Repair Manual
Type 2

VOLKSWAGEN

Campmobile

Repair
Troubleshooting

This publication contains the essential removal, installation, and adjustment procedures for 1976, 1977 and 1978 factory-equipped Campmobile vehicles sold in the USA and Canada.

CAUTION

It is assumed that the reader is familiar with basic automotive repair procedures.

Special tools required in performing certain service operations are identified in the manual and recommended for use.

Use of tools or procedures other than those recommended in this repair manual may be detrimental to the vehicle's safe operation as well as the safety of the person servicing the vehicle.

Part numbers listed in this manual are for reference only. Always check with your authorized dealer to verify part numbers.

W 42-028-965-1

First Edition, 4/78

Manufactured in the United States of America

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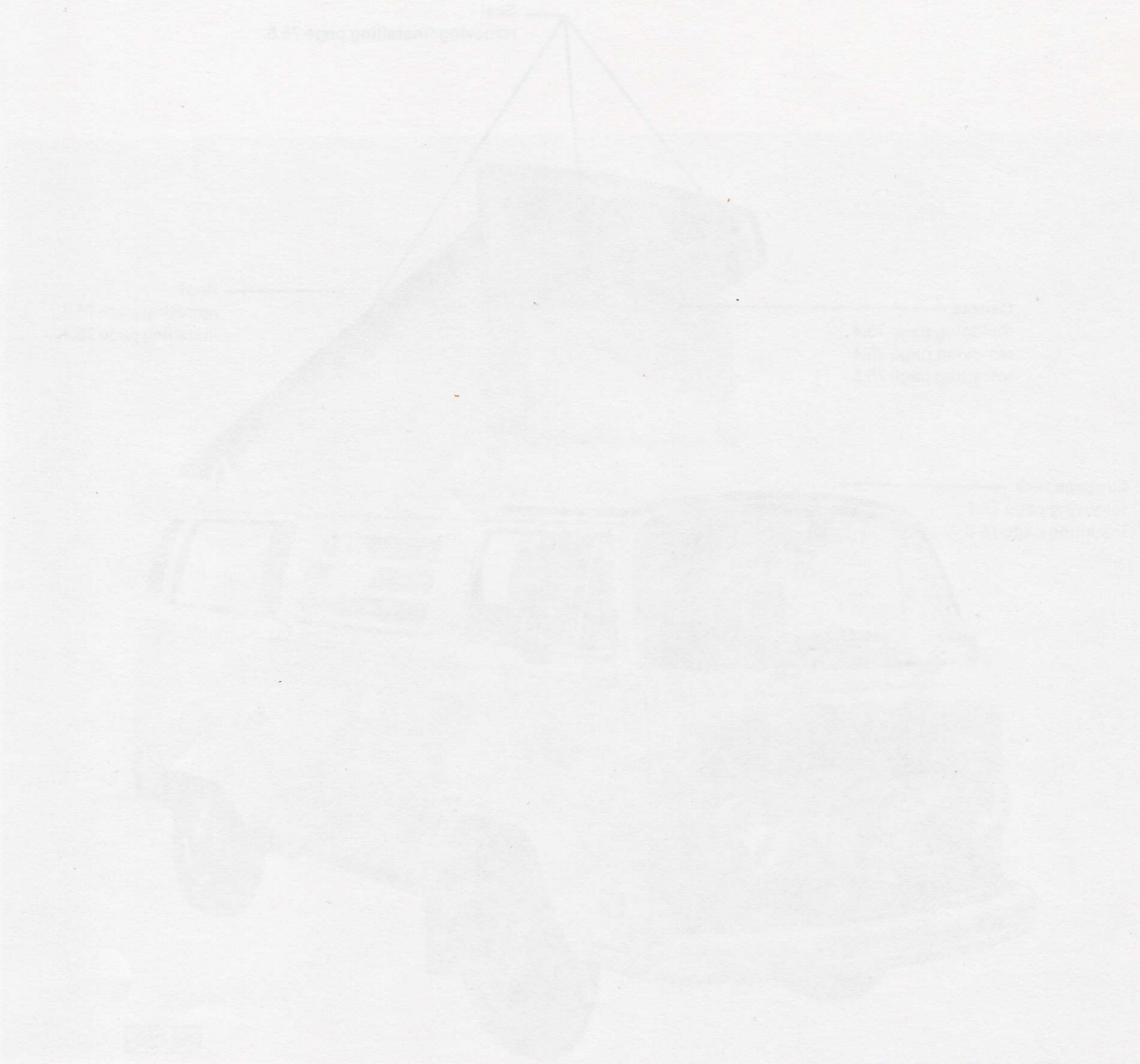

Interior Panels
Roof


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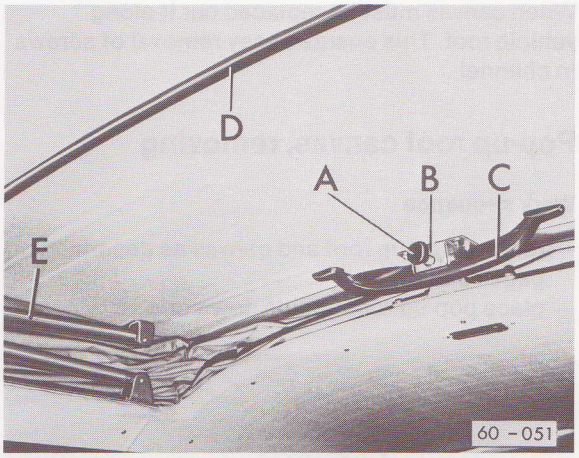
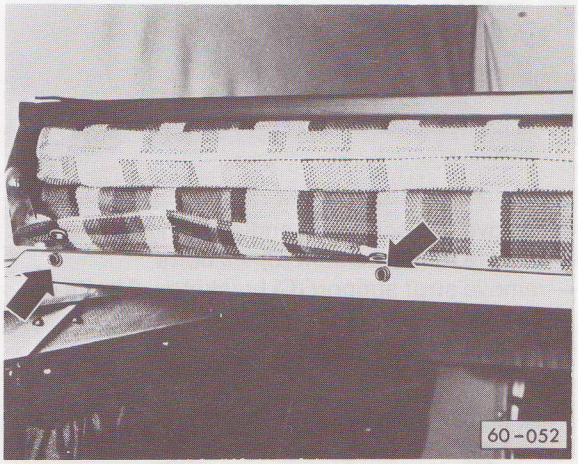
Pop-up roof, removing

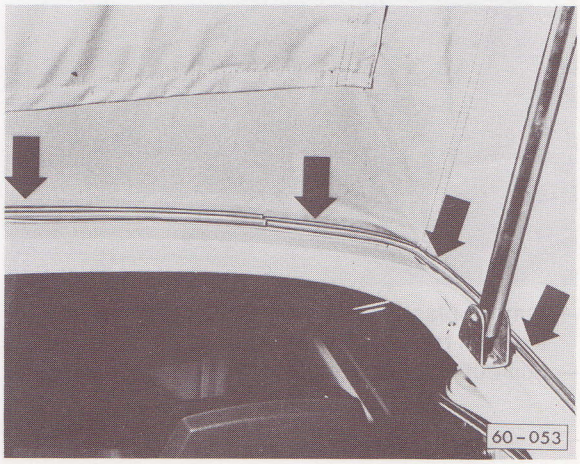
Work sequence



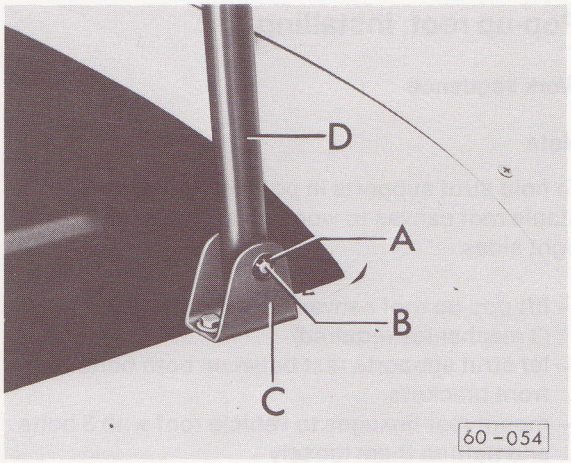
— release latch (A) at lock (B)
— push up roof at handle (C) and crossbar (D) until strut supports (E) at front are locked in position



— pull off double bed snaps (arrows) at frame and remove mattress



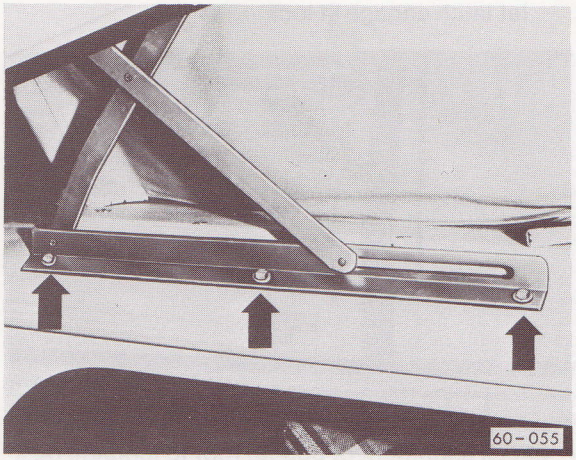
— remove screws (arrows) at channel



— remove circlip (A) from bolt (B)
— push bolt (B) out of bracket (C)
— let strut supports (B) rest between both bolts in brackets (C)

Note

Following procedures require 2 mechanics to avoid damage to vehicle paint



— remove 3 bolts (arrows) on each side of rear linkages and tie them together
— let pop-up roof rest at rear of vehicle roof
— lift pop-up roof off vehicle (third mechanic required)

Note

Do not damage paint with front support struts when removing roof

Pop-up roof, installing

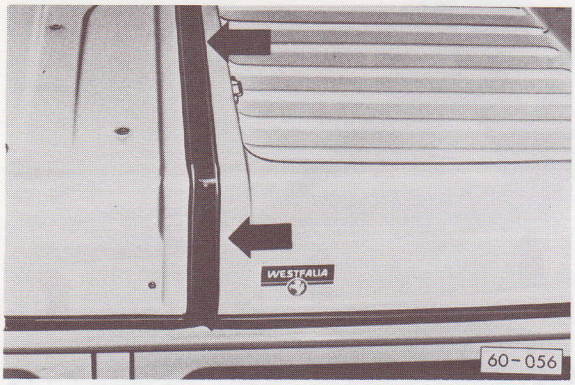
Work sequence

Note

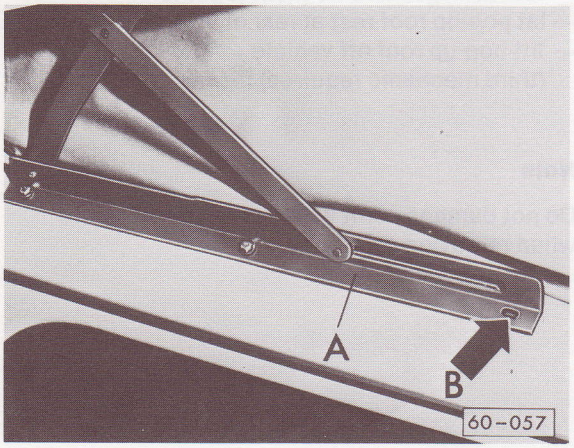
To hold strut supports in position temporarily staple roof canvas to wooden frame on left and right sides

— lift pop-up roof canvas onto vehicle roof (3 mechanics required)
— let strut supports rest between both bolts of front brackets
— mount rear linkages to vehicle roof with 3 bolts and tighten them loosely

— install bolts in strut support brackets and secure with new circlips
— reinstall channel of pop-up roof canvas and tighten screws from center to sides
— close pop-up roof noting following:
  • lower pop-up roof so that at front approx. 200 mm (8 in.) stays open
  • push roof on both sides to front
  • push center part of roof to front also and let latch engage in lock



— check alignment of pop-up roof to luggage rack and seating of seal (arrows)



— if necessary realign roof by moving rear linkages **A** in elongated holes and tighten bolts **B**

Pop-up roof canvas, replacing

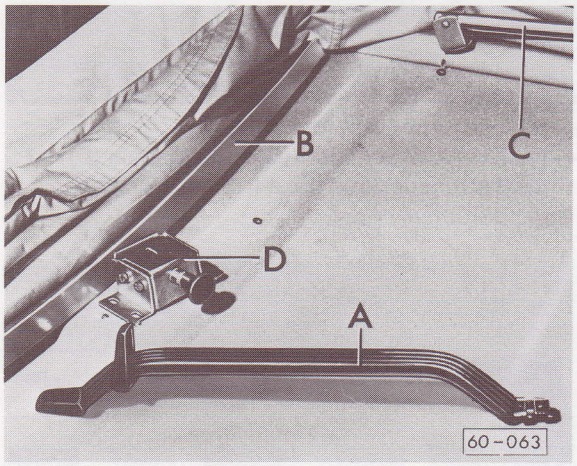
Note

When canvas must be replaced cut it along vehicle roof. This ensures easy removal of screws in channel

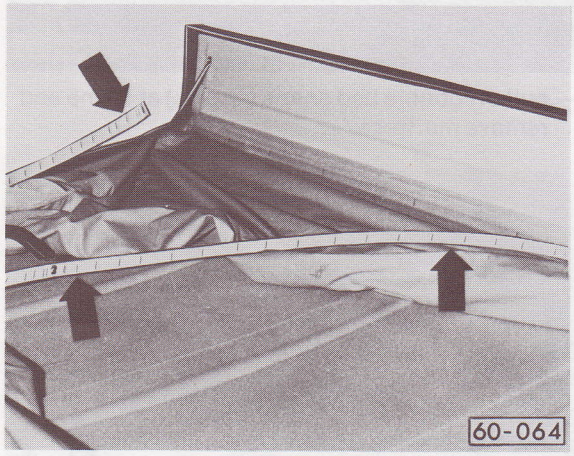
Pop-up roof canvas, removing

Work sequence

— remove pop-up roof and canvas as described on page 75.3
— place pop-up roof upside down on two benches



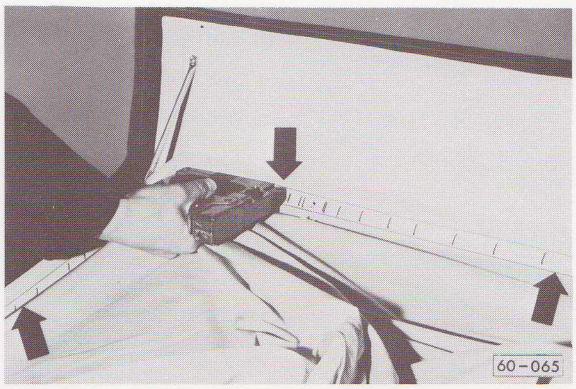
— remove one screw of handle (A) and turn around
— remove reinforcement (B)—3 bolts
— remove strut support (C) brackets—2 bolts on each side
— remove lock (D)—4 bolts



— remove plastic strip held with staples to wooden frame (arrows)
— pull out staples holding canvas to wooden frame

Pop-up roof canvas, installing

Work sequence



— fit canvas to all four corners of wooden frame with staples
— attach canvas to front, rear and side sections of wooden frame with staples going from center of sections to corners
— cut 4 plastic strips approx. 200 mm (8 in.) shorter than each side of roof

— warm up plastic strips in warm water
— staple plastic strips (stretching them to length required) to wooden frame

Note

Always start at corners

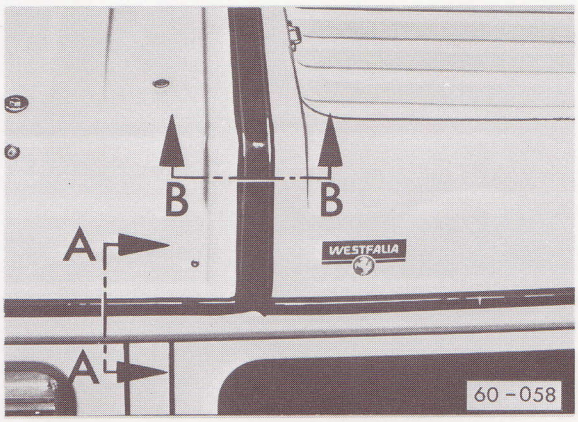
— reinstall pop-up roof and canvas as described on page 75.4

Pop-up roof seal, removing

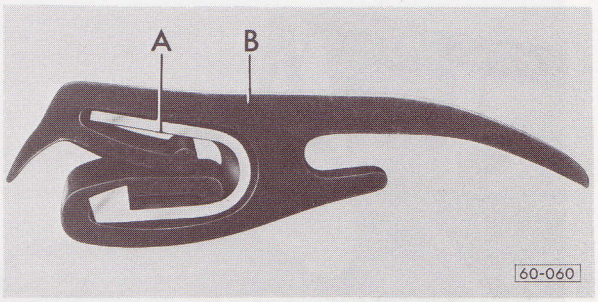
— open roof and pull off seal

Pop-up roof seal, installing

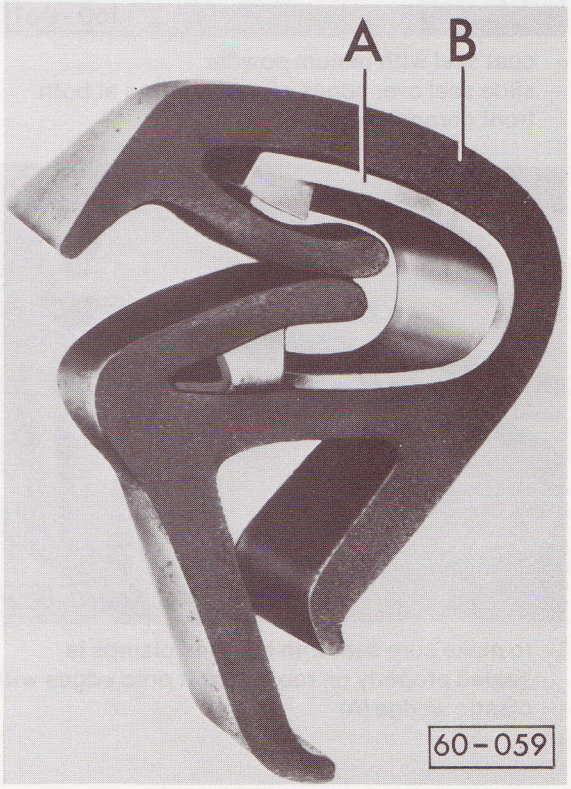
Work sequence



— install seal with cross section **A-A** on rear and left and right sides
— install seal with cross section **B-B** on front



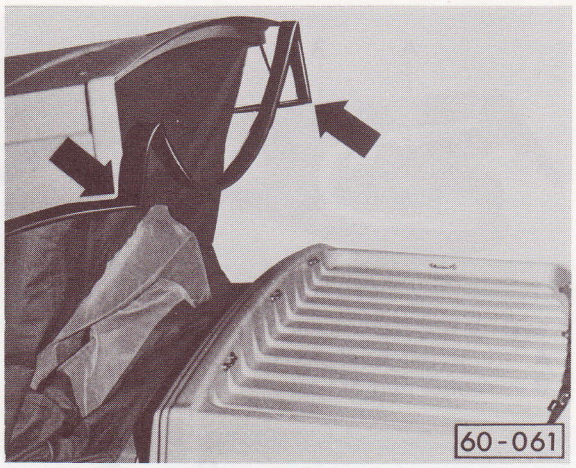
• seal for front (cross section **B-B**)
A — inserted steel clamps
B — rubber part of seal



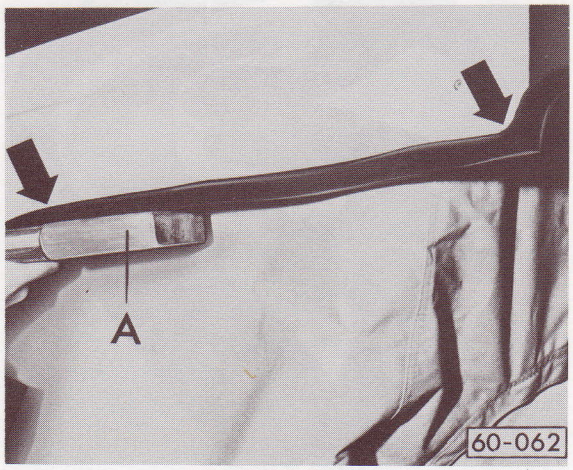
• seal for sides and rear (cross-section **A-A**)
A — inserted steel clamps
B — rubber part of seal

Note

Correct tension of inserted steel clamps can be restored by squeezing seal together

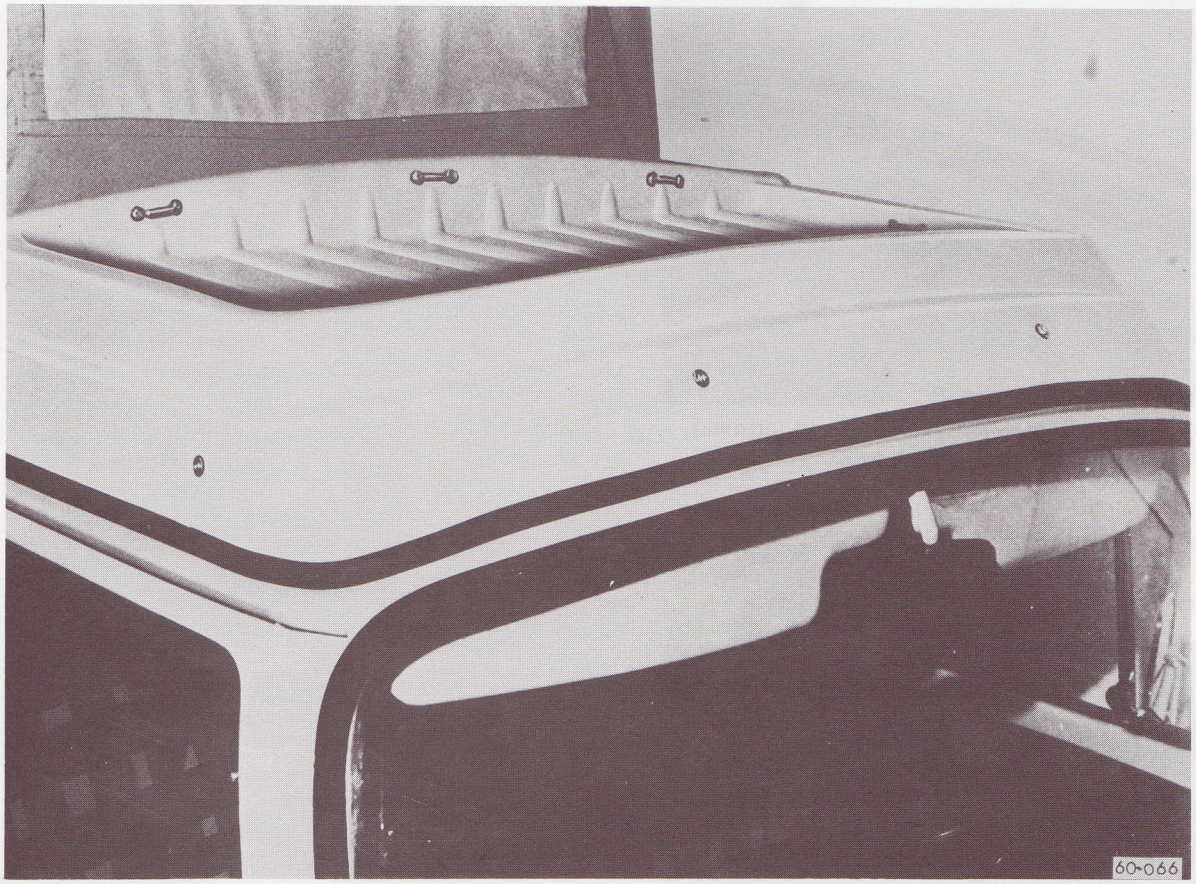


— coat seal with talcum powder
— slide seal over edges of roof starting at both front corners (arrows)

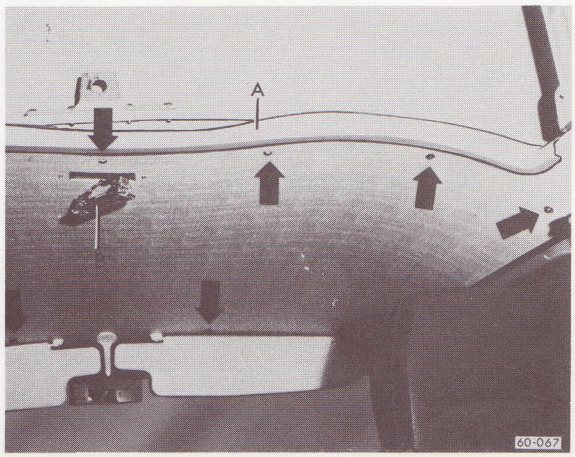


— to make sure seal with inserted clamps is seated properly on roof press it onto edges with plastic wedge (A)

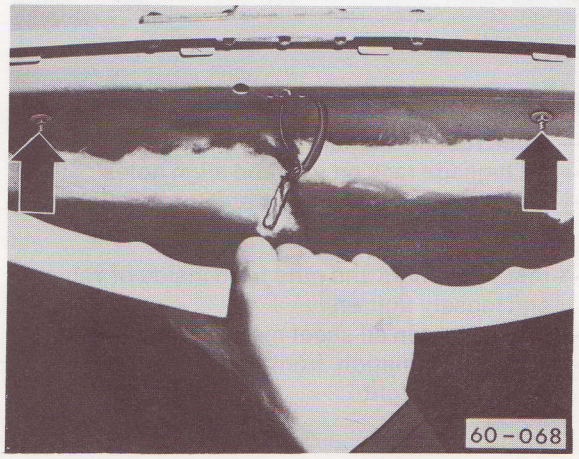
Luggage rack, removing



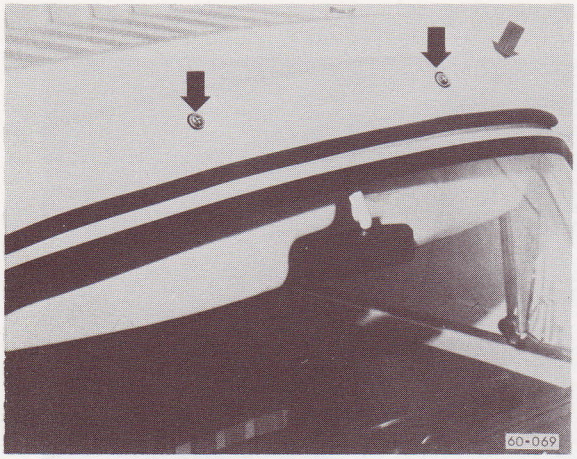
Work sequence



— remove beading (A) partially after removing 2 Phillips screws
— remove interior light (B) and insulate hot wire
— remove all 7 Phillips screws on rear part of front headliner (arrows)
— remove 2 Phillips screws on front part of front headliner (arrows)



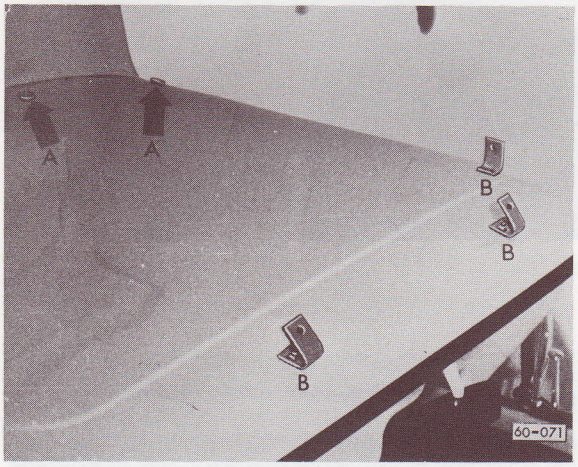
— partially pull down front headliner and insulation
— remove nuts (arrows)



— remove all (four) sheet metal screws (arrows)
— lift luggage rack off vehicle roof

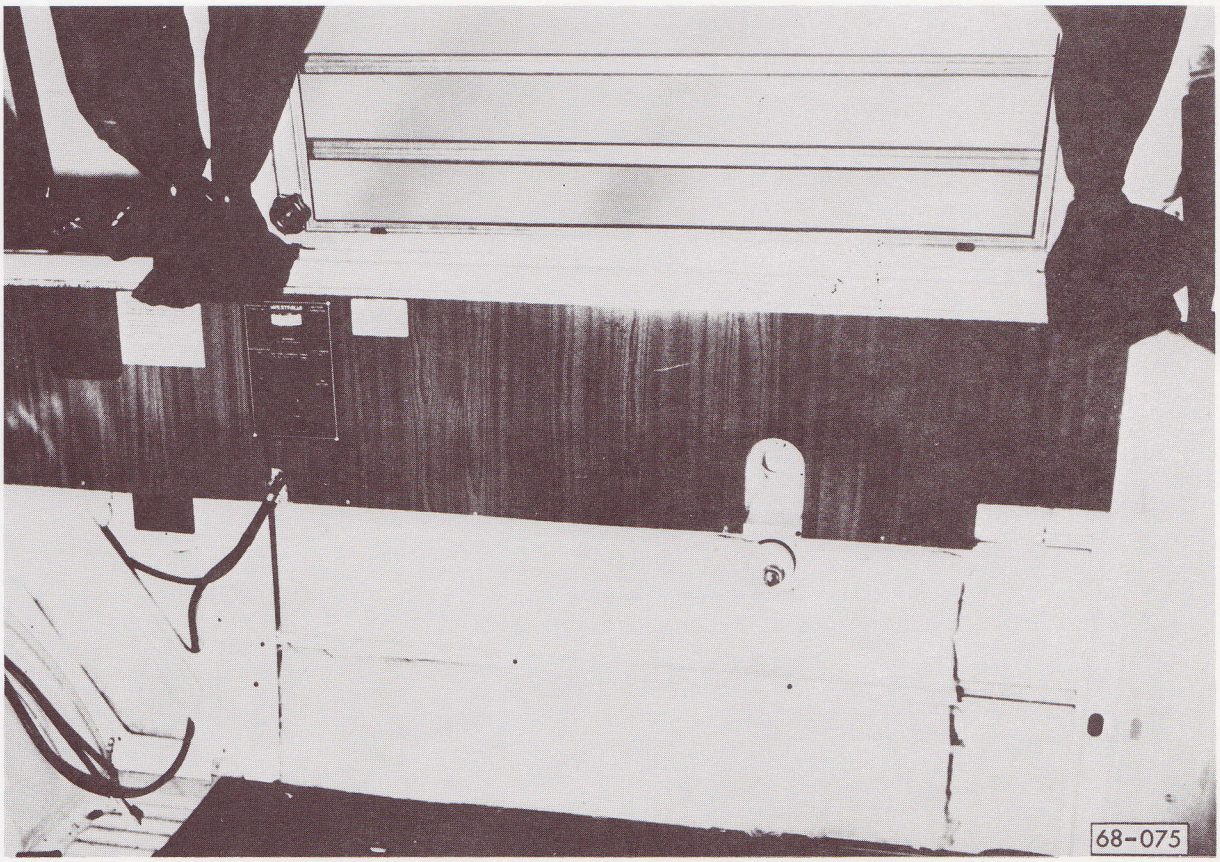
Luggage rack, installing

Work sequence



— place rubber washers (A) on holes
— lift luggage rack on roof and align holes
— insert sheet metal screws and loosely tighten in brackets (B)
— install washers and nuts from inside of vehicle and loosely tighten
— finally tighten all sheet metal screws and nuts
— reinstall insulation, front headliner, beading and interior light

Left inside trim panel, removing



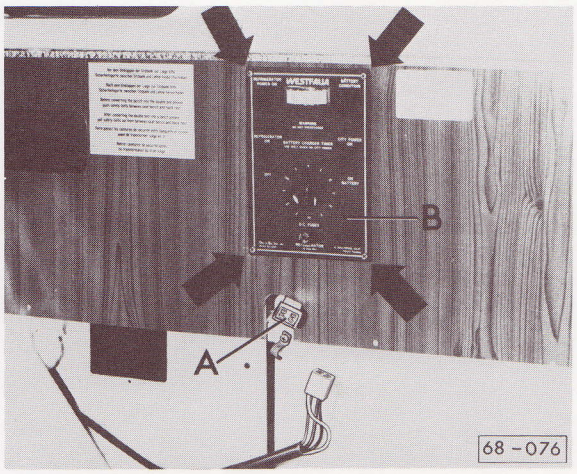
Work sequence

Note

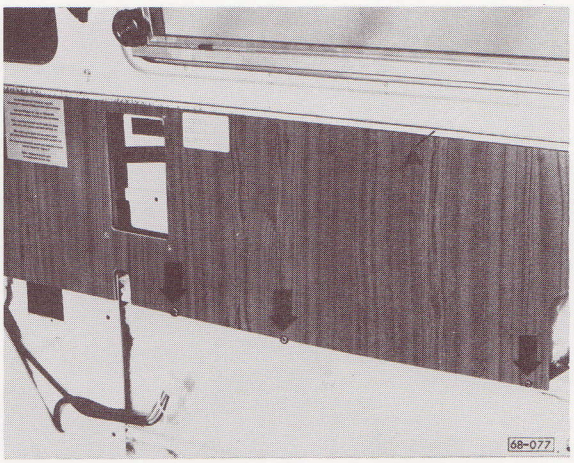
Removal is only possible after refrigerator cabinet and sink/gas range cabinet are removed

WARNING

Before starting to perform following repair operations disconnect extension cord and remove ground strap on both batteries



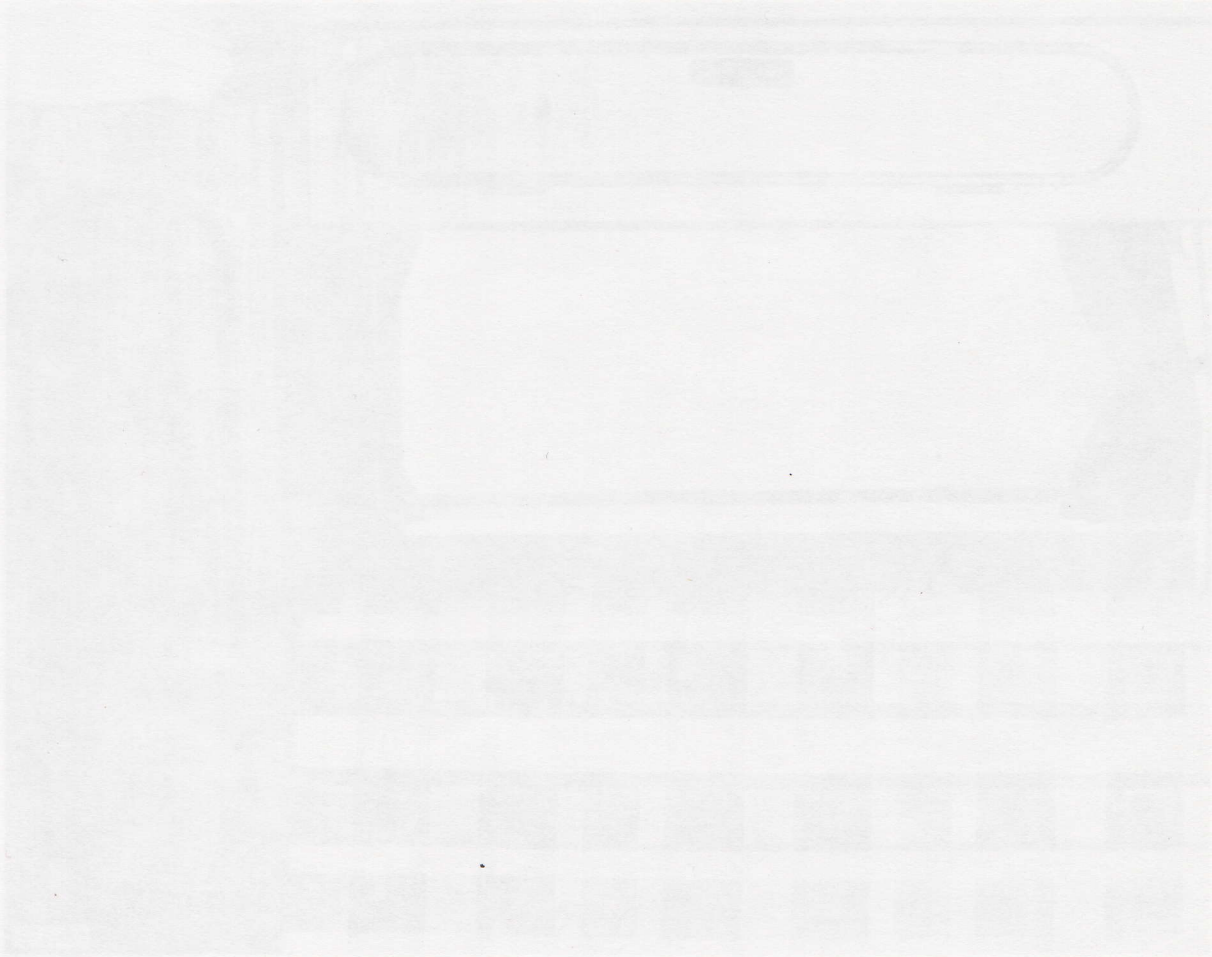
— loosen cable clamp
— disconnect wiring from plug (A)
— remove Phillips screws (arrows) and pull out control panel (B)

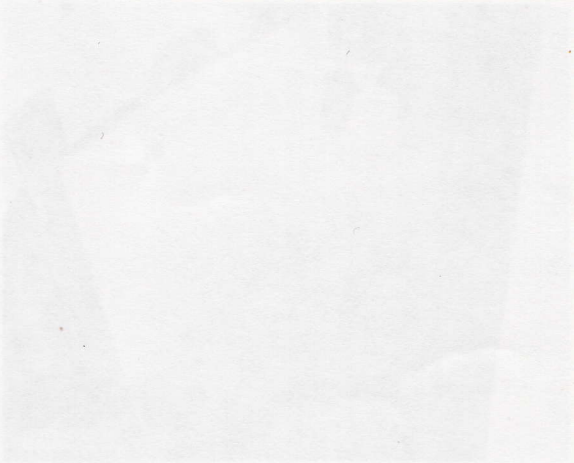


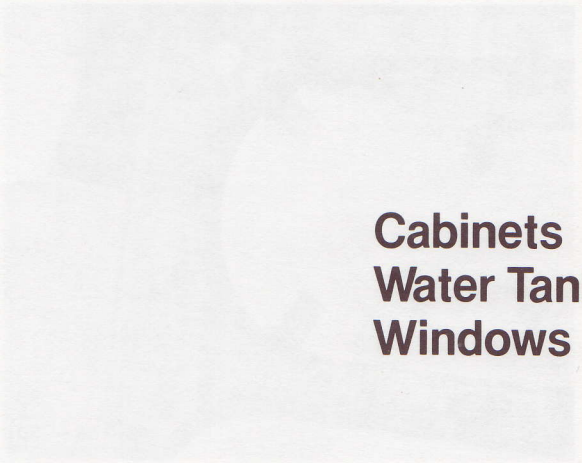
— remove Phillips screws (arrows) and pull trim panel out of channel

Left inside trim panel, installing

— install in reverse order

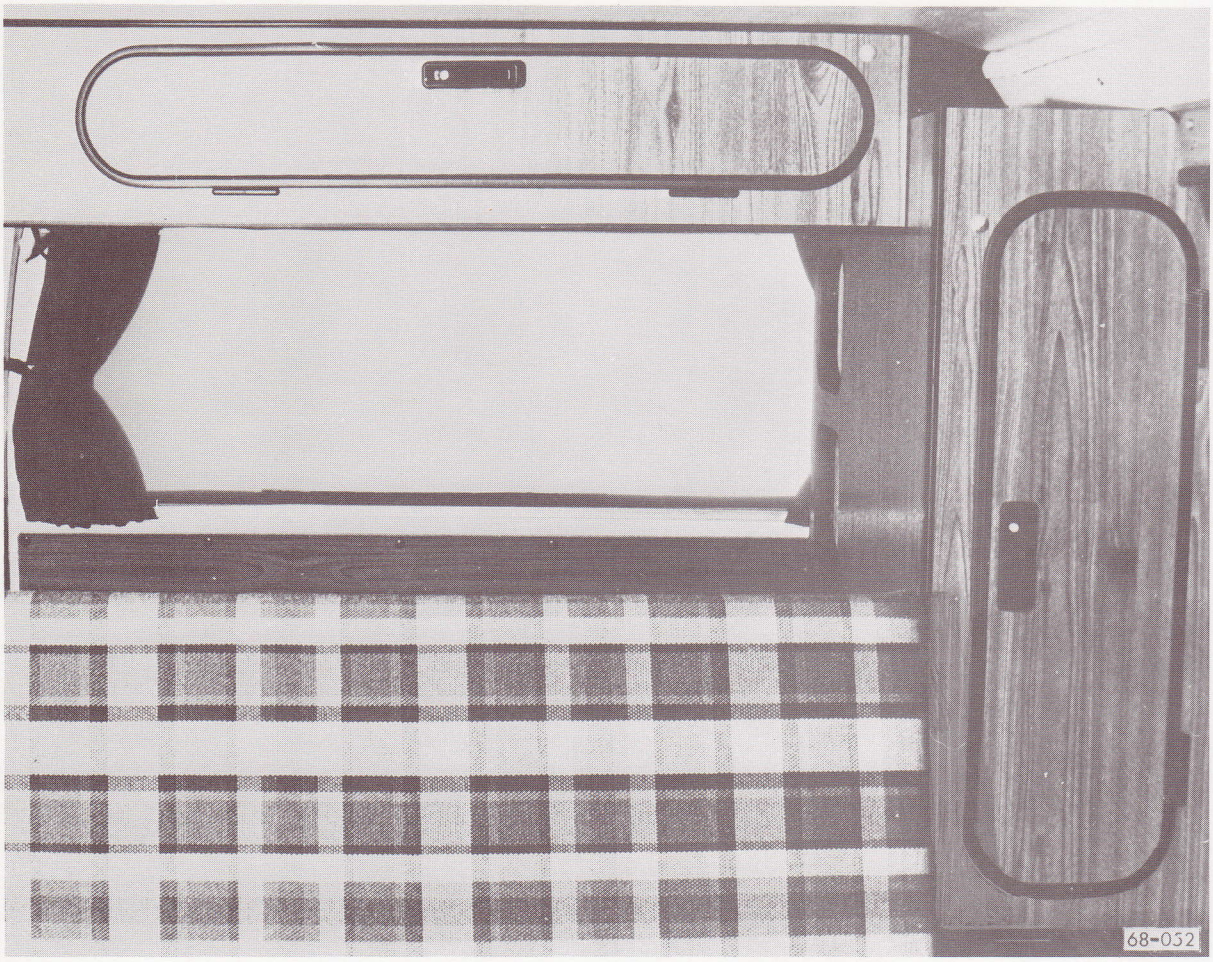


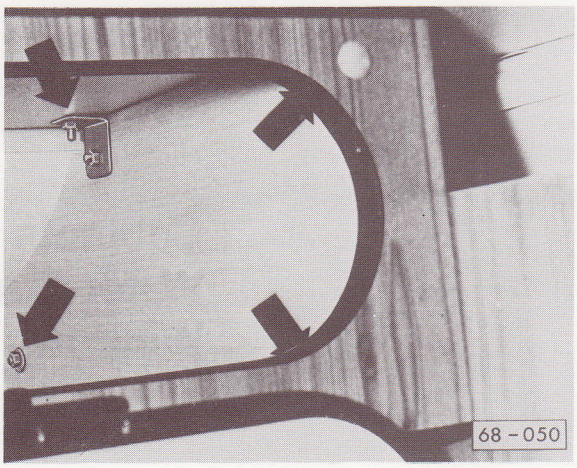




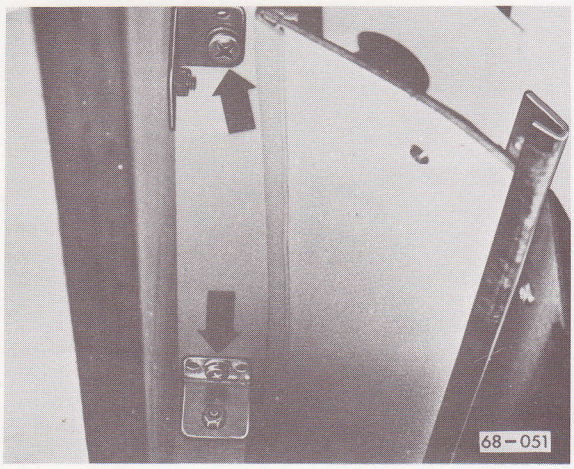
Cabinets
Water Tank
Windows

Ceiling cabinet, removing





— open cabinet lid
— on left side remove four nuts (arrows) and push bolts into closet



— on right side remove Phillips screws (arrows)
— lift cabinet out (2 mechanics needed)

Ceiling cabinet, installing

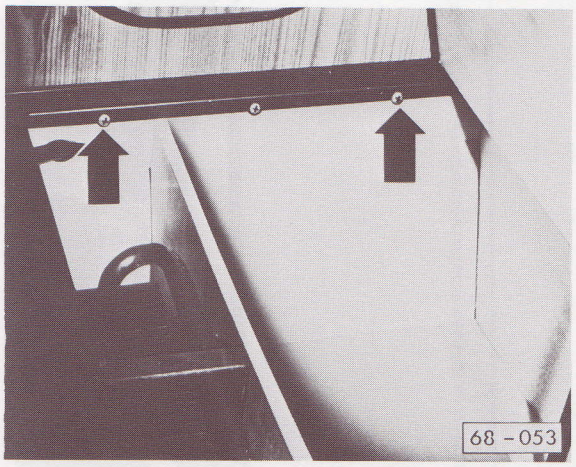
— install in reverse order starting with 2 bolts in top of cabinet

Closet, removing

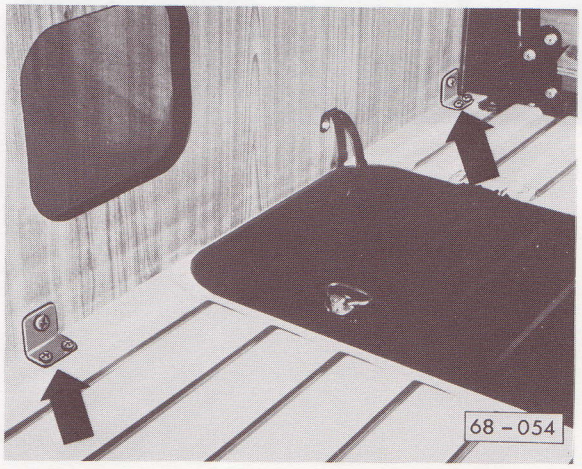
Work sequence

Note

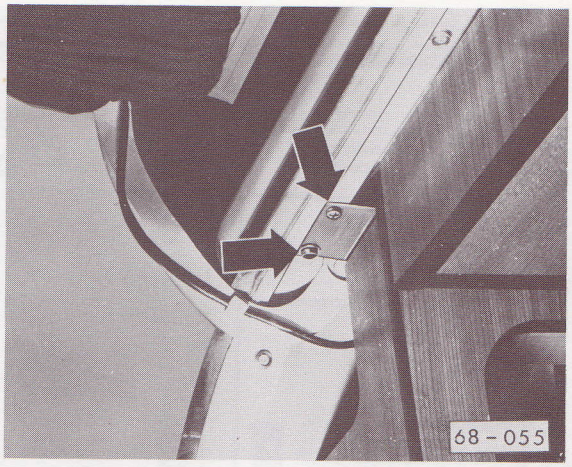
Removal only possible after ceiling cabinet is removed



— remove engine compartment insulation
— remove Phillips screws (arrows) also hold refrigerator cabinet frame



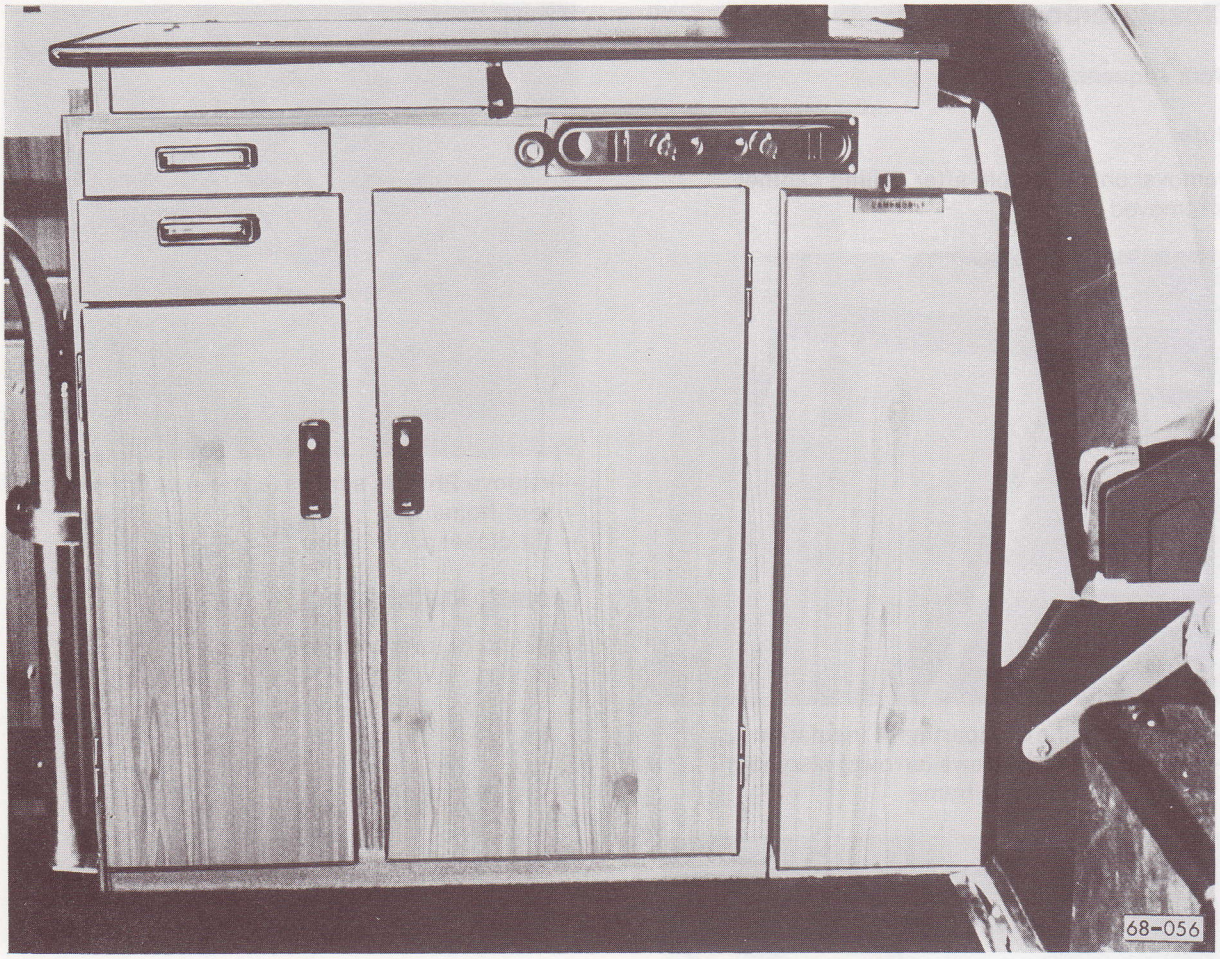
— remove Phillips screws (arrows) at brackets at engine compartment top



— remove Phillips screws (arrows) at bracket on roof frame
— tilt closet and remove

Closet, installing

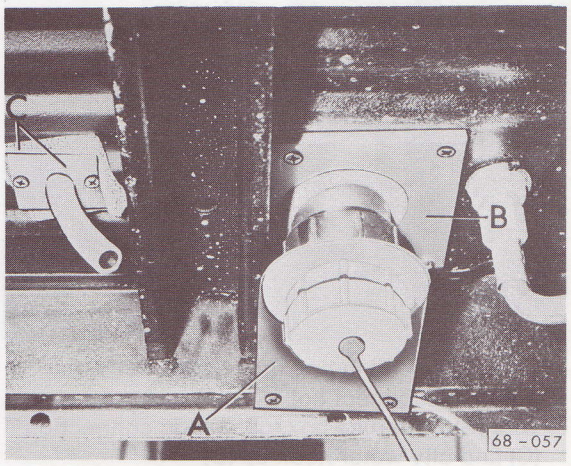
— install in reverse order



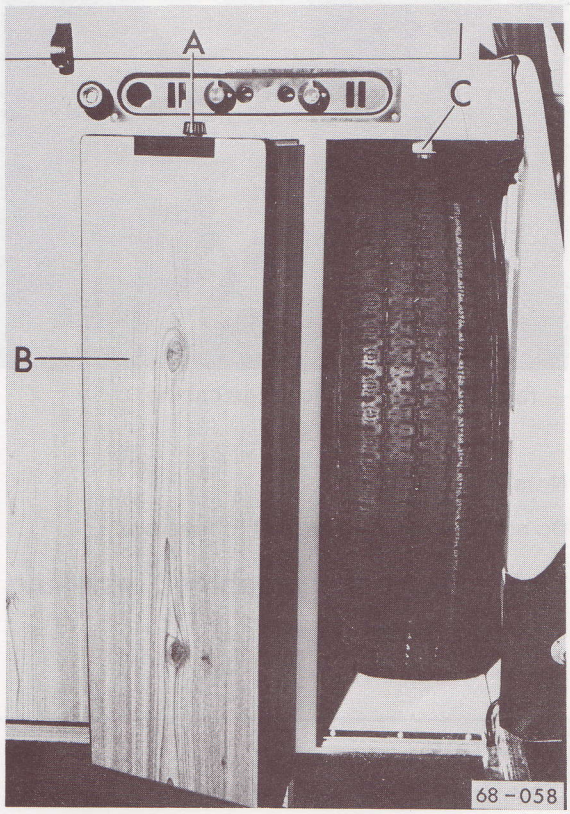
76.4 Sink and gas range cabinet

Sink and gas range cabinet, removing

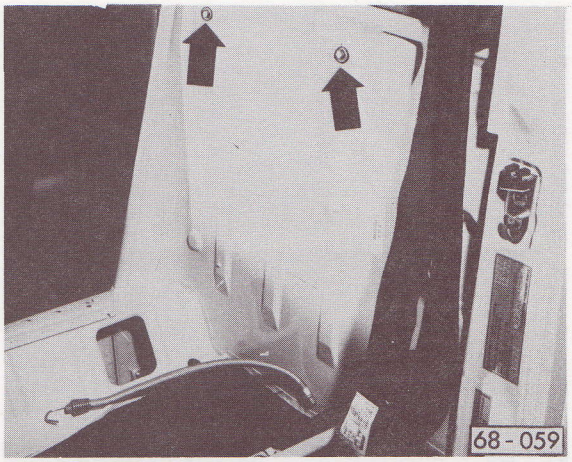
Work sequence



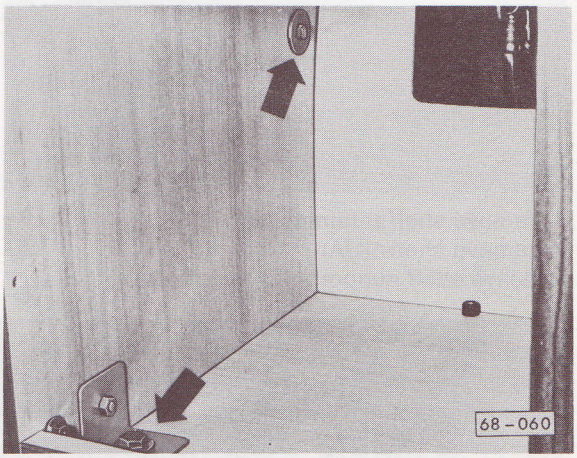
— remove from underneath vehicle:
A = bracket for sink drain
B = cover plate with seal
C = cover plate for water tank drain hose



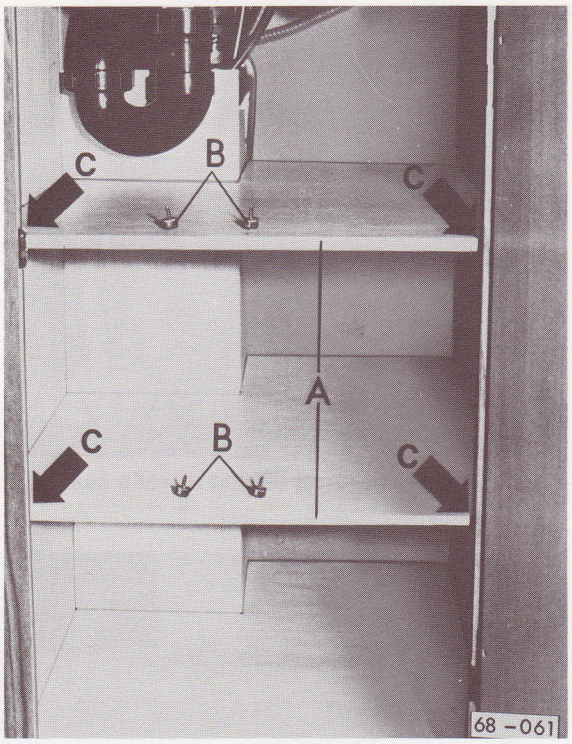
— remove lock bolt (A) for spare tire storage compartment door from bracket (C)
— remove door (B) from hinges



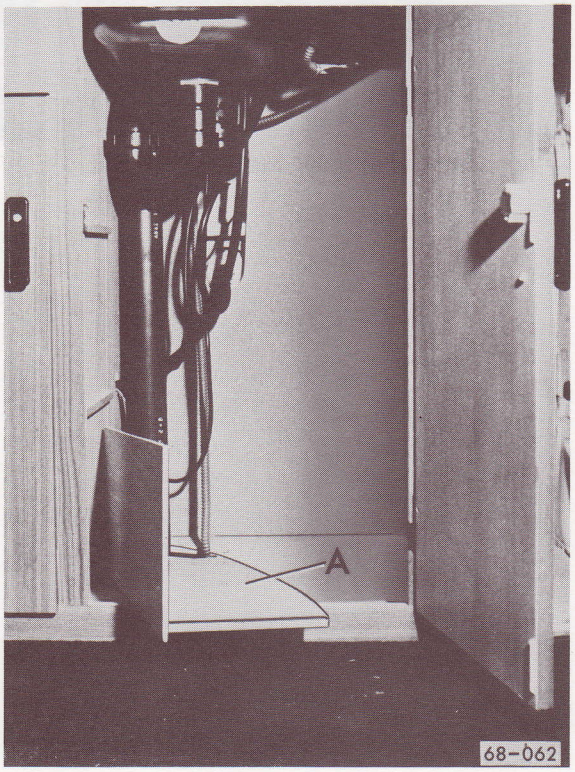
— remove bolts (arrows) behind driver's seat partition



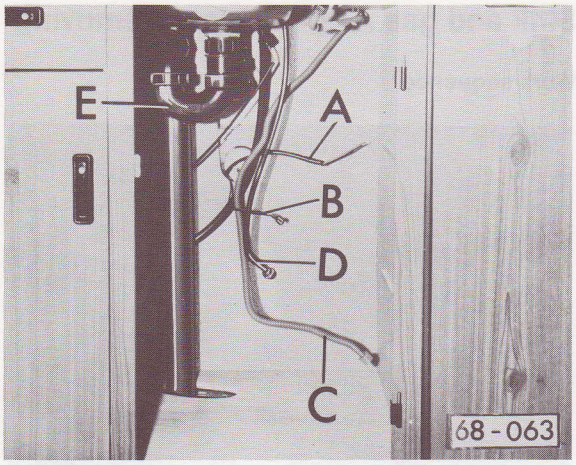
— remove bolts (arrows) inside of cabinet



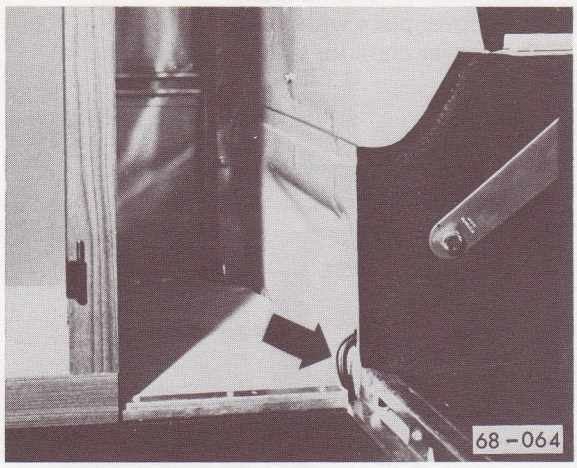
— remove shelf retainers (B)
— remove shelves (A)
— (leave shelf supports (C) installed)



— remove cover plate for sink drain plate (A)
— remove cabinet doors and drawers



— remove fuse in in-line fuse holder for water pump, disconnect hot wire (A) and ground wire (B) from fuse box, gas range connection (C) and city water hook-up (D)
(E = sink drain pipe)



— remove sink and gas range cabinet

Note

Do not damage wire (arrow) to fuse box

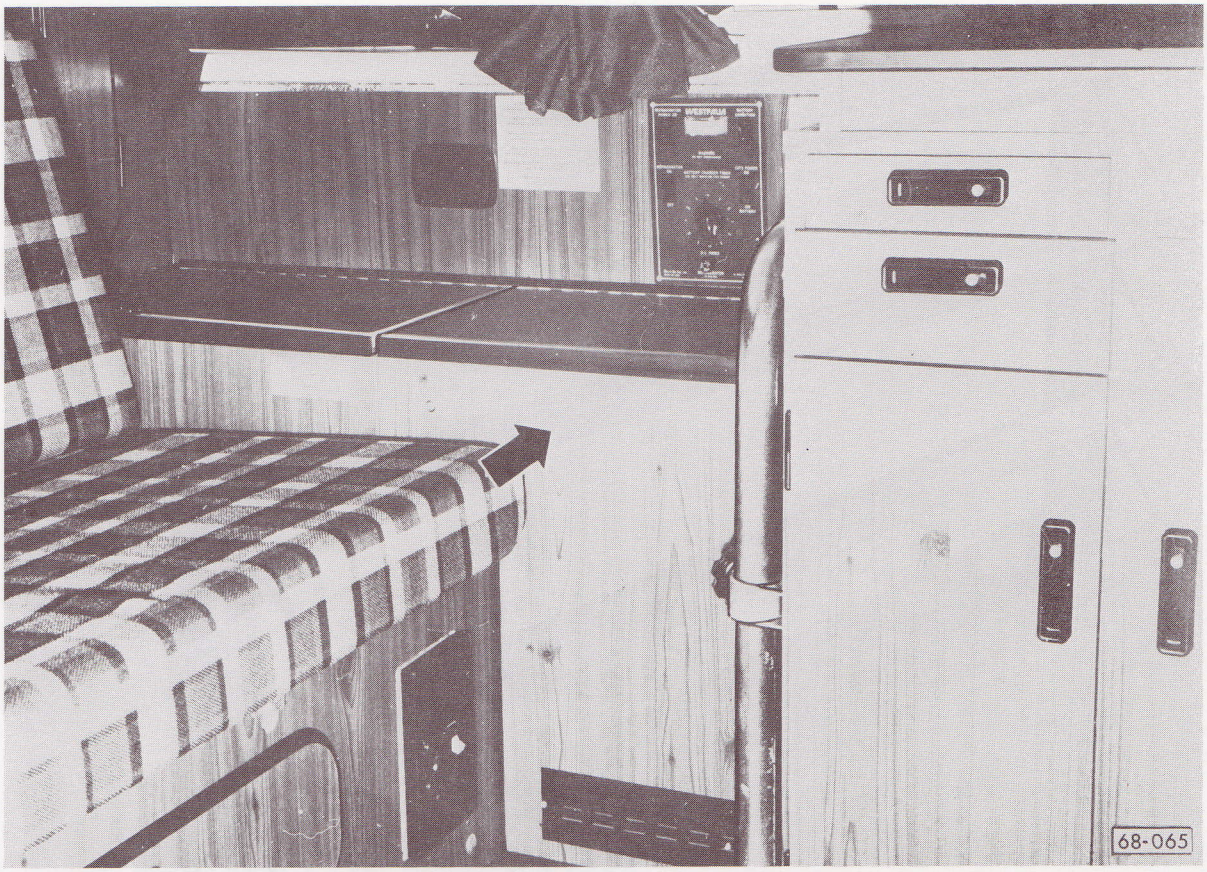
Sink and gas range cabinet, installing

— install in reverse order

CAUTION

Water and gas range connections must not leak

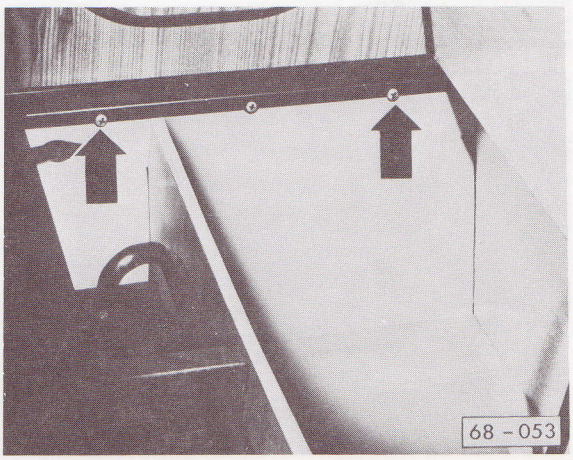
Refrigerator cabinet, removing



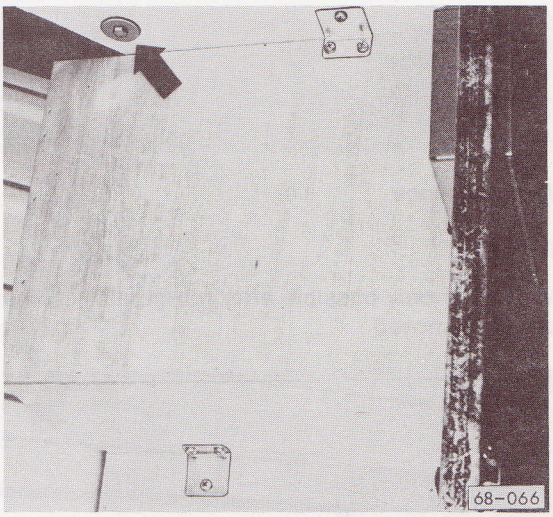
Work sequence

Note

Removal only possible after sink and gas range cabinet is removed



— remove Phillips screws (arrows) holding frame



— remove bolt (arrow) located in storage locker under rear seat bench
— disconnect electrical connection and lift out refrigerator cabinet

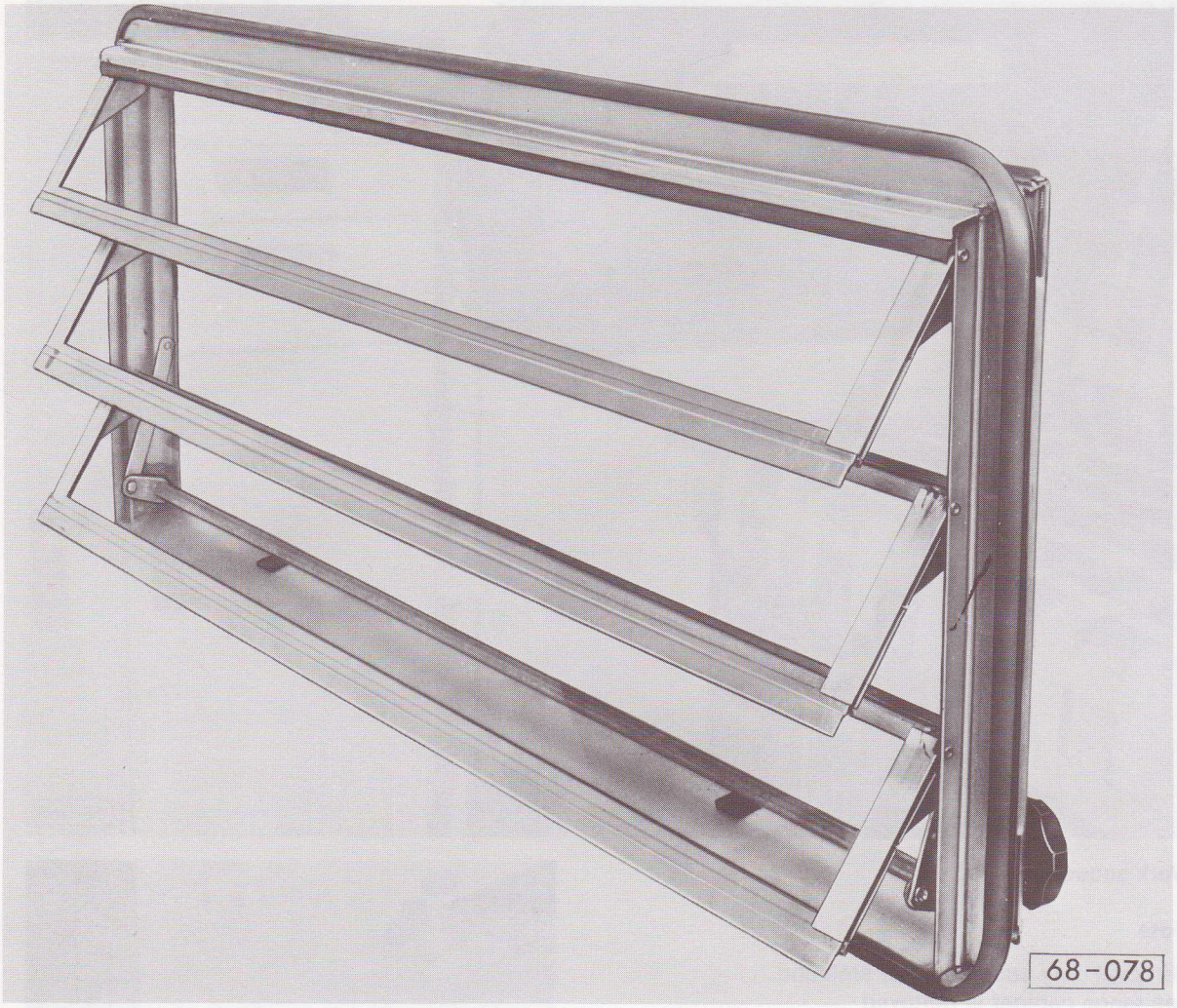
Refrigerator cabinet, installing

— install in reverse order

Note

Connect electrical wires

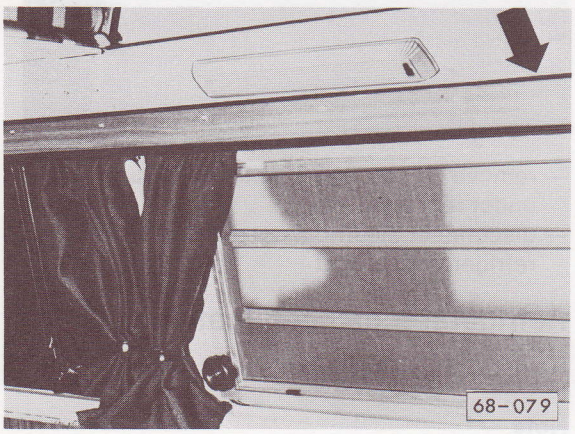
Louvered windows, removing



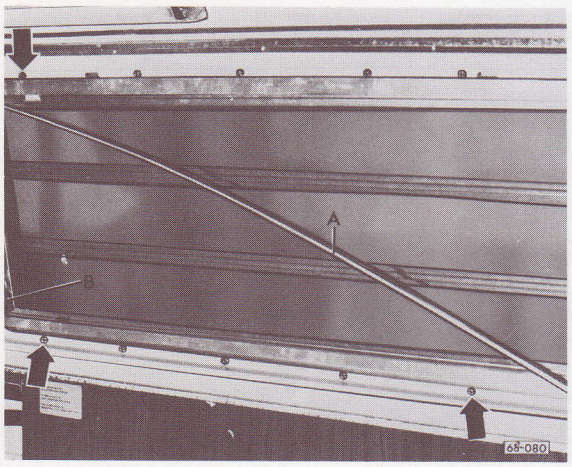
Work sequence

Note

Removal is only possible after refrigerator cabinet cover is removed



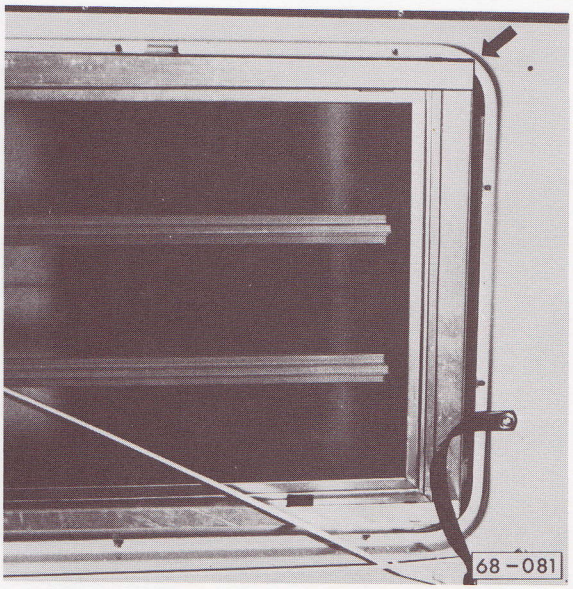
— remove curtain rod cover (arrow)



— remove 2 Phillips screws holding curtain rod and bend rod (A) down carefully
— remove knurled knob of window opener and 16 Phillips screws (arrows)
— carefully press louvered window to outside of panel opening

Louvered window, installing

Work sequence

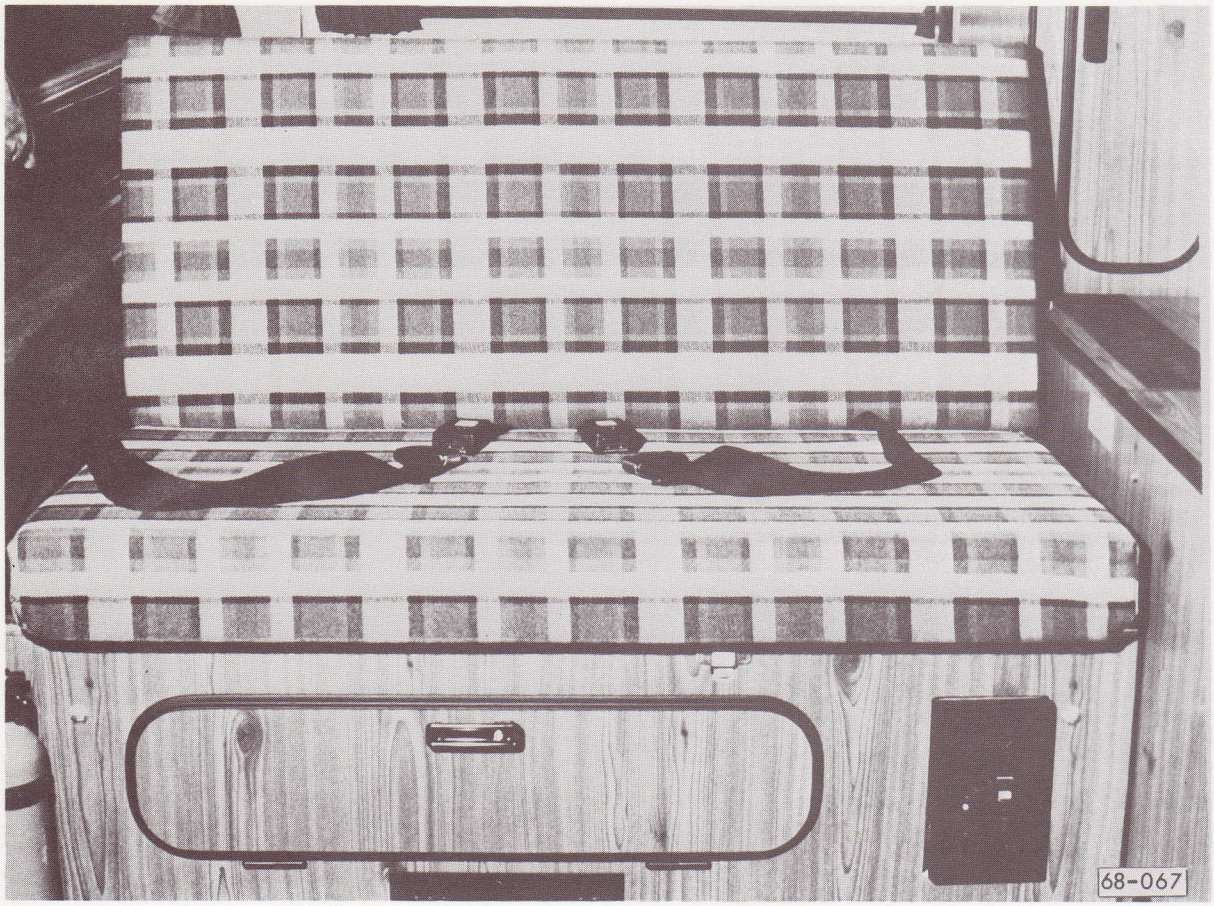


— install louvered window in panel opening with two upper corners first
— check proper seating of rubber sealing. Rectify fit of rubber lip if necessary
— install 16 Phillips screws and knurled knob of window opener

— install curtain rod
— install curtain rod cover

Seats
Table
Beds

Rear seat and storage locker, removing



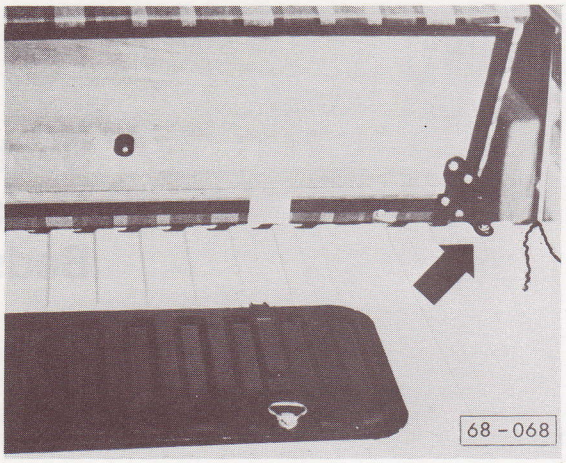
Work sequence

Note

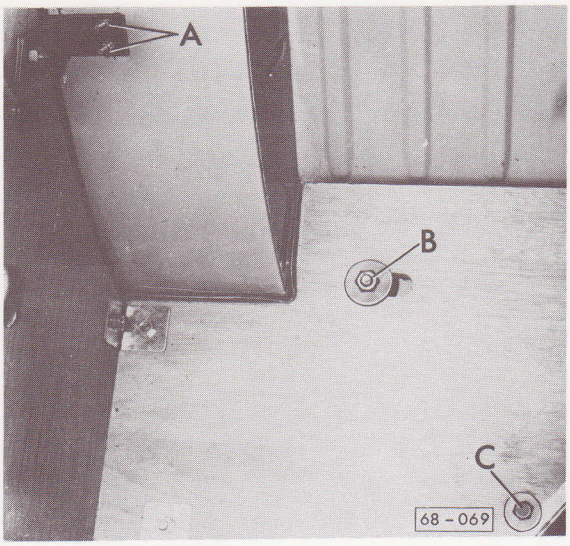
Removal is only possible after sink/gas range cabinet and refrigerator cabinet are removed

WARNING

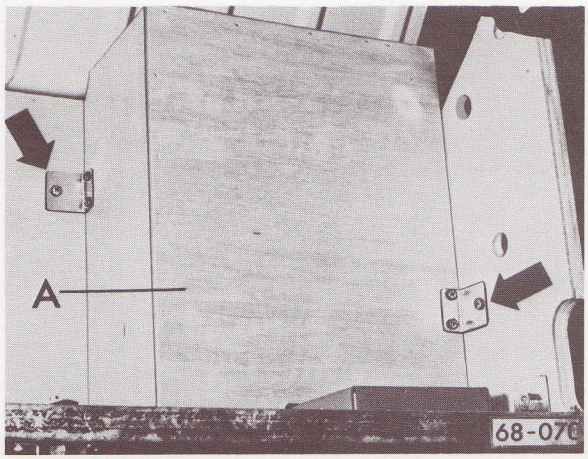
Before starting to perform following repair operations disconnect extension cord and remove ground strap on both batteries



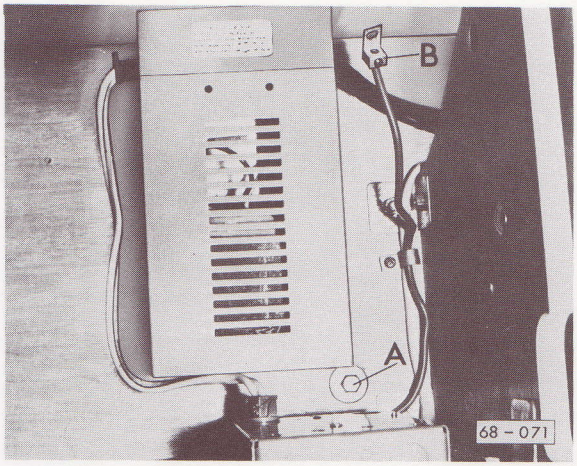
— pull seat belts into storage locker
— remove Phillips screw (arrow) on left and right sides at brackets



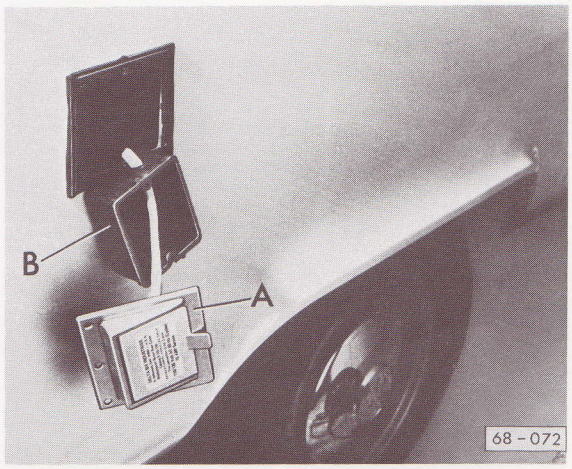
— remove 2 self-locking nuts (A), nut from anchor bolt (B) and bolt from floor (C)



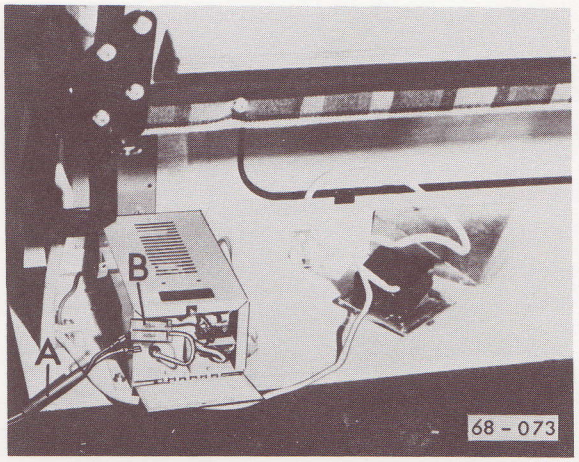
— remove Phillips screws (arrows) and then cover for rectifier



— remove bolt and washer (A) and disconnect ground cable (B)



— remove electrical receptacle (A), detach from housing (B) and pull to inside of vehicle



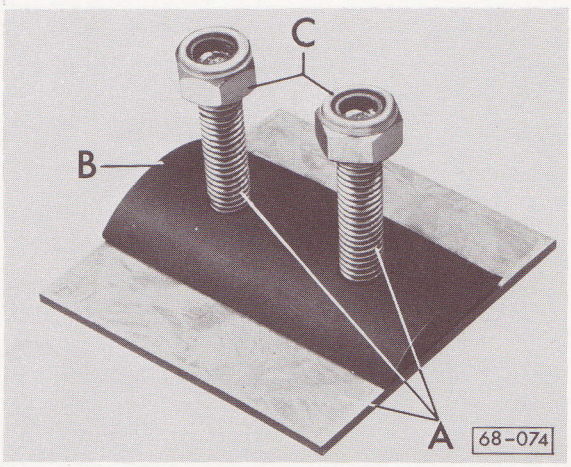
— loosen cable clamp at left wheel housing and place electrical receptacle and housing on bottom of storage locker
— open cover of rectifier and disconnect wiring (A) at connector (B)
— lift rear seat out of vehicle with a helper

Note

Make sure wooden wedge remains under anchor bolt

Rear seat and storage locker, installing

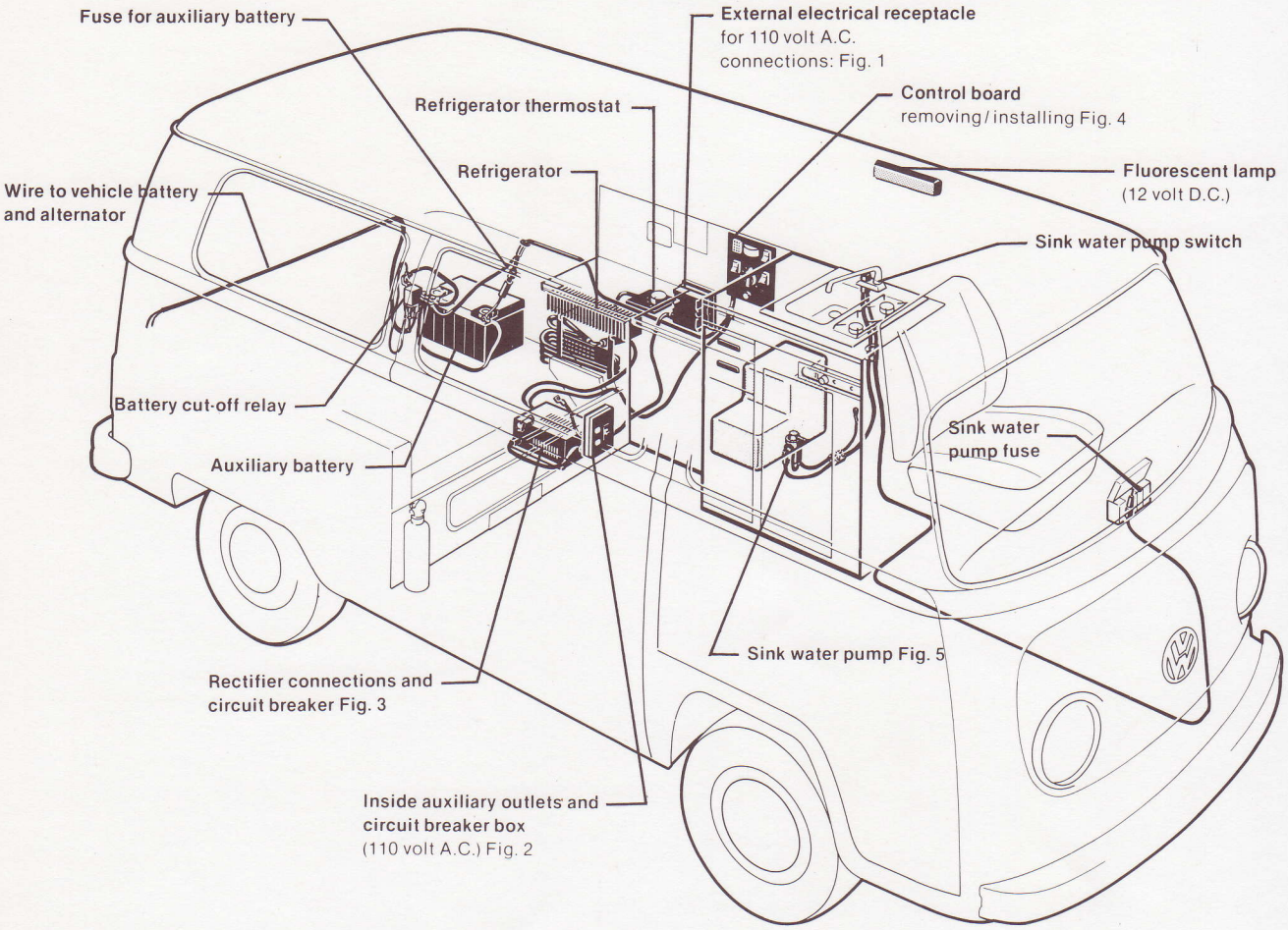
— install in reverse order



Note

When installing reinforcement plate with 2 studs (A) in right wheel housing, make sure rubber sealing (B) is attached. Use new self-locking nuts

Wiring



WARNING

Never remove/install external electrical receptacle, inside auxiliary outlets, circuit breaker or rectifier if vehicle is hooked-up to 110 volt A.C.

Note

Illustrations show USA version equipment

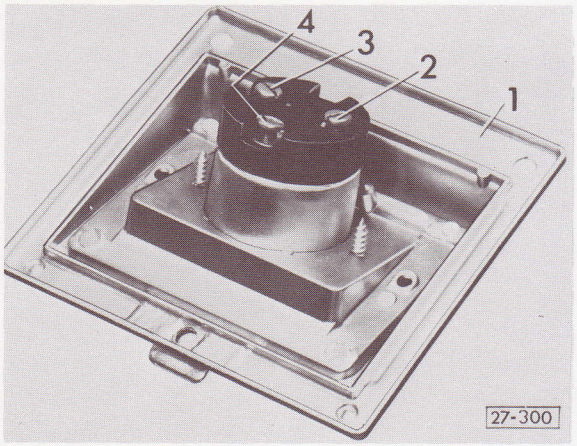


Fig. 1 External electrical receptacle, connections

1-electrical receptacle
2-black colored wire
3-white colored wire
4-non-insulated copper wire (ground)

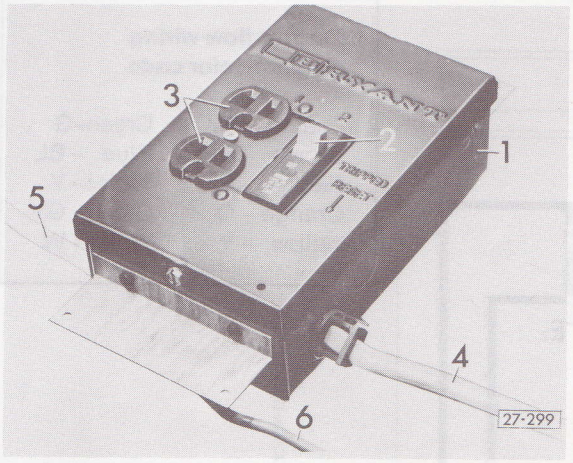


Fig. 2 Circuit breaker and auxiliary outlets

1-housing
2-circuit breaker (110 volt/15 amp)
3-sockets (110 volt A.C.)
4-wire from external receptacle
5-wire to rectifier
6-ground wire—must make good contact

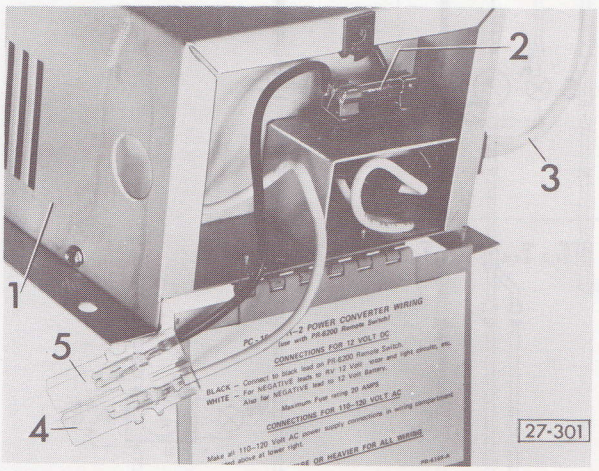


Fig. 3 Rectifier
(converts 110 volt A.C. to 12 volt D.C.)

1-housing
2-fuse on D.C. side—25 amps
3-wire from external receptacle via circuit breaker
4-hot wire—12 volt D.C.
5-ground wire—12 volt D.C.

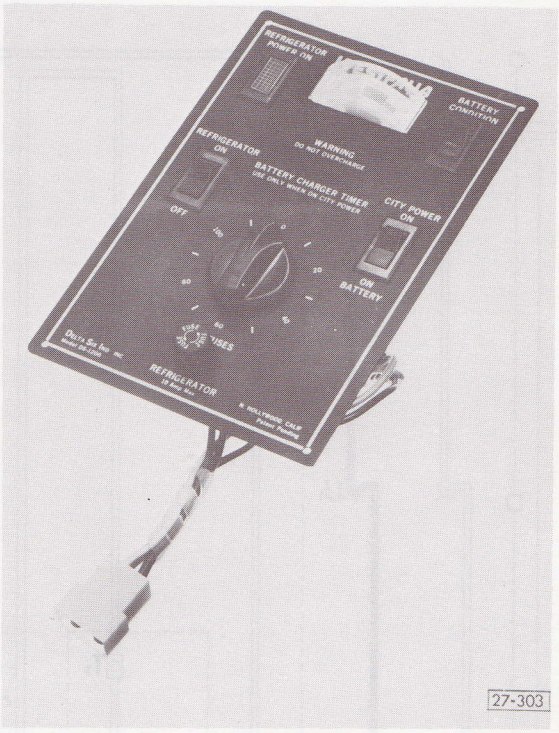


Fig. 4 Control panel, removing/installing

CAUTION

Remove only with external receptacle disconnected and inline fuse on auxiliary battery removed

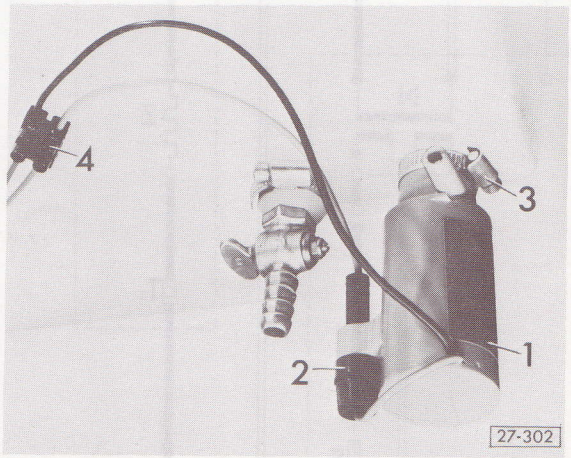
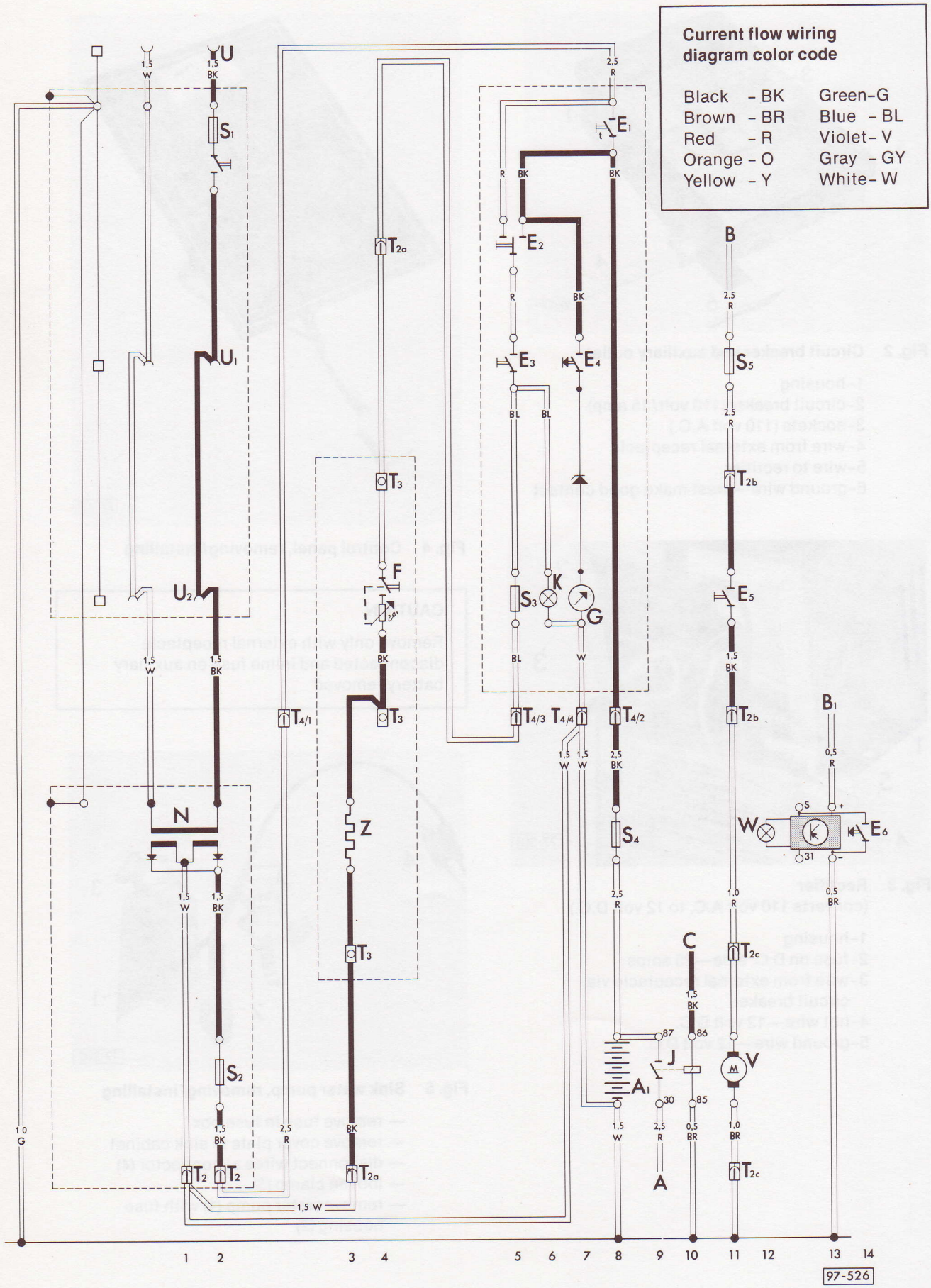


Fig. 5 Sink water pump, removing/installing

— remove fuse in fuse box
— remove cover plate in sink cabinet
— disconnect wires at connector (4)
— loosen clamp (3)
— remove water pump (1) with fuse housing (2)


Current flow wiring diagram color code
Black - BK
Brown - BR
Red - R
Orange - O
Yellow - Y
Green-G
Blue - BL
Violet - V
Gray - GY
White - W
U
U1
U2
S1
S2
S3
S4
S5
E1
E2
E3
E4
E5
E6
T2a
T2b
T2c
T3
T4/1
T4/2
T4/3
T4/4
F
K
G
Z
N
B
B1
W
V
J
A1
A
C
1 2 3 4 5 6 7 8 9 10 11 12 13 14
97-526

Description	Current track
A – to standard battery	9
A1 – auxiliary battery	8
B –to water pump inline fuse (8 amp) next to fuse box	11
B1 – to fuse S9 in fuse box	13
C – to alternator, terminal 61 (D +)	10
E1 – battery charging timer	8
E2 –switch BATTERY/CITY POWER	5
E3 – refrigerator switch	5
E4 – switch for testing battery condition	7
E5 – water pump switch	11
E6 – flourescent lamp switch	14
F – refrigerator thermostat	4
G – battery (charge) condition indicator	7
J – battery cut-off relay	9, 10
K – refrigerator warning light	6
N – rectifier 110 volt A.C./12 volt D.C.	1, 2
S1 – circuit breaker (110 volt/15 amp) with 2 outlets	2
S2 – fuse—12 volt/25 amp—in rectifier	2
S3 – fuse—12 volt/15 amp—for refrigerator	5
S4 – fuse—12 volt/16 amp—for auxiliary battery	8
S5 – fuse—12 volt/16 amp—for water pump	11
T2 – wire connector, double; in rectifier	
T2a – wire connector, double; next to refrigerator thermostat	
T2b – wire connector, double; next to water pump switch	
T2c – wire connector, double; next to water pump	
T3 – wire connector, 3-point; on refrigerator thermostat	
T4 – wire connector, 4-point; on control panel	
U – external receptacle (city power) 110 volt A.C.	1, 2
U1 –	
U2 – auxiliary outlets 110 volt A.C.	1, 2
V – water pump with fuse 12 volt/2 amp	11
W – flourescent lamp 12 volt D.C.	12, 13
Z – resistor for refrigerator (12 volt D.C.)	3

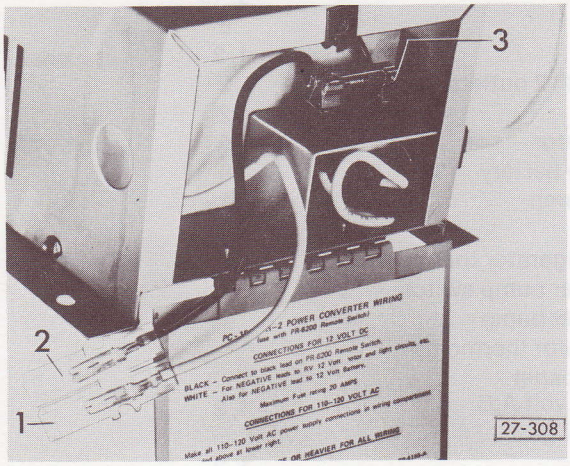
Refrigerator does not cool

Check these first:
- extension cord to external receptacle (broken wire or bad connections)
- circuit breaker
- fuses in system (see current flow diagram on page 97.4)

S_1 circuit breaker, checking

— connect a table lamp (110 volt A.C.) to outlets on kickboard
— check that circuit breaker is in normal position
  - if table lamp lights up circuit breaker is OK
  - if table lamp does not light up, circuit breaker is defective—replace

S_2 fuse in rectifier, checking



— connect one lead of test light to wire connector terminal 1
— connect other lead of test light to wire connector terminal 2
  - if test light lights up fuse is OK
— remove test light lead from terminal 2 and connect to fuse holder terminal 3
  - if test light lights up fuse is defective

Note

If auxiliary battery is recharged with rectifier, it is possible that fuse in rectifier blows. In such case charge auxiliary battery with stationary charger

S_3 fuse for refrigerator, checking

(located on control panel)

— check for blown fuse

S_4 fuse for auxiliary battery, checking

(located next to auxiliary battery in engine compartment)

— check for blown fuse

If all fuses are checked and found OK, proceed as follows:

- switch for BATTERY/CITY POWER switched to CITY POWER
- circuit breaker in ON position
- extension cord plugged in external receptacle

refrigerator switch defective

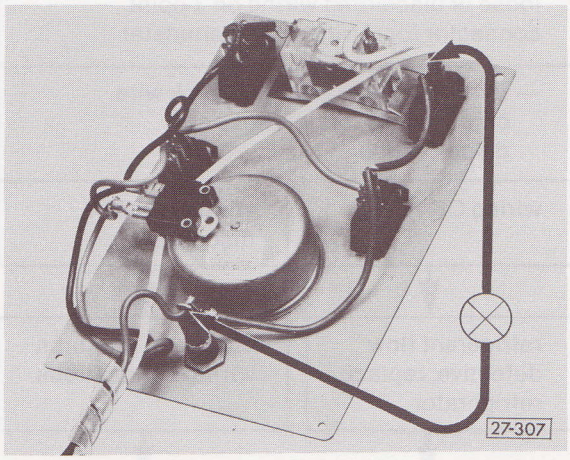
—remove control panel

Note

Do not disconnect 4-point connector

— connect test light to blue and white wire

refrigerator warning light lights up	refrigerator warning light does not light up
	replace refrigerator switch



wiring to refrigerator broken

— connect test light to blue and white wire of 2-point wire connector on refrigerator

Note

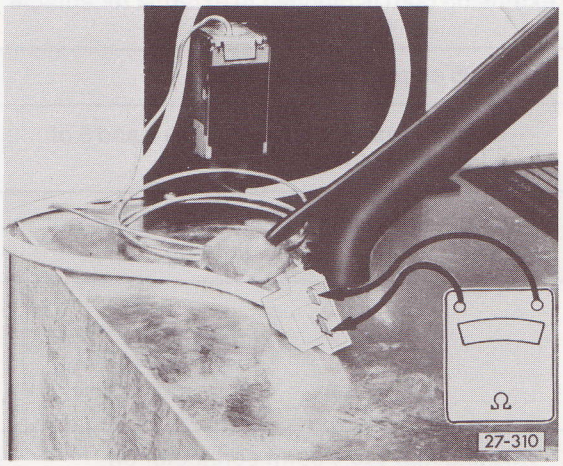
Do not disconnect wire connector

test light lights up	test light does not light up
	repair broken wire

wiring of refrigerator thermostat or resistor broken

— disconnect 2-point wire connector
— connect ohmmeter as shown
— turn thermostat fully to right

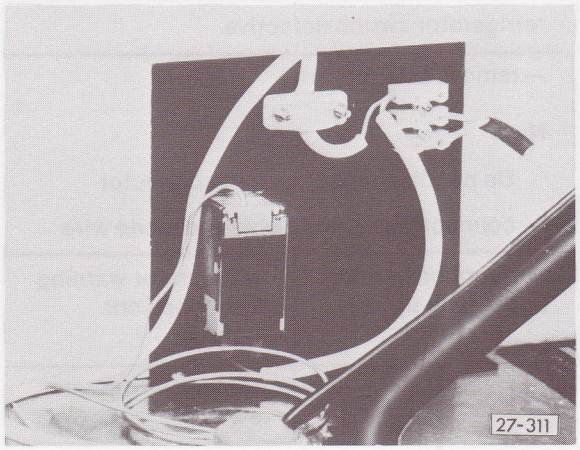
wiring not broken ohmmeter reads 0–2.5 Ohms	wiring broken ohmmeter reads ∞ Ohms
refrigerant flow defective, replace refrigerator	go to next page



loose or discolored wiring on 3-point connector for refrigerator thermostat

— remove refrigerator and check wire connections for tightness and discoloration

wiring OK	wiring loose or discolored
refrigerant flow defective, replace refrigerator	clean and retighten wiring connections
end	end



Refrigerator does not cool on 110 volt A.C. power

Check these first:
- refrigerator cools on 12 volt D.C. power
- BATTERY/CITY POWER switch is switched to CITY POWER
- circuit breaker is in ON position
- extension cord is plugged in external receptacle

fuse (25 amp) in rectifier blown

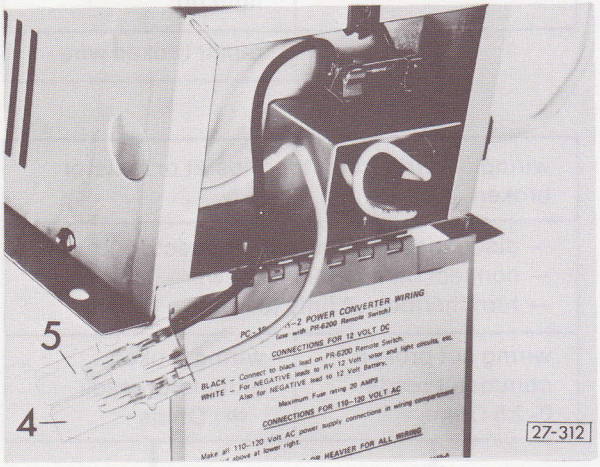
— connect test light to terminals 4 and 5 of wire connector

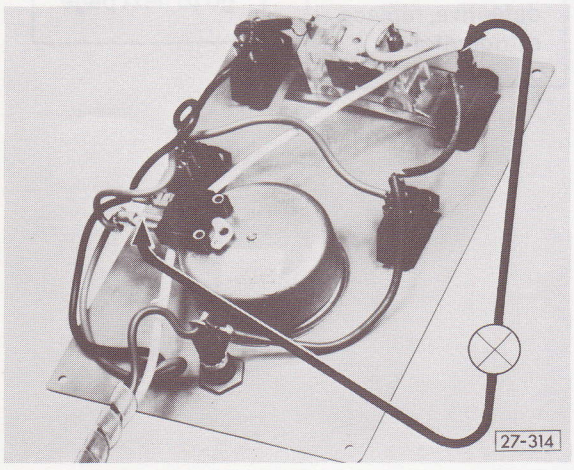
test light lights up, fuse OK	test light does not light up
	go to page 97.9

wire (2.5 mm²) to 4-point connector on control panel broken

— remove control panel
— connect test light to red and white wire

test light lights up	test light does not light up
switch defective, replace	repair broken wire
end	end





Continued from page 97.8

fuse (25 amp) blown

— connect test light to terminal 4 in wire connector and fuse (white arrow)

test light lights up	test light does not light up

→ fuse (25 amp) blown, replace → end

→ rectifier defective

— connect table lamp (110 volt) to auxiliary outlet at kick board

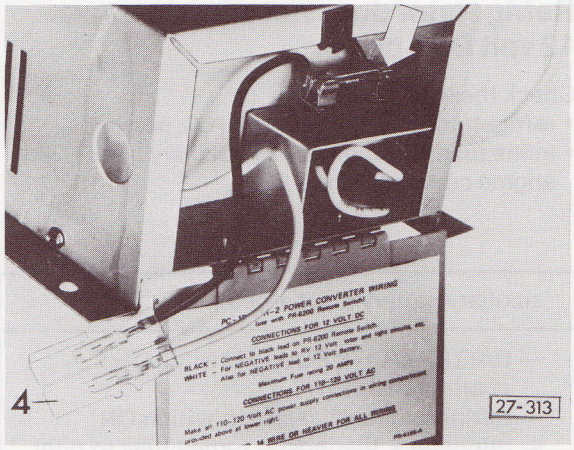
table lamp lights up	table lamp does not light up

→ rectifier defective, replace → end

→ wire from external receptacle to rectifier broken, repair → end

WARNING

Unplug external receptacle before repairing broken wire



Refrigerator does not cool on 12 volt D.C. power

Check these first:
- refrigerator cools on 110 volt A.C. power
- inline fuse (16 amp) next to auxiliary battery in engine compartment is OK

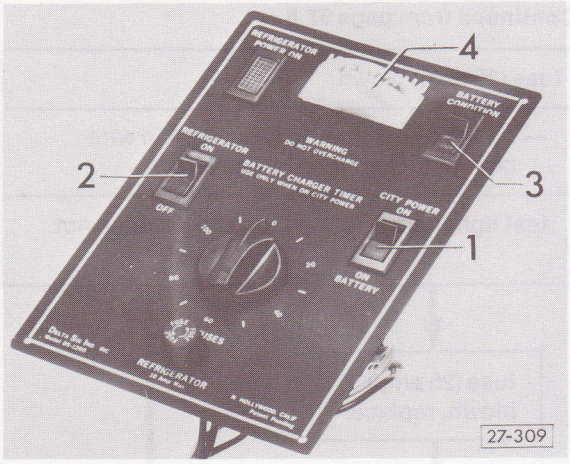
auxiliary battery discharged

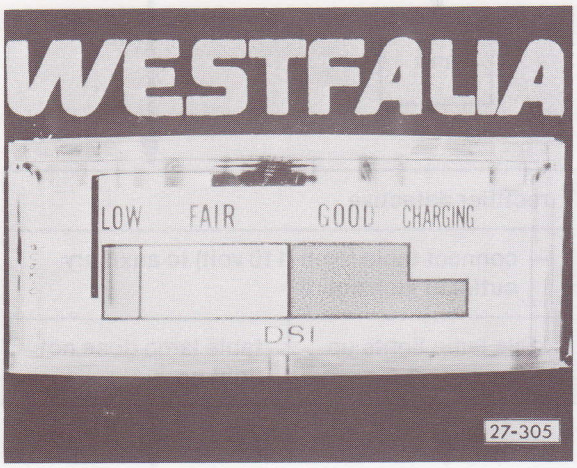
— BATTERY/CITY POWER switch (1) in position BATTERY
— refrigerator switch (2) in position ON
— refrigerator thermostat turned fully to right
— check charge of battery with switch (3) in position BATTERY

needle of instrument (4) is in:

green scale | yellow scale | red scale

- green scale → procedure incorrect, e.g. thermostat was not turned on
- yellow scale → charge battery
- red scale → standard battery discharged
  - check acid level
  - check specific gravity
  - charge battery





Battery can be charged with:

1-rectifier in vehicle
2-stationary battery charger
3-alternator with vehicle engine running

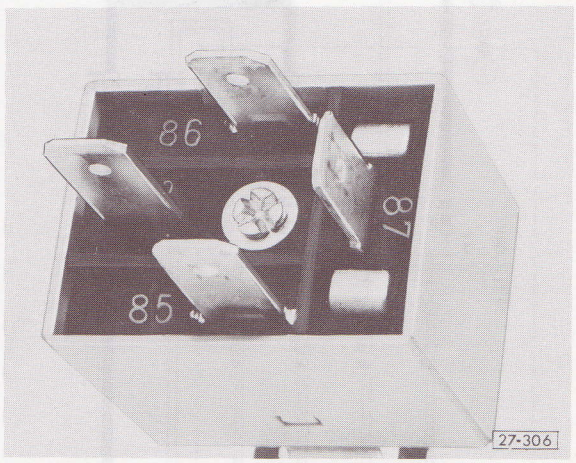
Note

Discharged battery will not only be caused by operating refrigerator too long on battery but also by defective cut-off relay for auxiliary battery

Cut-off relay for auxiliary battery, checking

(see also current flow diagram, page 97.4)

— remove ground strap of auxiliary battery
— remove fuse (16 amp) of inline fuse holder
— remove red wire from terminal 87 of relay
— check wires
  • to alternator terminal 61 (D+)
  • to standard battery



cut-off relay for auxiliary battery defective

— bridge terminal 87 of relay and ground with test light
— start engine
  • with engine at idle, test light must light up

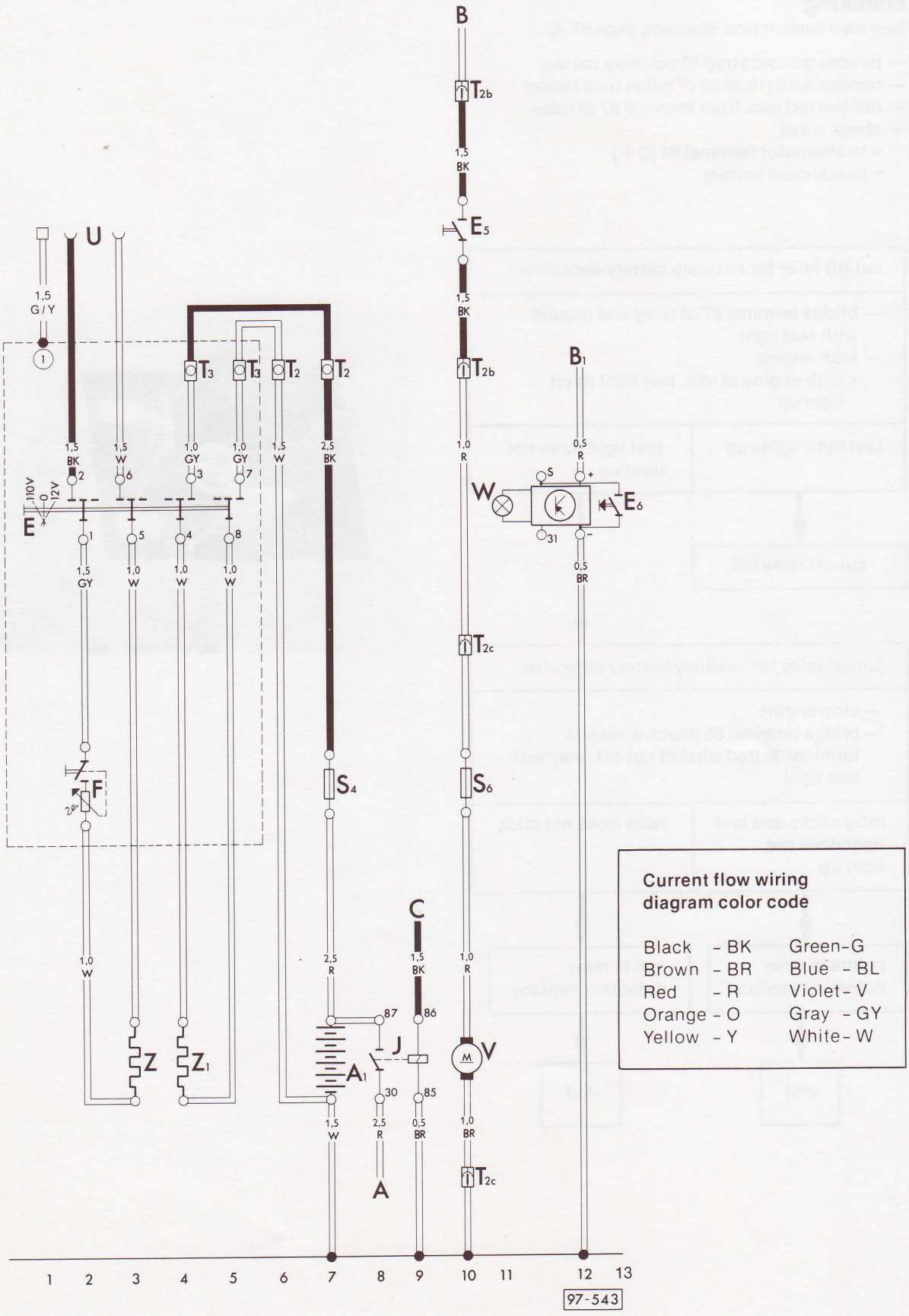
test light lights up	test light does not light up

→ cut-off relay OK

→ cut-off relay for auxiliary battery defective

— stop engine
— bridge terminal 86 (black wire) and terminal 30 (red wire) of cut-off relay with test light

relay clicks and test light does not light up	relay does not click
→ points in relay defective, replace	→ coil in relay defective, replace
→ end	→ end



Current flow wiring diagram color code

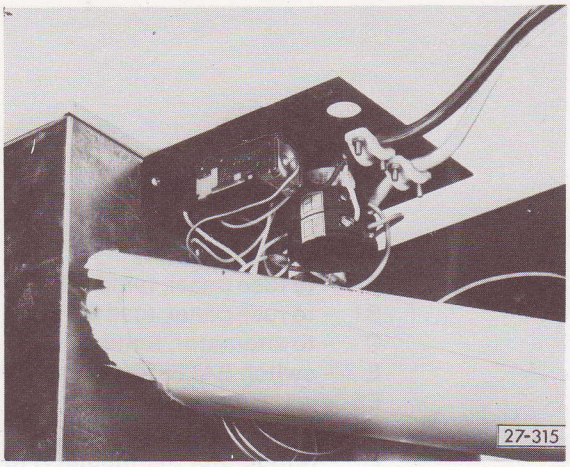
Black - BK	Green - G
Brown - BR	Blue - BL
Red - R	Violet - V
Orange - O	Gray - GY
Yellow - Y	White - W

Description	Current track
A - to standard battery	8
A1 - auxiliary battery	7
B - to fuse panel, terminal 30 (incoming side)	10
B1 - to fuse panel, fuse 9	12
C - to alternator, terminal 61 (D +)	9
E - switch BATTERY/CITY POWER	2-5
E5 - water pump switch	10
E6 - flourescent lamp switch	13
F - refrigerator thermostat (110 volt only)	2
J - battery cut-off relay	8, 9
S4 - fuse—12 volt/16 amp—for auxiliary battery	7
S6 - fuse—12 volt/2 amp—for water pump	10
T2 - wire connector, double; next to refrigerator switch	
T2b - wire connector, double; next to water pump switch	
T2c - wire connector, double; next to water pump	
T3 - wire connector, 3-point; next to refrigerator thermostat	
U - auxiliary outlets 110 volt A.C.	1-3
V - water pump	10
W - flourescent lamp 12 volt D.C.	11
Z - resistor for refrigerator 110 volt A.C.	3
Z1 - resistor for refrigerator 12 volt D.C.	4

① - ground connection
(green/yellow wire must make good contact)

Refrigerator does not cool

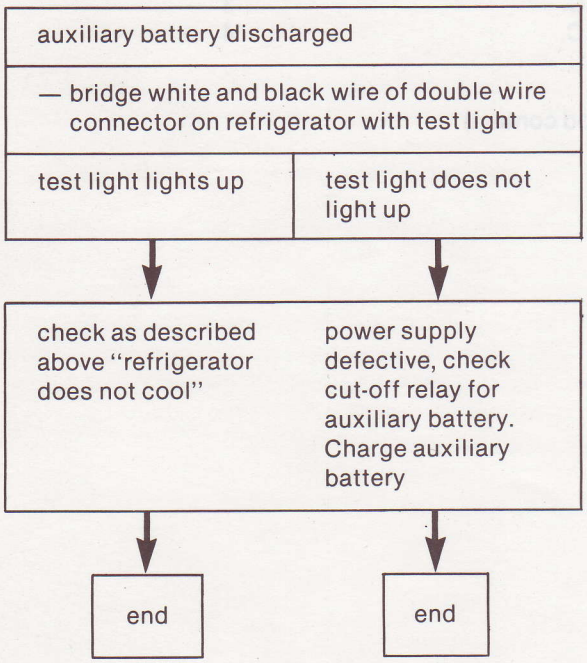
— pull out plug at 110 volt A.C. receptacles
— remove refrigerator
— remove BATTERY/CITY POWER switch
— check for loose or discolored wire connections
  • if wires and connections are OK, refrigerant flow is defective—replace refrigerator and switch
  • repair loose or discolored wire connections and let refrigerator operate on 110 and 12 volt power. If refrigerator still does not cool, replace refrigerator



Refrigerator cools on 12 volt D.C. power only

check these first:

- plug at 110 volt external receptacle pulled
- inline fuse 12 volt/16 amp for auxiliary battery (next to battery in engine compartment)



Refrigerator does not cool on 110 volt A.C. power

— pull out plug at 110 volt A.C. receptacle
— check extension cord and auxiliary outlets on kick board for broken wire, wires for loose and discolored connections
— if no faults are found check as described above "refrigerator does not cool"