



General Instructions

- Take lots of pictures as you take your carburetor apart. This will give you a reference of where things go.
- Using a cookie sheet with folded up sides will help keep parts from falling on the floor.
- We suggest not removing the throttle shaft, valves, or choke shaft unless they are corroded, or very dirty. These parts can be easily damaged and are difficult to re-assemble.
- Instruction sheets that come with our carburetor kits are somewhat generic. It may not match your parts exactly.
- Do NOT use WD-40 around your carburetor. It reacts with ethanol.
- Using Silicon Spray Lubricant on the gaskets will help with sticking in case you need to take the carburetor apart again.
- Be careful after taking the top of the carburetor off. Turning the carburetor upside down may cause parts to fall out and you won't know where they were.
- Screws and jets that are frozen can often be removed after heating outside the screw or jet.
- Stuck check balls can be removed by heating the outside of where the check ball resides and tapping the carburetor on the work bench.
- Do not discard any parts until complete done. You may have to refer for size, or matching.

Cleaning:

- Clean with carburetor dis-assembled.
- Soak all parts except rubber & electrical in Simple Green for 2 hours. Aluminum parts will get discolored if left longer.
- Wash parts with hot water if available to remove all chemicals.
- Blow out each passage way taking special notice of the smaller ones. Test each passage that air goes through the entire passage.
- Blow out the idle mixture hole.

- Check any hole above the idle mixture hole (inside the bore). This is the idle discharge and often becomes plugged.
- A tooth brush can facilitate cleaning parts.
- Soda blasting, then washing again will make the carburetor look good any will clean any minor deposits.
- Any corrosion, or deposits that are hard to remove may indicate the passages are also corroded and the carburetor should be replaced.
- If your engine has been sitting for 6 months or more, the gas has probably turned, and the gas tank will need to be cleaned as well as the fuel lines. Flushing new gas through the tank will not be enough.

Assembly:

- Do NOT apply any gasket sealant on any of the gaskets. Gas will break sealant part and the particles will clog the small passages.
- Test your float.
 - Brass floats should be immersed into hot water. As the air inside expands any leak will be noticeable with air bubbles.
 - Plastic, or Nitrophyl floats should be weighed. The weight is in grams. Check our technical pages for any weight specification that we may have.
- Most gaskets will fit as expected, but you may have to trim some, especially under the venturis.
- Your kit may include multiple gaskets in order to get better coverage out of the kit. Use the one that fits the best. Look for any opening the gasket may leave allowing air into the carburetor. Some holes may be casting holes that don't lead to anything and do not have to be covered.
- Mounting gaskets for multiple bore carburetors do not have to have matching holes. Example a four-barrel gasket can be open in the middle instead of 4 holes as long as the carburetor has some kind of passage between bores. The passage is between primary, or secondary, not both.
- When adjusting the float be careful not to put any pressure on the needle. The viton tip is easily damaged.
- Most idle mixture screws can be cleaned using a soft wire wheel. Inspect for any scoring, which would indicate over tightening. Screw with scoring should be replaced.

Accelerator Pumps:

- On leather cups run your finger around the inside of the cup to break any manufacturer sealant.
- Apply 2 drops of oil to cups (leather, or rubber) before inserting into carburetor. Do not soak the cup in oil. The swelling of the cup needs to happen inside the carburetor. Allow the 2 drops of oil and the gas to do its job naturally.
- Twist the pump as you are inserting to help keep the cup from curling or folding over.
- Test your accelerator pump circuit before putting the top of the carburetor back on. Our technical pages have instructions on how to do this for most carburetor types.
- Pump wells are usually slight tapered, and the pump will not seal until it gets towards the bottom.

INSTRUCTION SHEET

OFF VEHICLE CARBURETOR SERVICE

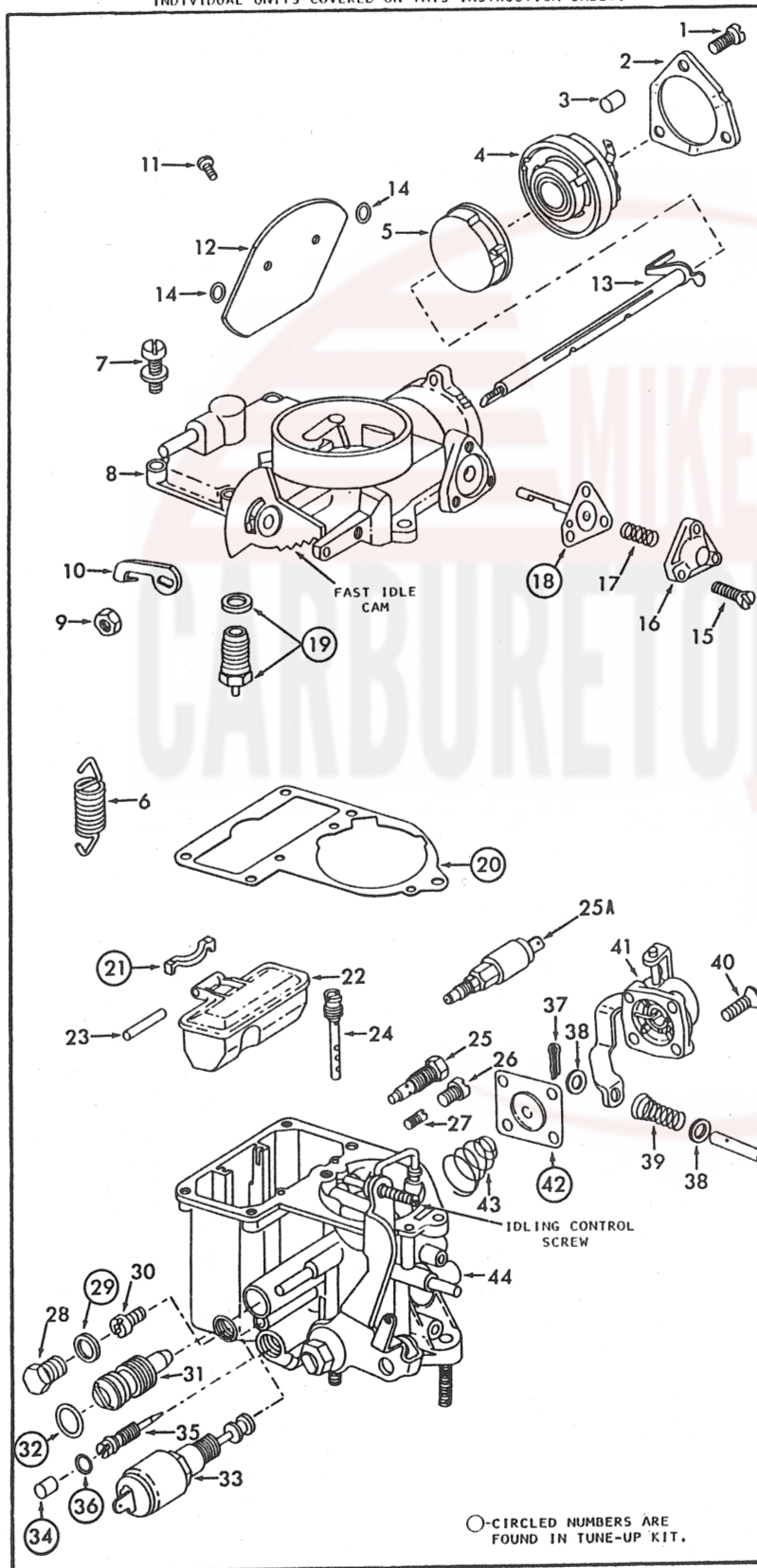
SOLEX CARBURETOR - MODELS 30PICT-2, -3, 34PICT-3, -4

50-504-1

1968 TO 1974 TYPE 1, 1968 TO 1971 TYPE 2

GENERAL EXPLODED VIEW

THE GENERAL DESIGN AND PARTS SHOWN WILL VARY TO
INDIVIDUAL UNITS COVERED ON THIS INSTRUCTION SHEET.



REMOVING

REMOVE OIL BATH AIR CLEANER. DETACH FUEL HOSE, VACUUM HOSE OF DASHPOT (WHERE APPLICABLE), AND VACUUM HOSE. DISCONNECT AUTOMATIC CHOKE CABLE, BYPASS AIR CUT-OFF VALVE CABLE (WHERE APPLICABLE), AND ELECTRO-MAGNETIC PILOT JET CABLE. DETACH ACCELERATOR CABLE AT THROTTLE VALVE LEVER. REMOVE TWO NUTS ON INTAKE MANIFOLD AND TAKE OFF CARBURETOR.

DISASSEMBLY

USE EXPLODED VIEW AS A GUIDE. THE NUMERICAL SEQUENCE MAY GENERALLY BE FOLLOWED TO DISASSEMBLE UNIT FAR ENOUGH TO PERMIT CLEANING AND INSPECTION. CAUTION: BRASS TUBE TYPE JETS ARE NOT REMOVABLE. BEFORE REMOVING CHOKE VALVE SCREWS (11) FILE OFF PEENED END FOR EASY REMOVAL. MARK LINKAGE RODS AND LEVERS SO THEY CAN BE RETURNED TO THE SAME POSITIONS.

NOMENCLATURE

REF. NO.	REF. NO.
1. SCREW (3) - RETAINING RING	23. PIN - FLOAT LEVER
2. RETAINING RING - COVER	24. JET - AIR CORRECTION
3. SPACER BUSH - RETAINING RING	25. JET - AUX. IDLE SPEED FUEL
4. COVER - WITH SPRING AND HEATER ELEMENT	25A. VALVE - IDLE CUT OFF (30 PICT-2, 3)
5. PLASTIC CAP	26. PLUG - AUX. FUEL JET
6. SPRING - THROTTLE RETURN	27. JET - AUXILIARY FUEL
7. SCREW & LKWSHR (5) - UPPER BODY	28. PLUG MAIN JET
8. UPPER BODY ASSY.	29. GASKET - PLUG
9. NUT - CHOKE SHAFT	30. JET - MAIN
10. OPERATING LEVER - FAST IDLE	31. AIR SCREW - BYPASS
11. SCREW (2) - CHOKE VALVE	32. O-RING - VOLUME CONTROL SCREW
12. VALVE - CHOKE	33. VALVE - BYPASS AIR CUT-OFF
13. SHAFT - CHOKE	34. PLUG - VOLUME CONTROL SCREW
14. SPACER WASHER (2) - CHOKE VALVE	35. SCREW - VOLUME CONTROL
15. SCREW (3) - COVER	36. O-RING - VOLUME CONTROL SCREW
16. COVER - VACUUM DIAPHRAGM	37. COTTER PIN
17. SPRING - VACUUM DIAPHRAGM	38. WASHER (2)
18. VACUUM DIAPHRAGM - CHOKE	39. SPRING - CONNECTOR ROD
19. NEEDLE, SEAT & GASKET ASSY.	40. SCREW (4) - COVER
20. GASKET - CARBURETOR BODY	41. COVER - WITH LEVER & PIN
21. LUG - FLOAT PIN	42. DIAPHRAGM - PUMP
22. FLOAT	43. SPRING - DIAPHRAGM
	44. CARBURETOR MAIN BODY ASSY'

CLEANING

CLEANING MUST BE DONE WITH CARBURETOR DISASSEMBLED. SOAK PARTS LONG ENOUGH TO SOFTEN AND REMOVE ALL FOREIGN MATERIAL. USE A CARBURETOR CLEANING SOLVENT. MAKE CERTAIN THE THROTTLE BODY IS FREE OF ALL HARD CARBON DEPOSITS. WASH OFF IN SUITABLE SOLVENT. BLOW OUT ALL PASSAGES IN CASTINGS WITH COMPRESSED AIR AND CHECK CAREFULLY TO INSURE THOROUGH CLEANING OF OBSCURE AREAS. CAUTION: DO NOT SOAK SOLENOIDS, SWITCHES, FLOAT, OR RUBBER PARTS IN SOLVENTS.

REASSEMBLY

USING ESSENTIALLY THE REVERSE ORDER OF DISASSEMBLY GIVING SPECIAL ATTENTION TO THE FOLLOWING SPECIAL INSTRUCTIONS.

SPECIAL INSTRUCTIONS

MAKE SURE ALL JET ORIFICES ARE CLEAN AND OPEN. CLEAN WITH COMPRESSED AIR. DO NOT USE WIRES TO CHECK FOR CLOGGED ORIFICES. WHEN INSTALLING THE PUMP DIAPHRAGM AND SPRING (43) MAKE SURE THE LARGER END OF SPRING IS PROPERLY SEATED IN THE CARBURETOR BODY CAVITY. BE SURE TO INSTALL THE DIAPHRAGM (42) WITH PLUNGER TOWARD PUMP COVER (41).

CHECK FOR A WORN SPOT (DEPRESSION) ON THE FLOAT LEVER WHERE IT MAKES CONTACT WITH THE FUEL INLET NEEDLE VALVE. REPLACE FLOAT ASSEMBLY, IF NECESSARY. FLOAT ASSEMBLY MAY BE PURCHASED AT LOCAL VW DEALER. P/N 113-129-391 RECTANGULAR SHAPED FLOAT (22).

PROPER NEEDLE SEAT GASKET MUST BE USED FOR SPECIFIC CARBURETOR. USE THE FOLLOWING CHART TO DETERMINE THE CORRECT GASKET.

CARBURETOR MODEL	THROTTLE BODY	CHOKE VALVE
30 PICT-2	1.0 MM	.040"
30 PICT-3	1.5 MM	COMBINE 1.0 AND 0.5 MM GASKETS
34 PICT-3	0.5 MM	.020"

CHECK THE THERMOSTATIC SPRING IN HOUSING (ITEM #4) FOR DAMAGE. IF IT IS DISTORTED OR "KINKED", REPLACE THE ASSEMBLY.

ALSO, MAKE SURE THE ELECTRICAL HEATING ELEMENT IS NOT BROKEN. THIS CAN BE CHECKED WITH AN OHMMETER OR CONNECTED TO A CORRECT VOLTAGE BATTERY FOR A FEW MINUTES TO SEE IF IT WARMS UP. (BE SURE TO GROUND THE INSIDE METAL PART OF THE HOUSING IN ORDER TO COMPLETE THE CIRCUIT.) WHEN INSTALLING ASSEMBLY WITH SPRING AND HEATER ELEMENT, CAREFULLY ROTATE ASSEMBLY COUNTERCLOCKWISE, BEING SURE THE HOOK ON COIL END ENGAGES WITH THE LEVER ON CHOKE SHAFT. CONTINUE ROTATING APPROXIMATELY 1/8-TURN MORE UNTIL INDEX MARKS ALIGN. THEN TIGHTEN SCREWS SECURELY.

INSTALLING

INSTALL IN REVERSE ORDER OF REMOVING.
TORQUE RETAINING NUTS TO 2.0 MKG. (14 FT. LB.)

IDLING ADJUSTMENT

- CHECK IF THE AUTOMATIC CHOKE IS FULLY OPEN.
- TURN IDLING CONTROL SCREW (SEE EXPLODED VIEW) OUT UNTIL THERE IS CLEARANCE BETWEEN SCREW AND FAST IDLE CAM.
- THEN TURN IDLING CONTROL SCREW IN UNTIL IT JUST TOUCHES THE FAST IDLE CAM.
- FROM THIRD POSITION, TURN SCREW IN FURTHER 1/4 OF A TURN.
- TURN VOLUME CONTROL SCREW (ITEM #35) IN SLOWLY UNTIL IT COMES TO A STOP, AND THEN TURN IT BACK 2.5 TO 3 COMPLETE TURNS.
- START ENGINE AND SET IDLE SPEED (900 RPM) BY TURNING THE BYPASS SCREW (ITEM #31).
- BY TURNING VOLUME CONTROL SCREW (ITEM #35), ADJUST TO THE HIGHEST IDLE SPEED, THEN TURN IN UNTIL THE ENGINE SPEED DROPS BY 20-30 RPM.
- RESET THE CORRECT IDLE SPEED BY TURNING THE BYPASS SCREW (ITEM #31).

(NOTE 30 PICT-2 USE PROCEDURE ON PAGE 2.)

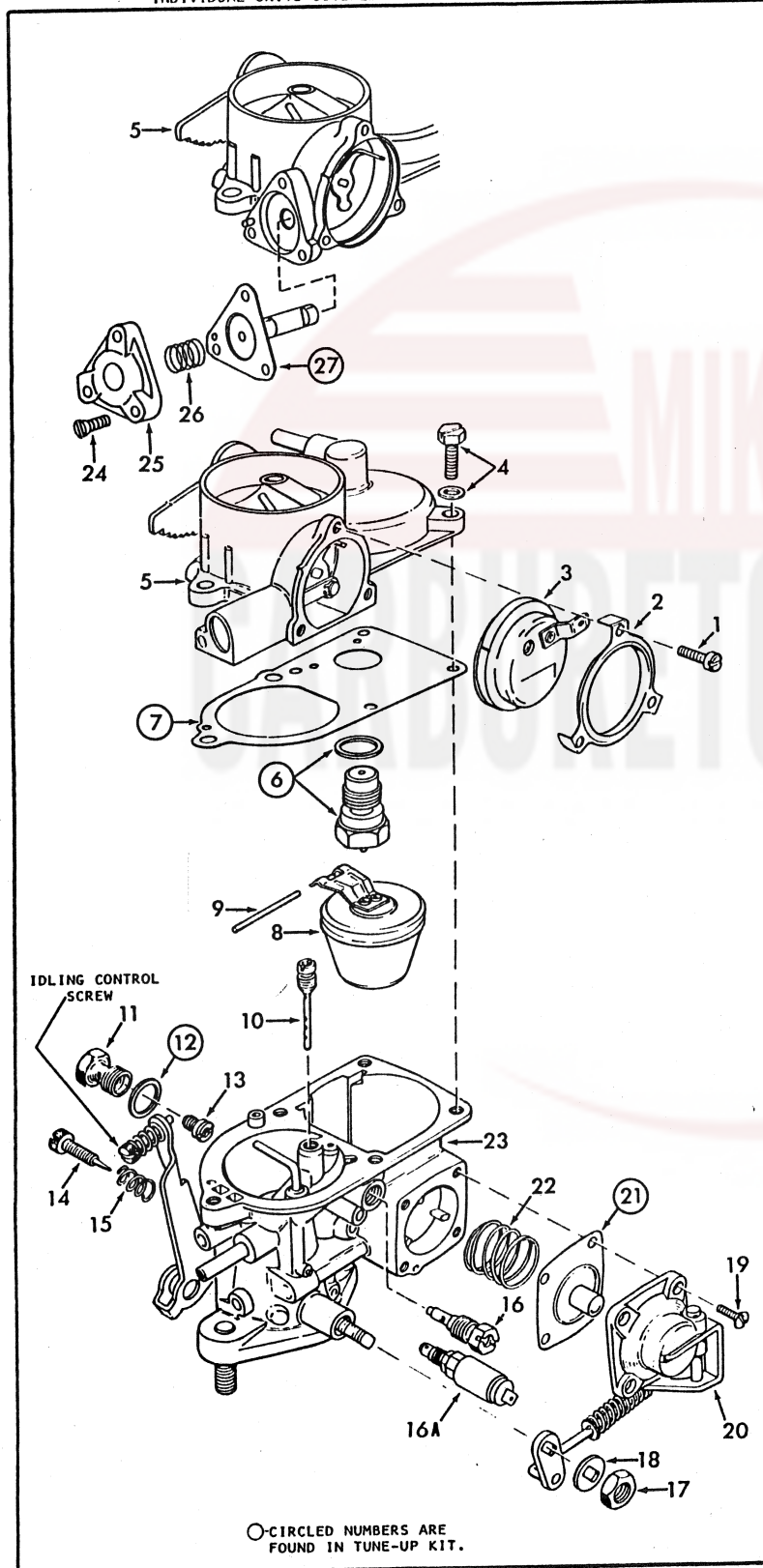
INSTRUCTION SHEET

SOLEX CARBURETOR — MODELS 28 PICT, -1, -2, 30 PICT-1

1961 TO 1967 TYPE 1, 1961 TO 1967 TYPE 2

GENERAL EXPLODED VIEW

THE GENERAL DESIGN AND PARTS SHOWN WILL VARY TO INDIVIDUAL UNITS COVERED ON THIS INSTRUCTION SHEET.



REMOVING

REMOVE OIL BATH AIR CLEANER. DETACH FUEL HOSE, VACUUM HOSE OF DASHPOT (WHERE APPLICABLE), AND VACUUM HOSE. DISCONNECT AUTOMATIC CHOKE CABLE, BYPASS AIR CUT-OFF VALVE CABLE (WHERE APPLICABLE), AND ELECTRO-MAGNETIC PILOT JET CABLE. DETACH ACCELERATOR CABLE AT THROTTLE VALVE LEVER. REMOVE TWO NUTS ON INTAKE MANIFOLD AND TAKE OFF CARBURETOR.

DISASSEMBLY

USE EXPLODED VIEW AS A GUIDE. THE NUMERICAL SEQUENCE MAY GENERALLY BE FOLLOWED TO DISASSEMBLE UNIT FAR ENOUGH TO PERMIT CLEANING AND INSPECTION. CAUTION: BRASS TUBE TYPE JETS ARE NOT REMOVABLE. WHEN NECESSARY TO REMOVE CHOKE SHAFT, BEFORE REMOVING VACUUM DIAPHRAGM (27) FILE OFF PEENED END OF CHOKE VALVE SCREWS FOR EASY REMOVAL. MARK LINKAGE RODS AND LEVERS SO THEY CAN BE RETURNED TO THE SAME POSITIONS.

NOMENCLATURE

REF. NO.	REF. NO.
1. SCREW (3) — RETAINING RING	15. SPRING — VOLUME CONTROL SCREW
2. RETAINING RING — COVER	16. JET — PILOT
3. COVER WITH SPRING AND HEATER ELEMENT	16A. VALVE — IDLING CUT — OFF 30 PICT — 1
4. SCREW & LOCKWASHER (5) — UPPER BODY	17. NUT — THROTTLE SHAFT LEVER
5. UPPER BODY ASSY.	18. WASHER — THROTTLE SHAFT LEVER
6. NEEDLE, SEAT & GASKET ASSY.	19. SCREW (4) — COVER
7. GASKET — CARBURETOR BODY	20. COVER — WITH LEVER & LINKAGE
8. FLOAT	21. DIAPHRAGM — PUMP
9. PIN — FLOAT LEVER	22. SPRING — PUMP DIAPHRAGM
10. JET — AIR CORRECTION	23. CARBURETOR MAIN BODY ASSY.
11. CARRIER — MAIN JET	24. SCREW (3) — COVER
12. GASKET — CARRIER	25. COVER — VACUUM DIAPHRAGM
13. JET — MAIN	26. SPRING — VACUUM DIAPHRAGM
14. SCREW — VOLUME CONTROL	27. VACUUM DIAPHRAGM — CHOKE

CLEANING

CLEANING MUST BE DONE WITH CARBURETOR DISASSEMBLED. SOAK PARTS LONG ENOUGH TO SOFTEN AND REMOVE ALL FOREIGN MATERIAL. USE A CARBURETOR CLEANING SOLVENT. MAKE CERTAIN THE THROTTLE BODY IS FREE OF ALL HARD CARBON DEPOSITS. WASH OFF IN SUITABLE SOLVENT. BLOW OUT ALL PASSAGES IN CASTINGS WITH COMPRESSED AIR AND CHECK CAREFULLY TO INSURE THOROUGH CLEANING OF OBSCURE AREAS. CAUTION: DO NOT SOAK SOLENOIDS, SWITCHES, FLOAT, OR RUBBER PARTS IN SOLVENTS.

REASSEMBLY

USING ESSENTIALLY THE REVERSE ORDER OF DISASSEMBLY GIVING SPECIAL ATTENTION TO THE FOLLOWING SPECIAL INSTRUCTIONS.

SPECIAL INSTRUCTIONS

MAKE SURE ALL JET ORIFICES ARE CLEAN AND OPEN. CLEAN WITH COMPRESSED AIR. DO NOT USE WIRES TO CHECK FOR CLOGGED ORIFICES.

WHEN INSTALLING THE PUMP DIAPHRAGM AND SPRING (22) MAKE SURE THE LARGER END OF SPRING IS PROPERLY SEATED IN THE CARBURETOR BODY CAVITY. BE SURE TO INSTALL THE DIAPHRAGM (21) WITH PLUNGER TOWARD PUMP COVER (20).

CHECK FOR A WORN SPOT (DEPRESSION) ON THE FLOAT LEVER WHERE IT MAKES CONTACT WITH THE FUEL INLET NEEDLE VALVE. REPLACE FLOAT ASSEMBLY, IF NECESSARY. FLOAT ASSEMBLY MAY BE PURCHASED AT LOCAL VW DEALER, P/N 111-129-391A-ROUND SHAPED FLOAT (8).

PROPER NEEDLE SEAT GASKET MUST BE USED FOR SPECIFIC CARBURETOR. USE THE FOLLOWING CHART TO DETERMINE THE CORRECT GASKET.

CARBURETOR MODEL		
28 PICT-1,2	1.0 MM	.040"
30 PICT-1	1.0 MM	.040"

CHECK THE THERMOSTATIC SPRING IN HOUSING (ITEM #3) FOR DAMAGE. IF IT IS DISTORTED OR "KINKED", REPLACE THE ASSEMBLY.

ALSO, MAKE SURE THE ELECTRICAL HEATING ELEMENT IS NOT BROKEN. THIS CAN BE CHECKED WITH AN OHMMETER OR CONNECTED TO A CORRECT VOLTAGE BATTERY FOR A FEW MINUTES TO SEE IF IT WARMS UP. (BE SURE TO GROUND THE INSIDE METAL PART OF THE HOUSING IN ORDER TO COMPLETE THE CIRCUIT.) WHEN INSTALLING ASSEMBLY WITH SPRING AND HEATER ELEMENT, CAREFULLY ROTATE ASSEMBLY COUNTERCLOCKWISE, BEING SURE THE HOOK ON COIL END ENGAGES WITH THE LEVER ON CHOKE SHAFT. CONTINUE ROTATING APPROXIMATELY 1/8-TURN MORE UNTIL INDEX MARKS ALIGN. THEN TIGHTEN SCREWS SECURELY.

INSTALLING

INSTALL IN REVERSE ORDER OF REMOVING.
TORQUE RETAINING NUTS TO 2.0 MKG. (14 FT LB.)
IDLING ADJUSTMENT

28 PICT, -1, -2. 30 PICT-1, -2.

- WARM UP ENGINE; CHECK IF THE AUTOMATIC CHOKE IS FULLY OPEN.
- SET IDLING SPEED TO 850 RPM WITH THE IDLING CONTROL SCREW. (SEE EXPLODED VIEW)
- TURN VOLUME CONTROL SCREW (ITEM #14) TO RIGHT UNTIL SPEED STARTS TO DROP.
- FROM THIS POSITION, TURN VOLUME CONTROL SCREW (ITEM #14) TO THE LEFT UNTIL ENGINE RUNS FASTEST.
- IF NECESSARY, REGULATE THE ENGINE SPEED (800-900 RPM) AGAIN, WITH THE IDLING CONTROL SCREW.