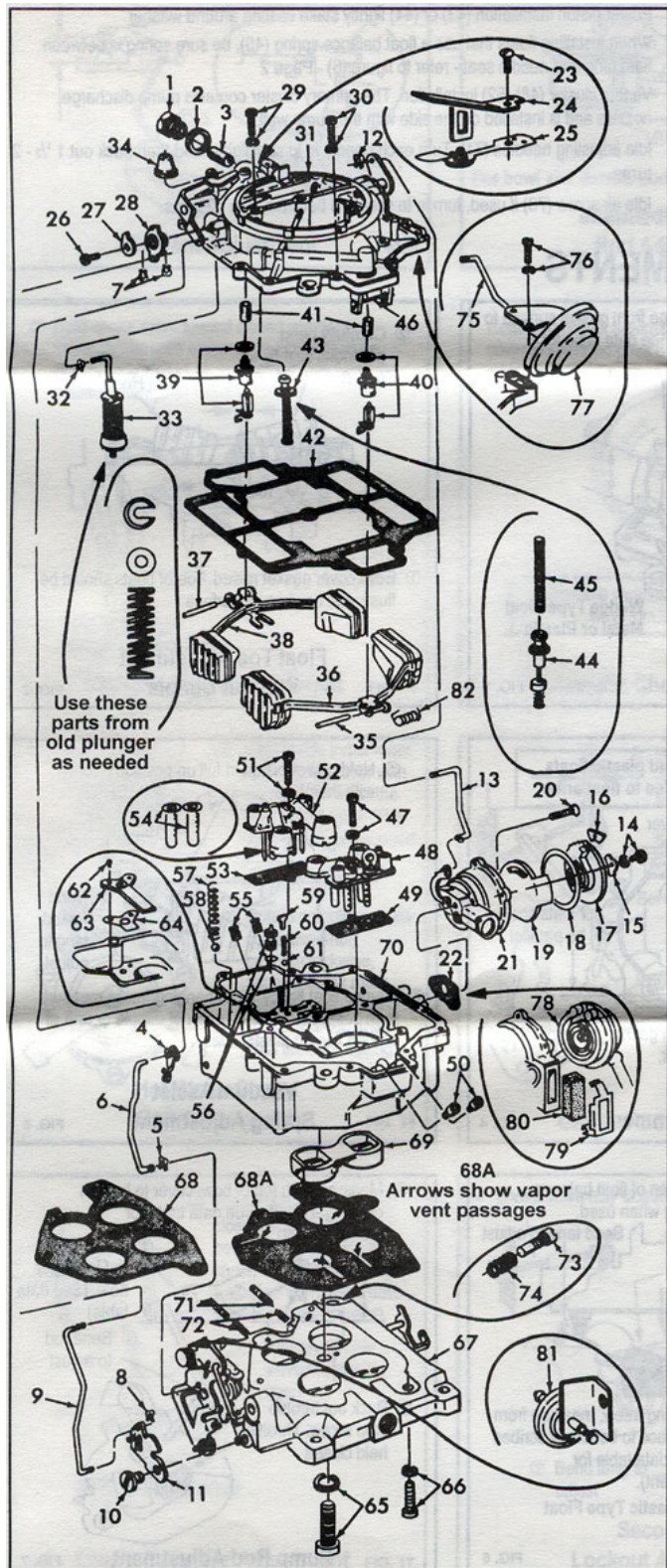


INSTRUCTION SHEET

Rochester Carburetor – Models 4G – 4GC

General Exploded View

The general design and parts shown will vary to individual units covered on this instruction sheet.



Disassembly

Use the exploded view as a guide. The numerical sequence may generally be followed to disassemble unit far enough to permit cleaning and inspection. Note: Bowl cover mounted automatic choke models usually only require removal of stat cover or vacuum unit. Caution: If choke shaft requires removal, choke valve screw are staked over, and staking must be filed off before screws are turned. Hot water type stat covers should not be disassembled unless parts are being replaced, and should not be immersed in cleaner or solvent. Remove staking from bowl cover for easy removal of power piston assembly (43) or (44). When removing floats (36) and (38), mark each one as to the side it belongs to. Note: (Primary side has pump circuit and choke valve). If main metering jets (50) and (55) are removed, note size number stamped on jets and from which bowl they are removed. The jets must be installed in pairs.

Cleaning

Cleaning must be done with carburetor disassembled. Soak parts long enough to soften and remove all foreign material. Use a carburetor cleaning solvent, lacquer thinner or denatured alcohol. Make certain the throttle body is free of all hard carbon deposits. Rinse off in suitable solvent. Blow out all passages in casting with compressed air and check carefully to insure thorough cleaning of obscure areas.

Caution: Do not soak rubber, leather or plastic parts in solvent.

NOTE: (78), (79) and (80) Water heated type choke stat cover may be removed from carburetor on engine to eliminate draining of coolant. (Leave water hoses connected).

Reassembly

Reassemble in reverse order of disassembly. Note special instructions and follow numerical outline in making adjustments. See other side.

Special Instructions

Plunger (33). Remove paper sleeve from leather cup if used. Flex leather outward slightly. Soak cup in gasoline, kerosene or oil for a few minutes prior to placing in carburetor.

Needle and seat selection where two part numbers are supplied – Use assembly with larger hole on the primary side.

Needle and seat gasket selection – refer to figure (1) – Page 2
Power piston installation (43) or (44) lightly stake casting around washer

When installing floats that use a float balance spring (46), be sure spring is between float tang and needle seat – refer to figure (6) – Page 2

Venturi cluster (48) (52) installation. The primary cluster contains pump discharge nozzles and is installed on the side with the pump well.

Idle adjusting needles (71). Turn each needle in to seat lightly and then back out 1 ½ - 2 turns.

Idle air screw (73) if used, turn into seat and back out 1 ½ - 2 turns.

Nomenclature

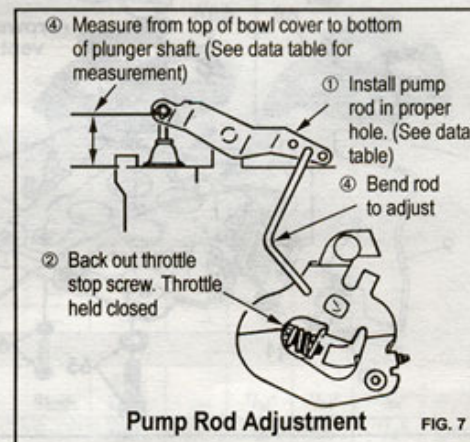
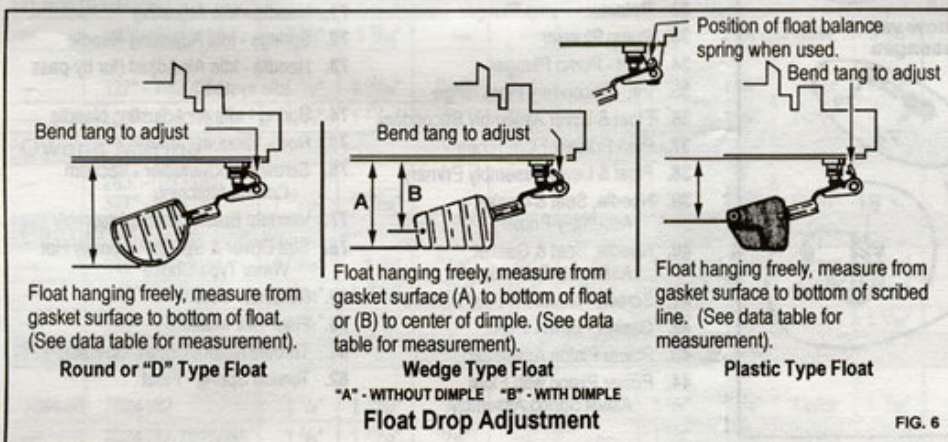
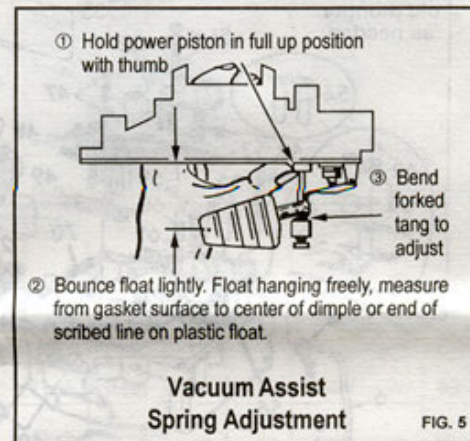
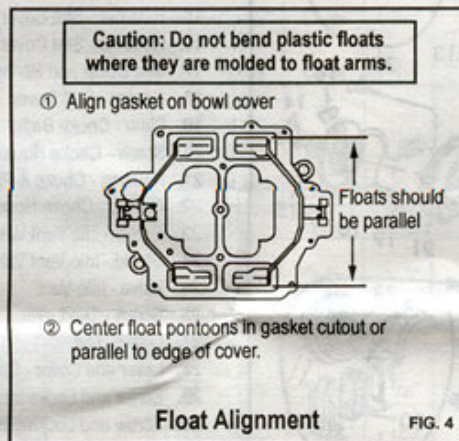
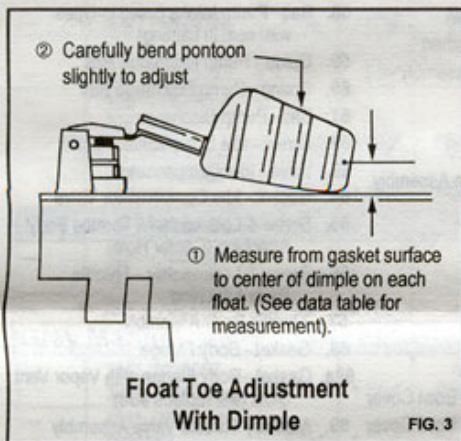
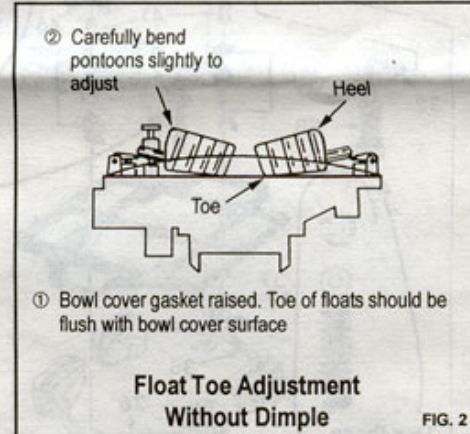
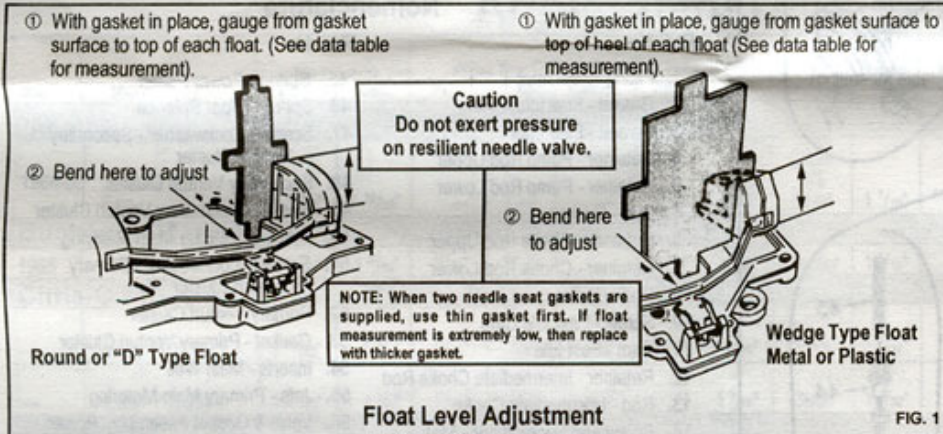
Ref.No.

1. Fitting – Fuel Inlet
2. Gasket – Fuel Inlet Fitting
3. Screen – Fuel Inlet
4. Retainer – Pump Rod Upper
5. Retainer – Pump Rod Lower
6. Rod – Pump
7. Retainer – Choke Rod Upper
8. Retainer – Choke Rod Lower
9. Rod – Choke
10. Screw – Fast Idle Cam
11. Cam – Fast Idle
12. Retainer – Intermediate Choke Rod
13. Rod – Intermediate Choke
14. Screw and Lockwasher – Stat Retainer
15. Retainer – Stat Cover Plain
16. Retainer – Stat Cover Toothed
17. Stat Cover and Spring Assembly
18. Gasket – Stat Cover
19. Plate – Choke Baffle
20. Screw – Choke Housing
21. Housing – Choke & Piston Assembly
22. Gasket – Choke Housing
23. Screw – Idle Vent Valve
24. Shield – Idle Vent Valve
25. Valve – Idle Vent
26. Screw – Trip Lever
27. Lever – Trip
28. Lever and Collar – Choke
29. Screw and Lockwasher – Bowl Cover
30. Screw and Lockwasher – Bowl Cover
31. Bowl Cover Assembly
32. Retainer – Pump Plunger
33. Pump Plunger
34. Boot – Pump Plunger
35. Pin – Secondary Float Hinge
36. Float & Lever Assembly Secondary
37. Pin – Primary Float Hinge
38. Float & Lever Assembly Primary
39. Needle, Seat & Gasket Assembly Primary
40. Needle, Seat & Gasket Assembly Secondary
41. Screen – Needle & Seat Strainer
42. Gasket – Bowl Cover
43. Power Piston Assembly
44. Power Piston with Float Assist Spring Assembly

Ref.No.

45. Spring – Power Piston
46. Spring – Float Balance
47. Screw & Lockwasher – Secondary Venturi Cluster
48. Secondary Venturi Cluster
49. Gasket – Secondary Venturi Cluster
50. Jets – Secondary Main Metering
51. Screw & Lockwasher – Primary Venturi Cluster
52. Primary Venturi Cluster
53. Gasket – Primary Venturi Cluster
54. Inserts – Main Well
55. Jets – Primary Main Metering
56. Valve & Gasket Assembly – Power
57. Spring – Pump Return
58. Ball – Pump Intake (used in types with seat in casting)
59. Guide – Pump Discharge Ball
60. Spring – Pump Discharge Ball
61. Ball – Pump Discharge
62. Screw – Idle Compensator Valve
63. Valve – Idle Compensator
64. Gasket – Idle Compensator Valve
65. Screw & Lockwasher – Throttle Body Attaching (Center Hole)
66. Screw & Lockwasher – Throttle Body Attaching
67. Throttle Body Assembly
68. Gasket – Body Flange
- 68a. Gasket – Body Flange with Vapor Vent Slots (will replace #68)
69. Auxiliary Throttle Valve Assembly
70. Bowl Assembly – Float
71. Needle – Idle Adjusting
72. Springs – Idle Adjusting Needle
73. Needle – Idle Air Adjust (for by-pass idle system)
74. Spring – Idle Air Adjusting Needle
75. Rod – Vacuum Control
76. Screw & Lockwasher – Vacuum Control Attaching
77. Vacuum Break Control Assembly
78. Stat Cover & Spring Assembly Hot Water Type Choke
79. Retainer – Filter
80. Filter – Air Intake
81. Throttle Return Check Assembly
82. Torsion Spring – Float

ADJUSTMENTS



ADJUSTMENTS (Cont.)

NOTE: Older models adjust tang that contacts valve under pump lever

- Measure from top of bowl cover to bottom of plunger shaft. (See data table for measurement)
- Bend tang to adjust
- Open throttle valve until vent valve just closes

Idle Vent Adjustment

FIG. 8

- Choke valve held closed
- End of choke piston should be flush with end of piston sleeve
- Bend rod to adjust

For bowl and throttle body mounted choke housing

Intermediate Choke Rod Adjustment

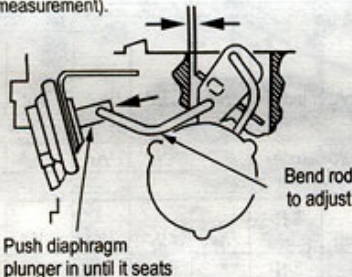
FIG. 9

- Choke valve fully closed
- Place fast idle screw on high step of cam
- Raise the intermediate choke lever to its full up position. All lash removed from rods in slots
- Choke piston should be flush with end of bore
- Bend rod to adjust

Intermediate Choke Adjustment

FIG. 10

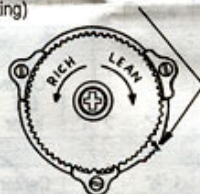
- Hold choke valve toward closed position, measure between upper edge of choke valve and dividing wall of air horn. (See data table for measurement).



Vacuum Break Adjustment

FIG. 11

Rotate stat cover against spring tension, set mark on cover to specified point on choke housing. (See data table for setting)

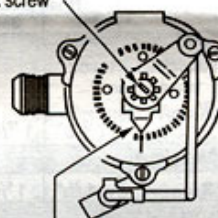


Allowable variations, 2 notches either way from initial setting.

Automatic Choke Adjustment

FIG. 12

- Hold throttle valves closed loosen center lock screw



- Rotate pointer counterclockwise until the index pointer lines up with proper index mark on choke cover. (See data table for setting) Tighten center lock screw

Choke Modifier Adjustment

FIG. 13

- Align inside index mark on the inner cover with the index point on the outer cover. Note: This adjustment only needed if unit has been disassembled.
- Rotate complete choke cover assembly counterclockwise, aligning index mark with specified point on choke housing. (See data table for setting.)

Hot Water Choke Coil Adjustment

FIG. 14

- Hold choke valve toward closed position, measure between upper edge of choke valve and dividing wall of air horn. (See data table for measurement).
- Bend rod to adjust
- Turn idle stop screw in until it just touches low step of fast idle cam, then turn in one more turn. Place screw on second step of cam next to shoulder of high step.

Choke Rod Adjustment

FIG. 15

- Measure between upper edge of choke valve and dividing wall. (See data table for measurement).

- Push intermediate choke lever upward until both rods are against end of slot
- Bend rod to adjust
- Turn idle stop screw in until it just touches low step of fast idle cam, then turn in one more turn. Place screw on second step of cam next to shoulder of high step.

Choke Rod Adjustment

FIG. 16

- Hold choke valve toward closed position, measure between upper edge of choke valve and dividing wall of air horn. (See data table for measurement).
- Primary throttle valves held wide open
- Bend tang to adjust

Choke Unloader Adjustment

FIG. 17

- Choke valve fully closed
- Measure between lockout lever and fast idle cam. (See data table for measurement).
- Bend tang to adjust

Secondary Lockout Adjustment

FIG. 18

- Choke valve wide open
- Measure between lockout lever and fast idle cam. (See data table for measurement).
- Bend tang to adjust

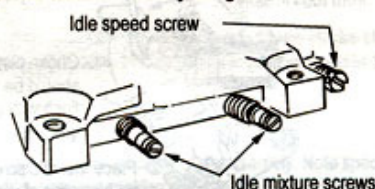
Secondary Contour Adjustment

FIG. 19

ADJUSTMENTS (Cont.)

Engine at operating temperature, choke fully open, adjust idle mixture screws in or out for a smooth idle and adjust idle stop screw for proper R.P.M. (See data table for R.P.M.)

Note: Where hot idle compensator is used, be sure it is held closed when adjusting idle.

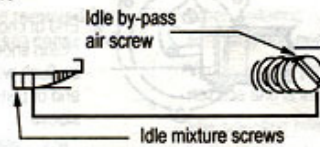


(First Type)
Slow Idle Adjustment

FIG. 20

Engine at operating temperature, choke fully open, throttle valves completely closed. Adjust idle mixture screws in or out for a smooth idle and adjust idle by-pass air screw for proper R.P.M. (See data table for R.P.M.)

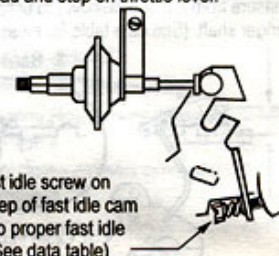
Note: Final adjustment is made with idle mixture screws



(Second Type)
Slow Idle Adjustment

FIG. 21

② With engine off and screw still on step of fast idle cam. Adjust set screw clearance between the screw head and stop on throttle lever.



① Place fast idle screw on proper step of fast idle cam and set to proper fast idle R.P.M. (See data table)

(Dash Pot) Throttle
Return Check Adjustment

FIG. 22

Adjustment Data Table

Year	Model	Float Level		Float Toe		Vac. Assist.	Float Drop		Pump Rod Location	Pump Rod	Idle Vent	Interm. Choke Rod	Auto Choke Setting	Choke Rod	Un-Loader	Sec. Lock-Out	Sec. Contour	Slow Idle R.P.M.
		Pri.	Sec.	Pri.	Sec.		Pri.	Sec.										
Acadia																		
1964-65	283"-327" Eng.	1 17/32"	1 19/32"	—	—	—	2 1/4"	2 1/4"	Outer S/T Inner	1 1/16"	3 1/32"	Flush	Index	1/16"	1/4"	1/64"	1/64"	500
Buchanan Marine																		
1965	7025083	1 3/8"	1 5/16"	11/16"	9/16"	—	1 7/8"	1 7/8"	Center	1 1/16"	—	Flush	Index	1/16"	1/8"	1/64"	1/32"	—
Chris-Craft																		
—	Early - 7013071	1 15/32"	1 3/8"	11/16"	3/8"	1 1/16"	1 1/2"	1 5/16"	Outer	1 1/32"	—	Flush	3-N-Lean	3/64"	1/8"	1/64"	1/8"	500
—	Late - 7015090	1 15/32"	1 1/2"	11/16"	5/8"	1 1/16"	1 1/2"	1 5/16"	Outer	1 1/32"	—	Flush	3-N-Lean	3/64"	1/8"	1/64"	1/8"	500
Crusader																		
—	409" - 7020084	1 5/16"	1 3/8"	1/2"	3/8"	—	1 11/32"	1 1/8"	Outer	1 1/32"	—	Flush	3-N-Lean	3/64"	1/8"	1/64"	1/8"	550
—	327" - 7020085	1 15/32"	1 3/8"	11/16"	3/8"	1 1/16"	1 1/2"	1 1/8"	Outer	1 1/32"	—	Flush	3-N-Lean	3/64"	1/8"	1/64"	1/8"	550
—	409" - 7023084 327" - 7023085- 7023089	1 3/8"	1 11/32"	11/16"	9/16"	—	1 3/8"	1 3/8"	Outer	1 1/32"	—	Flush	3-N-Lean	3/64"	1/8"	1/64"	1/8"	550
—	327" - 7023085- 7023089	1 3/8"	1 11/32"	11/16"	9/16"	—	1 3/8"	1 3/8"	Outer	1 1/32"	—	Flush	3-N-Lean	3/64"	1/8"	1/64"	1/8"	550
Daytona Marine																		
—	327" - 7023181 409" - 7023088	1 3/8"	1 11/32"	11/16"	9/16"	—	1 3/8"	1 3/8"	Outer	1"	—	—	—	—	—	—	—	650
—	283" - 7023187	1 17/32"	1 19/32"	—	—	—	2 1/4"	2 1/4"	Center	1 1/16"	—	—	—	—	—	—	—	650
Gray Marine																		
—	215" - 7020087 327" - 7024086	1 3/8"	1 11/32"	11/16"	9/16"	—	1 3/8"	1 3/8"	Outer	1 1/32"	—	Flush	Index	—	—	—	—	650
—	401" - 7020991- 7024182	1 3/8"	1 11/32"	11/16"	9/16"	—	1 3/8"	1 3/8"	Outer	1 1/32"	—	Flush	Index	—	—	—	—	650
Kiekhaefer																		
—	283" - 7023180	1 1/2"	1 9/16"	—	—	—	2 1/4"	2 1/4"	Outer	1 3/32"	—	Flush	Index	—	15/64"	1/64"	1/64"	550
—	327" - 7020995	1 3/8"	1 11/32"	11/16"	9/16"	—	1 3/8"	1 3/8"	Outer	1 1/32"	—	Flush	3-N-Lean	—	1/8"	1/64"	7/64"	550
—	409" - 7023183	1 3/8"	1 11/32"	11/16"	9/16"	—	1 3/8"	1 3/8"	Outer	1 1/16"	—	Flush	Index	—	1/8"	1/64"	1/32"	550
Owens Marine																		
—	283" - 7023185 327" - 7023184	1 17/32"	1 19/32"	—	—	—	2 1/4"	2 1/4"	Outer	1 1/32"	—	Flush	Index	1/16"	15/64"	1/64"	1/64"	650
Palmer Marine																		
—	345" - 7015091	1 15/32"	1 1/2"	11/16"	3/8"	1 1/16"	1 1/2"	1 5/16"	Center	1 1/32"	—	—	—	—	—	—	—	600
—	345" - 7019084	1 13/32"	1 15/32"	5/8"	9/16"	29/32"	1 1/2"	1 5/16"	Center	1 1/16"	—	—	—	—	—	—	—	600
—	549" - 7024084	1 3/8"	1 3/8"	11/16"	11/16"	—	1 3/8"	1 3/8"	Center	1 1/32"	—	—	—	—	—	—	—	600
Revley Corp																		
1964-66	7024182	1 3/8"	1 11/32"	11/16"	9/16"	—	1 3/8"	1 3/8"	Outer	1 1/32"	—	Flush	3-N-Lean	—	7/64"	1/64"	7/64"	650
—	7024187-7025085	1 3/8"	1 11/32"	11/16"	9/16"	—	1 3/8"	1 3/8"	Center	1 1/32"	—	Flush	Index	3/64"	1/8"	1/64"	1/32"	500