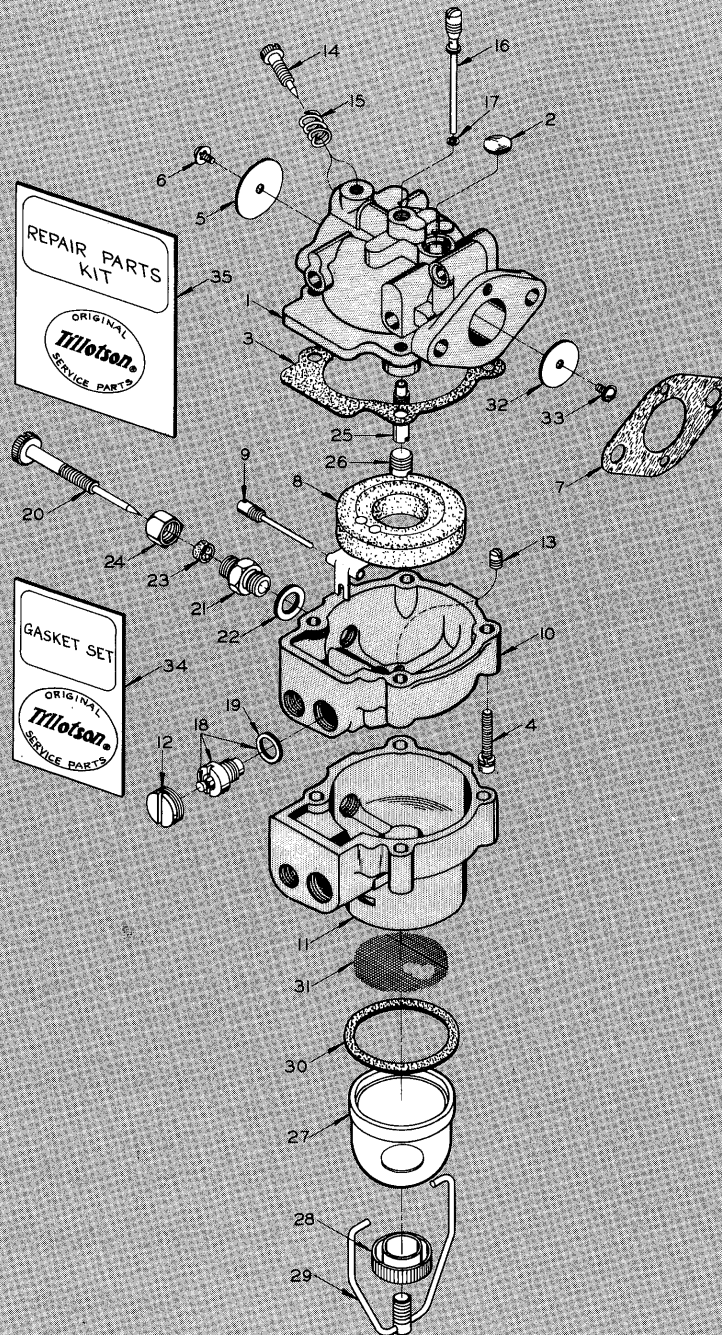




# MD Series PARTS LIST SECTION

## CARBURETORS

### HORIZONTAL FLANGE BASIC DRAWING



PARTS ILLUSTRATED ARE  
TYPICAL IN APPEARANCE, AND  
MAY NOT LOOK EXACTLY LIKE  
THE PART REQUIRED

PRINTED IN U.S.A.

REF. NO.	PART NAME
1	Body (Service)
2	Body Channel Welch Plug
3	Body Gasket
4	Body Retaining Screw & Lockwasher (4)
5	Choke Shutter
6	Choke Shutter Screw
7	Flange Gasket
8	Float
9	Float Lever Pinion Screw
10	Fuel Bowl
11	Fuel Bowl w/Strainer
12	Fuel Bowl Plug Screw (Large)
13	Fuel Bowl Plug Screw (Small)
14	Idle Adjustment Screw
15	Idle Adjustment Screw Spring
16	Idle Tube
17	Idle Tube Gasket
18	Inlet Needle, Seat & Gasket
19	Inlet Seat Gasket
20	Main Adjustment Screw
21	Main Adjustment Screw Gland
22	Main Adjustment Screw Gland Gasket
23	Main Adjustment Screw Packing
24	Main Adjustment Screw Packing Nut
25	Main Nozzle
26	Main Nozzle Channel Plug Screw
27	Strainer Bowl
28	Strainer Bowl Cup & Thumb Nut
29	Strainer Bowl Clamp Wire & Stud
30	Strainer Bowl Gasket
31	Strainer Bowl Screen
32	Throttle Shutter
33	Throttle Shutter Screw
34	Gasket & Packing Set
35	Repair Parts Kit

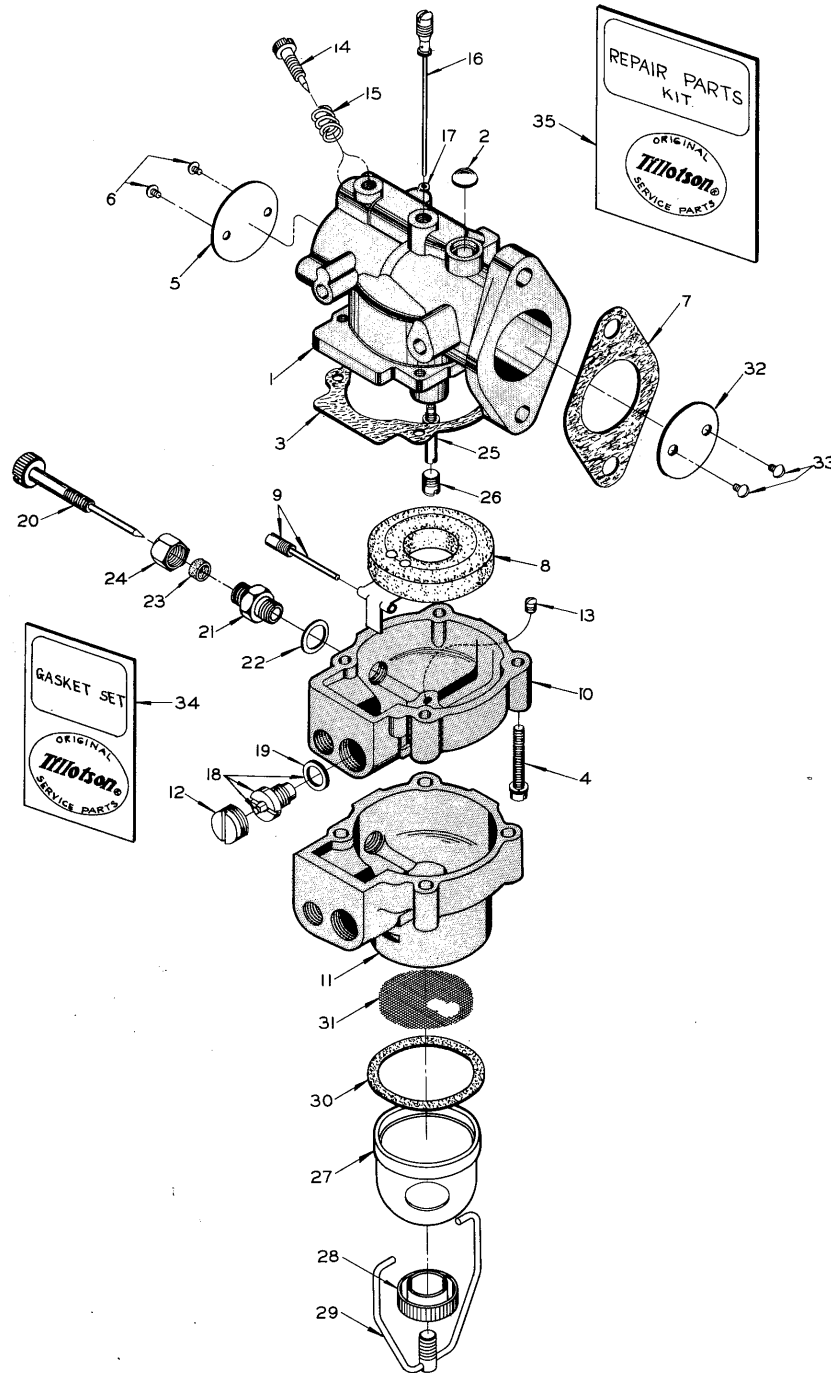
**TILLOTSON MANUFACTURING CO.**  
PARTS AND SERVICE DIVISION  
TOLEDO 12, OHIO

REV. 8/62

MD Page 1



## VERTICAL FLANGE BASIC DRAWING

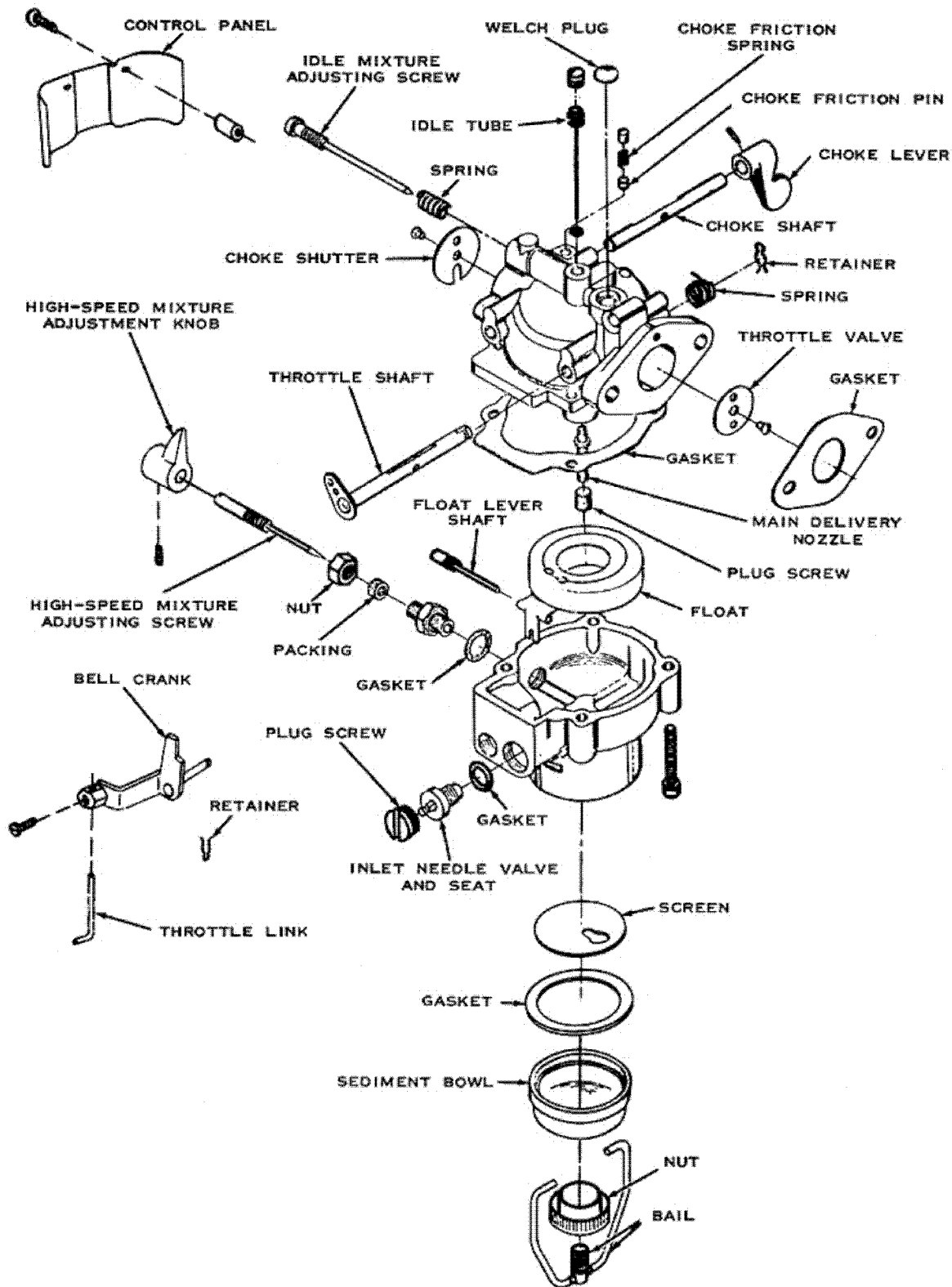


REF. NO.	PART NAME
1	Body (Service)
2	Body Channel Welch Plug
3	Body Gasket
4	Body Retaining Screw & Lockwasher (4)
5	Choke Shutter
6	Choke Shutter Screw (2)
7	Flange Gasket
8	Float
9	Float Lever Pinion Screw
10	Fuel Bowl
11	Fuel Bowl w/Strainer
12	Fuel Bowl Plug Screw (Large)
13	Fuel Bowl Plug Screw (Small)
14	Idle Adjustment Screw
15	Idle Adjustment Screw Spring
16	Idle Tube
17	Idle Tube Gasket
18	Inlet Needle, Seat & Gasket
19	Inlet Seat Gasket
20	Main Adjustment Screw
21	Main Adjustment Screw Gland
22	Main Adjustment Screw Gland Gasket
23	Main Adjustment Screw Packing
24	Main Adjustment Screw Packing Nut
25	Main Nozzle
26	Main Nozzle Channel Plug Screw
27	Strainer Bowl
28	Strainer Bowl Cup & Thumb Nut
29	Strainer Bowl Clamp Wire & Stud
30	Strainer Bowl Gasket
31	Strainer Bowl Screen
32	Throttle Shutter
33	Throttle Shutter Screw (2)
34	Gasket & Packing Set
35	Repair Parts Kit

PARTS ILLUSTRATED ARE TYPICAL IN APPEARANCE, AND MAY NOT LOOK EXACTLY LIKE THE PART REQUIRED

# Tillotson Carburetor MD Parts

## 4-28 FUEL



Exploded drawing of the Tillotson MD, with major parts identified. The high speed adjusting screw **MUST** be removed before the carburetor bodies are separated to prevent damaging the screw, as explained in the text.

# ADJUSTMENT & SERVICE INSTRUCTIONS

**FLOAT SETTING:** To check correctly, separate Fuel Bowl Assembly from Upper Body Assembly and Gasket. Now with Fuel Bowl Assembly held in upside down position the then lowest point of float, at free end, should project  $1/64$ th of an inch below rim of fuel bowl. If resetting is required remove Float and slightly bend vertical Float Lever only to obtain proper measurement. When inspection indicates Fuel Level continues to rise beyond float setting point, remove Inlet Needle and Seat, clean their seating surfaces with a soft cloth. Place Inlet Needle in its seat and tap very lightly while turning Inlet Needle with thumb and forefinger several times to reseal. Reinstall, then if proper Fuel Level is not maintained, install new Inlet Needle and Seat Assembly. (DO NOT CHANGE FLOAT SETTING FROM MANUFACTURERS SPECIFICATIONS.)

## ADJUSTMENT INSTRUCTIONS

Before starting engine check for proper fuel mixture supply in tank, open Fuel Line Shut Off Valve and be certain air valve on Fuel Tank cap is open.

Separate manual carburetor adjustments are provided: Main Adjustment Screw controlling power range mixture and Idle Adjustment Screw governing idle mixture at closed throttle.

**INITIAL ADJUSTMENT:** Completely close Idle Adjustment Screw by turning in (clockwise) until seated (without forcing) then turn back in opposite direction about one full turn. Proceed in like manner with Main Adjustment Screw except open about one full turn after first being closed (if a numbered Main Adjustment Knob or Lever is being used open to number specified in

Engine Manual or "Rich" position indicated on panel). Now choke and start engine in usual manner and run until thoroughly warm.

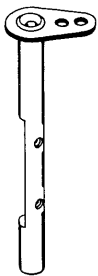
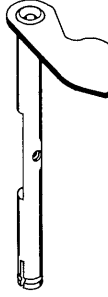
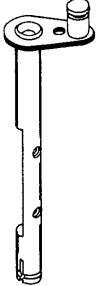
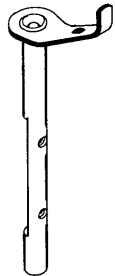
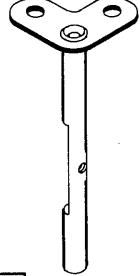
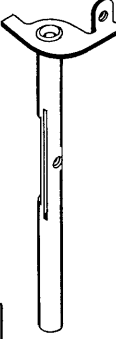
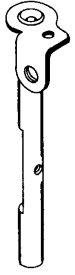
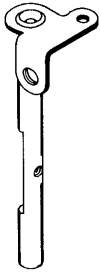
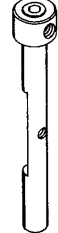
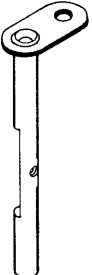
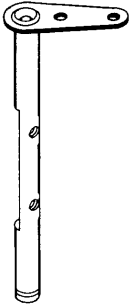
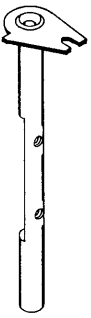
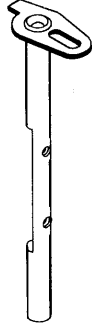
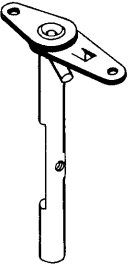
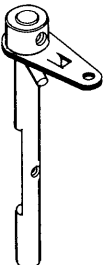
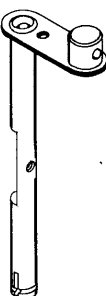
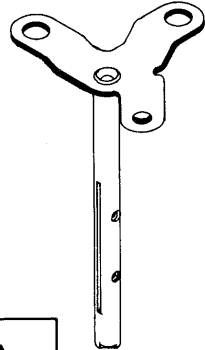
**POWER RANGE ADJUSTMENT:** With engine running at a constant speed of approximately one-half ( $1/2$ ) open throttle position, slowly turn Main Adjustment inward (clockwise) until motor begins to lose speed, then turn back in opposite direction (usually  $1/8$ th to  $1/4$ th of a turn) until maximum speed and power is obtained. Final setting should be approximately three-fourths to one ( $3/4-1$ ) turn open.

**IDLE MIXTURE ADJUSTMENT:** This adjustment should only be made AFTER the above mentioned power range adjustment has been completed. With engine idling at closed throttle position, slowly turn Idle Adjustment Screw inward (clockwise) until motor begins to lose speed and miss or flutter, then turn back in opposite direction (usually about  $1/8$ th of a turn) until engine functions smoothly and steadily. Final setting should be about one-half to three-fourths ( $1/2-3/4$ ) of a turn open.

**FINAL ADJUSTMENT:** Alternately open and close throttle a few times for adjustment test. If acceleration hesitancy or stalling at idle speed occurs, entire adjustment procedure outlined above, should be repeated. Preceding instructions cover Cold Motor start only. Warm Motor only requires opening of throttle and one or two vigorous pulls on starter rope without further carburetor adjustment. Regardless of altitude or climatic conditions a proper carburetor adjustment can be made by following the above rules - which eliminates jet changes.

# SPECIAL PARTS ILLUSTRATIONS

## SHAFT & LEVER ASSEMBLIES

 A1	 A2	 A3	 A4	 A5
 A6	 A7	 A8	 A9	 A10
 A11	 A12	 A13	 A14	 A15
 A16	 A17			



# SPECIAL PARTS ILLUSTRATIONS

## SHAFTS

B1	B2	B3	B4			

## LEVERS






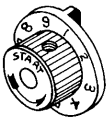


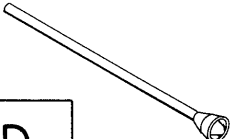












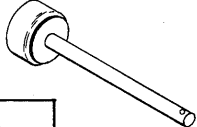

C1	C2	C3	C4	C5
C6	C7	C8	C9	C10
C11	C12	C13		

## MISCELLANEOUS PARTS





D1	D2	D3	D4	D5
D6	D7	D8	D9	D10

# SPECIAL PARTS ILLUSTRATIONS

## MISCELLANEOUS PARTS

 D11	 D12	 D13	 D14	 D15
 D16	 D17	 D18	 D19	 D20
 D21	 D22	 D23	 D24	 D25
 D26	 D27	 D28	 D29	 D30
 D31	 D32	 D33		

## SPRINGS

 E1	 E2	 E3	 E4	
---	---	---	---	--



**BASIC PARTS ILLUSTRATIONS:** See pages 1 and 2 for illustrations corresponding to reference numbers in list below.  
**SPECIAL PARTS ILLUSTRATIONS:** See pages 4, 5 and 6 for illustrations corresponding to reference letters in list below.

Carburetor Model	Year Built	Flange	Superseding Model	Equipment
MD-1A . . . . .	.1946-51 . . . . .	Horz. . . . .		West Bend
MD-2A . . . . .	.1946-51 . . . . .	Horz. . . . .		West Bend
MD-3A . . . . .	.1946-48 . . . . .	Horz. . . . .	MD-38A . . . . .	West Bend
MD-4A . . . . .	.1946-49 . . . . .	Horz. . . . .	MD-80A . . . . .	West Bend
MD-5B . . . . .	.1946-48 . . . . .	Horz. . . . .		Martin Motors
MD-6A . . . . .	.1946-56 . . . . .	Horz. . . . .		Power Products
MD-7A . . . . .	.1947-50 . . . . .	Horz. . . . .	MD-7B . . . . .	Chris-Craft
MD-7B . . . . .	.1950-53 . . . . .	Horz. . . . .		Chris-Craft

Ref.No.	Part Name	MD-1A	MD-2A	MD-3A	MD-4A	MD-5B	MD-6A	MD-7A	MD-7B
1	Body (Service) . . . . .	07927	07932	----	----	----	08169	08289	09237
2	*Body Channel Welch Plug . . . . .	02531	02531	02531	02531	02531	02531	02531	02531
3	Body Gasket . . . . .	07903	07903	07903	07903	07903	07903	07903	07903
4	Body Ret. Screw & Lkwshr.(4) . . . . .	08872	06062	06062	06062	06062	08872	06062	06062
D12	*Choke Friction Pin . . . . .	05454	05454	05454	05454	07923	05454	----	----
D2	*Choke Friction Pin Screw . . . . .	07912	07912	07912	07912	07912	07912	----	----
E3	*Choke Friction Pin Spring . . . . .	03860	03860	03860	03860	07925	03860	----	----
C2	Choke Lever . . . . .	05566	08089	08089	05566	----	05566	----	----
D8	Choke Lever Ret. Pin . . . . .	03208	----	----	03208	----	03208	----	----
D5	Choke Lever Ret. Screw . . . . .	----	06393	06393	----	----	----	----	----
D4	Choke Lever Ret. Screw Lkwshr..	----	06396	06396	----	----	----	----	----
B2	Choke Shaft . . . . .	07906	08088	08088	08090	----	07906	----	----
A2	Choke Shaft & Lever . . . . .	----	----	----	----	----	----	08282	08282
A15	Choke Shaft & Lever . . . . .	----	----	----	----	08002	----	----	----
E2	*Choke Shaft Return Spring . . . . .	----	----	----	----	----	----	07944	07944
D13	Choke Shaft Return Spg.Ret.Clip	----	----	----	----	----	----	08597	08597
5	Choke Shutter . . . . .	07908	03739	03739	03739	08010	07908	08285	08285
6	Choke Shutter Screw . . . . .	05430	05204	05204	05204	05430	05430	05204	05204
7	Flange Gasket . . . . .	05591	05591	05591	05591	05591	05591	05591	05591
8	Float . . . . .	07804	07804	07804	07804	07804	07804	07804	07804
9	*Float Pinion Screw . . . . .	07901	07901	07901	07901	07901	07901	07901	07901
10	Fuel Bowl . . . . .	08332	08332	08332	08332	08332	07929	07929	----
11	Fuel Bowl w/Strainer . . . . .	----	----	----	----	----	----	----	08500
12	Fuel Bowl Plug Screw (Large) . . . . .	07896	07896	07896	07896	07896	07896	07896	07896
13	*Fuel Bowl Plug Screw (Small) . . . . .	03311	03311	03311	03311	03311	03311	03311	----
14	*Idle Adj. Screw . . . . .	06910	06910	06910	06910	08403	06910	08339	08339
15	*Idle Adj. Screw Spring . . . . .	05725	05725	05725	05725	05725	05725	08736	08736
D7	*Idle Adj. Screw Washer . . . . .	----	----	----	----	----	----	06095	06095
16	*Idle Tube . . . . .	07899	07921	07921	07921	07938	07899	07899	07899
17	Idle Tube Gasket . . . . .	07900	07900	07900	07900	07900	07900	07900	07900
D9	*Inlet Connection Screen . . . . .	----	----	----	----	----	07283	07283	----
18	*Inlet Needle, Seat & Gasket . . . . .	07895	07895	07895	08018	08018	07895	07895	07895
19	Inlet Seat Gasket . . . . .	02510	02510	02510	02510	02510	02510	02510	02510
20	*Main Adj. Screw . . . . .	07905	07905	08263	07905	08404	08611	08288	08288
21	Main Adj. Screw Gland . . . . .	0702	0702	0702	0702	0702	0702	0702	0702
22	Main Adj. Screw Gland Gasket . . . . .	0676	0676	0676	0676	0676	0676	0676	0676
23	Main Adj. Screw Packing . . . . .	09112	09112	09112	09112	09112	09112	09112	09112
24	Main Adj. Screw Packing Nut . . . . .	0703	0703	0703	0703	0703	0703	0703	0703
D16	Main Adj. Screw Knob . . . . .	----	----	----	----	----	08612	----	----
D10	Main Adj. Screw Knob Set Screw . . . . .	----	----	----	----	----	06969	----	----
25	*Main Nozzle . . . . .	07911	07922	08081	07922	07922	07911	08279	08279
26	Main Nozzle Channel Plug Screw . . . . .	02395	02395	02395	02395	02395	02395	02395	02395
D25	Primer Pin . . . . .	----	----	----	----	07993	----	----	----
D26	Primer Pin Link . . . . .	----	----	----	----	07995	----	----	----
E3	*Primer Pin Return Spring . . . . .	----	----	----	----	07994	----	----	----
D7	*Primer Pin Washer . . . . .	----	----	----	----	03804	----	----	----
27	Strainer Bowl . . . . .	----	----	----	----	----	----	----	09229
28	Strainer Bowl Cup & Thumb Nut . . . . .	----	----	----	----	----	----	----	09231
29	Strainer Bowl Clamp Wire & Stud . . . . .	----	----	----	----	----	----	----	09234
30	Strainer Bowl Gasket . . . . .	----	----	----	----	----	----	----	08227
31	*Strainer Bowl Screen . . . . .	----	----	----	----	----	----	----	08574
B1	Throttle Shaft . . . . .	----	----	----	----	----	----	08283	08283
A1	Throttle Shaft & Lever . . . . .	07914	07914	07914	07914	08421	08166	----	----
E1	*Throttle Shaft Return Spring . . . . .	----	----	----	----	----	08165	----	----
E2	*Throttle Shaft Return Spring . . . . .	07910	07910	07910	07910	07910	----	07910	07910
D13	*Thro.Shaft Return Spg.Ret.Clip . . . . .	08597	08597	08597	08597	08597	----	08597	08597
32	Throttle Shutter . . . . .	07909	07961	07961	08011	08011	08170	08585	08585
33	*Throttle Shutter Screw . . . . .	05430	05204	05430	05430	05204	05430	06393	06393
D4	*Throttle Shutter Screw Lkwshr..	----	----	----	----	----	----	06396	06396
34	*Gasket & Packing Set . . . . .	GS-114	GS-114	GS-114	GS-114	GS-114	GS-114	GS-114	GS-115
35	Repair Parts Kit . . . . .	RK-284	RK-234	RK-235	RK-236	RK-283	RK-237	RK-289	RK-294

(\*) Indicates contents of Repair Parts Kit