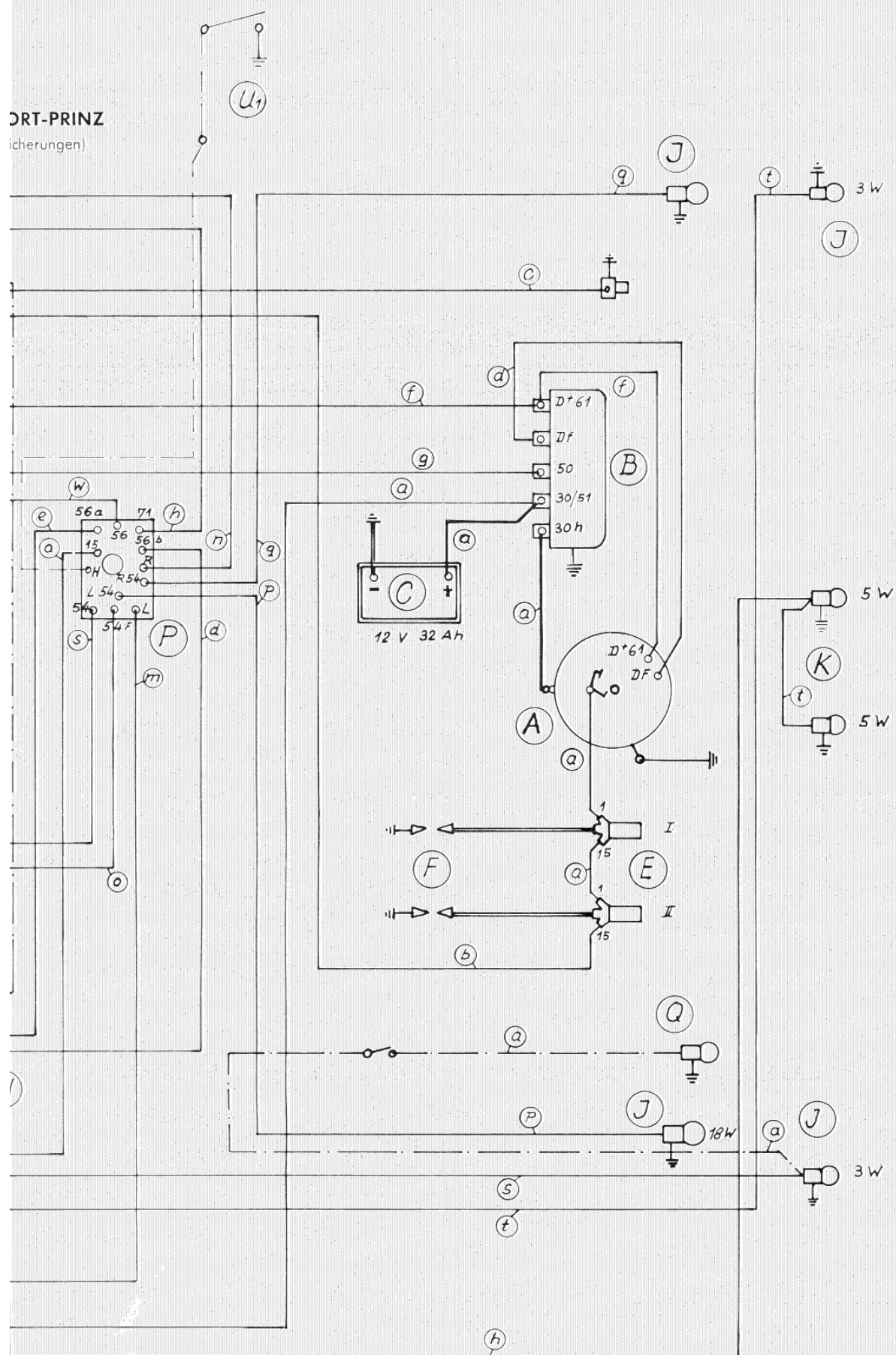
Schaltplan für SP

(Ausführung mit 8 S)



DRT-PRINZ

(icherungen)



Wiring Diagram for SPORT-PRINZ
(from vehicle No. 41 09691/4734900)

Sport-Prinz

Schaltplan für SPC

