

CHAPTER 5

FUEL SYSTEM / CARBURETION

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Whenever servicing the carburetor or fuel system, it is important to heed the following warnings.

⚠ WARNING

Gasoline is extremely flammable and explosive under certain conditions.

- ⚠ Always stop the engine and refuel outdoors or in a well ventilated area.
- ⚠ Do not smoke or allow open flames or sparks in or near the area where refueling is performed or where gasoline is stored or used.
- ⚠ Do not overfill the tank. Do not fill the tank neck.
- ⚠ If you get gasoline in your eyes or if you swallow gasoline, see your doctor immediately.
- ⚠ If you spill gasoline on your skin or clothing, immediately wash it off with soap and water and change clothing.
- ⚠ Never start the engine or let it run in an enclosed area. Gasoline powered engine exhaust fumes are poisonous and can cause loss of consciousness and death in a short time.

Jet Part Numbers

The following chart lists all Mikuni main and pilot jets and the part number of each that are presently available.

Mikuni

PILOT JET NO.	PART NO.
25	3130064
30	3130065
35	3130066
40	3130067
45	3130068

Mikuni

PILOT JET NO.	PART NO.
50	3130069
55	3130070
60	3130071
65	3130072

Keihin

PILOT JET	PART NO.
35	3050219-35
38	3050219-38
40	3050219-40
42	3050219-42
45	3050219-45
48	3050219-48

Keihin

PILOT JET	PART NO.
50	3050219-50
52	3050219-52
55	3050219-55
58	3050219-58
60	3050219-60
62	3050219-62
65	3050219-65

Mikuni

HEX HEAD

MAIN JET NO.	PART NO.
80	3130099
85	3130100
90	3130101
95	3130102
100	3130103
105	3130104
110	3130105
115	3130106
120	3130107
125	3130108
130	3130109
135	3130110
140	3130111
145	3130112
150	3130113
155	3130114
160	3130115
165	3130116
170	3130117
175	3130118
180	3130119
185	3130120
190	3130121
195	3130122
200	3130123
210	3130124
220	3130125
230	3130126
240	3130127

Mikuni

HEX HEAD

MAIN JET NO.	PART NO.
250	3130128
260	3130129
270	3130130
280	3130131
290	3130132
300	3130133
310	3130134
320	3130135
330	3130136
340	3130137
350	3130138
360	3130139
370	3130290
380	3130140
390	3130480
400	3130141
410	3130599
420	3130142
430	3130143
440	3130144
450	3130145
460	3130146
470	3130147
490	3130148
500	3130149
530	3130150
560	3130151
590	3130152
620	3130153

Keihin

Long Hex Head (Amal Type)

MAIN JET NO.	PART NO.
140	3050235-140
142	3050235-142
145	3050235-145
148	3050235-148
150	3050235-150
152	3050235-152
155	3050235-155
158	3050235-158
160	3050235-160
162	3050235-162
165	3050235-165
168	3050235-168
170	3050235-170
172	3050235-172
176	3050235-176
178	3050235-178
180	3050235-180
182	3050235-182
185	3050235-185
188	3050235-188
190	3050235-190
192	3050235-192
195	3050235-195
198	3050235-198
200	3050235-200
205	3050235-205
210	3050235-210
215	3050235-215
220	3050235-220

FUEL SYSTEM/CARBURETION

Jet Part Numbers

Jet Needle Part Numbers (Mikuni)

<u>JET NEEDLE NO.</u>	<u>PART NO.</u>
5DP7	3130155
5DT49	3130154
5DP10	3130333
5DP10	3130310
5DT2	3130473
5D78	3130667
5F81	3130528
5D78	3130667
6CEY6	3130476
6CGY3	3130484
6CGY6	3130652
6DH3	3130470

<u>JET NEEDLE NO.</u>	<u>PART NO.</u>
6DH4	3130402
6DH5	3130391
6DH7	3130329
6DH8	3130645
6DH29	3130462
6DP1	3130156
6DP17	3130374
6EJ26	3130423
6EJ3	3130680
6F4	3130319
6F9	3130378

Jet Needle Part Numbers (Keihin)

<u>JET NEEDLE NO.</u>	<u>PART NO.</u>
R-1368G	3050244
R-1370G	3050220
R-1371G	3050256
R-1372J	3050247

<u>JET NEEDLE NO.</u>	<u>PART NO.</u>
R-1369G	3050245
R-1370J	3050221
R-1371J	3050246

Needle Jet Part Numbers (Mikuni)

<u>NEEDLE JET NO.</u>	<u>PART NO.</u>
P-4 (159)	3130162
P-2 (166)	3130460
P-4 (166)	3130348
P-4 (166)	3130499
P-6 (166)	3130160
P-8 (166)	3130421
Q-2 (166)	3130376
O-4 (169)	3130166
O-4 (169)	3130409
O-6 (169)	3130358
O-6 (169)	3130469
O-8 (169)	3130453
O-8 (171)	3130035
P-0 (225)	3130579
P-2 (255)	3130608
P-2 (259)	3130161
P-0 (247)	3130671
P-2 (247)	3130672
P-4 (247)	3130641

<u>NEEDLE JET NO.</u>	<u>PART NO.</u>
P-6 (247)	3130655
P-8 (247)	3130382
Q-0 (247)	3130414
Q-2 (247)	3130165
Q-4 (247)	3130603
Q-8 (247)	3130485
R-0 (247)	3130477
P-0 (286)	3130607
P-2 (286)	3130608
O-4 (286)	3130635
O-6 (480)	3130429
O-8 (480)	3130683
P-2 (480)	3130675
P-4 (480)	3130639
Q-6 (480)	3130618
P-8 (513)	3130510

Throttle Valve Part Numbers (Keihin)

<u>Throttle Valve No.</u>	<u>PART NO.</u>
3.0	3050234-B02
4.0	3050234-C02
5.0	3050234-D02
5.5	3050234-J02
6.0	3050234-E02
6.5	3050234-K02
7.0	3050234-F02
7.5	3050234-L02
8.0	3050234-G02
9.0	3050234-H02

FUEL SYSTEM/CARBURETION

1996 Condensed Data

Machine Model	Engine Model	Cyl. Disp. CCs	Carburetor Model, Mount Type & No.	Std. Main Jet & Type	Std. Pilot Jet	Air Screw Adjust (counterclockwise from light seat)	Fuel Octane Reqmt.
Indy Lite/GT/Deluxe	EC34-2PM(E)02	339	VM30SS (2) Zinc	145 Hex	35	1 1/2 Turn	87*
Indy Sport/Sport Touring/TranSport	EC44-3PM01	432	VM34SS (2) Zinc	180 Hex	35	1 1/4 Turn	87*
Indy Super Sport	EC44-3PM02	432	VM34SS (2) Zinc	180 Hex	35	1 1/4 Turn	87*
Indy 440 LC	EC45PL06	432	VM34SS (2) Zinc	260 Hex	40	1 1/2 Turn	87*
Indy 440 XCR	EC45PL07	439	VM34SS (2) Aluminum	260 Hex	50	1 Turn	91
Indy 440 XCR SP	EC45PL08	439	VM34SS (2) Aluminum	260 Hex	50	1 Turn	91
Indy Trail/Touring	EC50PM(E)04	488	VM34SS (2) Zinc	220 Hex	35	1 Turn	87*
Indy Classic	EC50PLE11	488	VM38SS (2) Aluminum	340 Hex	40	1 Turn	87*
Indy Classic Touring	EC50PL14	488	VM34SS (2) Zinc	240 Hex	40	3/4 Turn	87*
Indy WideTrak GT	EC50PM03	488	VM34SS (2) Zinc	200 Hex	30	1 Turn	87*
Indy WideTrak LX	EC50PL12	488	VM34SS (2) Zinc	190 Hex	35	3/4 Turn	87*
Indy 500/SKS	EC50PL11	488	VM38SS (2) Aluminum	340 Hex	40	1 Turn	87*
Indy 500 RMK	EC50PL15	488	VM38SS (2) Aluminum	240 Hex	45	1 Turn	87*
Indy XLT/SKS	EC58PL03	597	VM34SS (3) Zinc	210 Hex	35	1 Turn	87*
Indy XLT Touring	EC58PLE05	597	VM34SS (3) Zinc	250 Hex	35	1 Turn	87*
Indy XLT RMK w/ACCS	EC58PL07	597	VM34SS (3) Zinc	190 Hex	35	N/A (see page 5.32)	87*
Indy XLT SP/600 XCR	EC58PL02	597	VM38AL (3) Aluminum	260 Hex	35	1 Turn	91
Indy 600 XCR SP	EC59PL01	598	VM38SS (3) Aluminum	400 Hex	40	1 1/2 Turn	91
Indy Ultra SP/SKS	EC68PL01	679	VM38AL (3) Aluminum	340 Hex	50	1 Turn	87*
Indy Ultra RMK	EC68PL04	679	VM38AL (3) Aluminum	280 Hex	50	1 Turn	87*
Indy Storm RMK	EC80PL04	794	VM38 (3) Aluminum	PTO Ctr Mag 330 330 350	45	1 Turn	91
Indy Storm/SKS	EC80PL05	794	VM38 (3) Aluminum	PTO Ctr Mag 400 400 420	45	1 Turn	91

* Non-Oxygenated. When using oxygenated fuel increase octane minimum to 89.

FUEL SYSTEM/CARBURETION 1996 Condensed Data

Engine Model	Jet Needle No. "E" Clip Position	Needle Jet No.	Throttle Valve Cutaway	Valve Seat	Idle RPM ± 200	Fuel/Oil Mixture
EC34-2PM02	5DP7-2	O-6 (169)	2.5 AL	1.5	1600	Variable Ratio Auto Injection
EC44-3PM01	6DH7-3	P-4 (166)	2.5 CH	1.5	1600	Variable Ratio Auto Injection
EC44-3PM02	6FJ6-3	P-8 (166)	2.0	1.5	1600	Variable Ratio Auto Injection
EC45PL02	6DH7-3	P-2 (480)	2.0	1.5	1600	Variable Ratio Auto Injection
EC45PL07	6DH3-2	O-4 (286)	2.0	1.5	1800	Variable Ratio Auto Injection
EC45PL08	6DH3-3	O-4 (286)	2.0	1.5	2000	Variable Ratio Auto Injection
EC50PLE11	6F9-3	P-8 (247)	2.5	1.5	1900	Variable Ratio Auto Injection
EC50PL14	6EJ26-2	P-4 (480)	3.0 CH	1.5	1600	Variable Ratio Auto Injection
EC50PME04	6DH7-3	P-8 (166)	3.0	1.5	1600	Variable Ratio Auto Injection
EC50PM03	6DH7-3	P-6 (166)	3.0 CH	1.5	1600	Variable Ratio Auto Injection
EC50PL12	6EJ26-2	P-6 (166)	3.0 CH	1.5	1600	Variable Ratio Auto Injection
EC50PL11	6F9-3	P-8 (247)	2.5 CH	1.5	1600	Variable Ratio Auto Injection
EC50PL15	6F9-2	P-4 (247)	2.0	1.5	1600	Variable Ratio Auto Injection
EC58PL03	6DP17-3	Q-2 (166)	2.0	1.5	1700	Variable Ratio Auto Injection
EC58PLE05	6DP17-3	Q-2 (166)	2.5	1.5	1700	Variable Ratio Auto Injection
EC58PL07	6DP17-3	Q-6 (480)	2.0	1.5	1700	Variable Ratio Auto Injection
EC58PL02	6DH7-3	Q-2 (247)	2.5 CH	1.5	2000	Variable Ratio Auto Injection
EC59PL01	6CEY6-3	R-0 (247)	2.5	1.5	2000	Variable Ratio Auto Injection
EC68PL01	6DH8-2	P-4 (247)	2.0	1.5	1800	Variable Ratio Auto Injection
EC68PL04	6DH8-2	P-4 (247)	1.5	1.5	1800	Variable Ratio Auto Injection
EC80PL04	6CGY6-3	P-6 (247)	3.0	1.5	1600	Variable Ratio Auto Injection
EC80PL05	6CGY6-3	Q-0 (247)	3.0	1.5	1600	Variable Ratio Auto Injection

FUEL SYSTEM/CARBURETION

1997 Condensed Data

Machine Model	Engine Model	Cyl. Disp. CCs	Carburetor Model, Mount Type & No.	Std. Main Jet & Type	Std. Pilot Jet	Air Screw Adjust (counterclockwise from light seat)	Fuel Octane Reqmt.
Indy Lite/GT/Deluxe	EC34-2PM(E)02	339	VM30SS (2)Zinc	150 Hex	35	1 1/2 Turn	87*
Indy Sport/Sport Touring/TranSport	EC44-3PM02	432	VM34SS (2)Zinc	185 Hex	35	1 Turn	87*
Indy XCF	EC44-3PM02	432	VM34SS (2)Zinc	185 Hex	35	1 Turn	87*
Indy Super Sport	EC50PM06	488	VM34SS (2)Zinc	250 Hex	45	1 Turn	87*
Indy Trail/Touring	EC50PM(E)04	488	VM34SS (2)Zinc	230 Hex	35	1 1/2 Turn	87*
Indy Trail RMK	EC50PM05	488	VM34SS (2)Zinc (ACCS)	270 Hex	45	1 Turn	87*
Indy 440 LC	EC45PL09	432	VM34SS (2)Zinc	270 Hex	40	3/4 Turn	87*
Indy 440 XC	EC45PL08	438	VM34SS (2) AL	240 Hex	50	3/4 Turn	87*
Indy 500/SKS/Classic	EC50PL17	488	VM38SS (2) AL	350 Hex	40	1 Turn	87*
Indy 500 RMK	EC50PL16	488	VM34SS (2)Zinc (ACCS)	250 Hex	40	3/4 Turn	87*
Indy Classic Touring	EC50PL19	488	VM34SS (2)Zinc	250 Hex	40	1 Turn	87*
Indy WideTrak GT	EC50PM03	488	VM34SS (2)Zinc	200 Hex	30	1 Turn	87*
Indy WideTrak LX	EC50PL20	488	VM34SS (2)Zinc	195 Hex	35	1/2 Turn	87*
Indy XLT/SKS	EC58PL03	597	VM34SS (3)Zinc	220 Hex	35	1 Turn	87*
Indy XLT RMK	EC58PL07	597	VM34SS (3)Zinc (ACCS)	240 Hex	50	3/4 Turn	87*
Indy XLT Touring/LTD	EC58PL(E)09	597	VM34CS (3)Zinc	260 Hex	35	1 Turn	87*
Indy XLT SP	EC58PL12	597	VM38AL (3) AL	270 Hex	35	1.5 Turn	87*
Indy XLT LTD SP	EC58PL12	597	VM38AL (3) AL	310 Hex	35	1 Turn	87*
Indy 600 XC	EC58PL08	597	VM38SS (3)Zinc	270 Hex	35	3/4 Turn	87*
Indy 600 XCR/SE	EC59PL01	598	VM38SS (3) AL	PTO Ctr Mag 360 380 380Hex	40	1/2 Turn	91
Indy Ultra/SP/Touring	EC68PL01	679	VM38AL (3) AL	340 Hex	40	1 Turn	87*
Indy Ultra SPX/SE	EC68PL03	679	VM38AL (3) AL	380 Hex	50	1 Turn	91
Indy 700 SKS	SN70LSDCSP-01	701	PWK 39-Keihin	185 Long Hex	40	1 Turn	87*
Indy 700 RMK	SN70LSDCSP-02	701	PWK 39-Keihin	158 Long Hex	55	1/2 Turn	87*
Indy Storm RMK	EC80PL04	794	VM38SS (3) AL	PTO Ctr Mag 300 290 310	55	1 Turn	91
Indy Storm/SE	EC80PL05	794	VM38SS (3) AL	PTO Ctr Mag 410 400 420	50	1 Turn	91

* Non-Oxygenated. When using oxygenated fuel increase octane minimum to 89.

FUEL SYSTEM/CARBURETION
1997 Condensed Data

Engine Model	Jet Needle No. "E" Clip Position	Needle Jet No.	Throttle Valve Cutaway
EC34-2PM02	5DP7-2	O-6 (169)	2.5
EC44-3PM02	6FJ6-3	P-8 (166)	2.0
EC45PL09	6DH7-2	P-2 (480)	2.0
EC45PL08	6DH3-3	O-4 (286)	1.5
EC50PM03	6DH7-3	P-6 (266)	3.0
EC50PM04	6DH7-3	P-8 (166)	3.0
EC50PM05	6DH7-2	P-2 (480)	2.0
EC50PM06	6DH7-3	O-8(480)	2.0
EC50PL16	6EJ26-3	P-2 (480)	2.5
EC50PL17	6F9-3	P-8 (247)	2.5
EC50PL19	6EJ26-3	P-2 (480)	3.0
EC50PL20	6EJ26-2	P-6 (166)	3.0
EC58PL03	6DP17-3	Q-2 (166)	2.0
EC58PL07	6EJ3-2	P-2 (480)	2.0
EC58PL08	6DH7-3	Q-2 (247)	2.0
EC58PL09	6DP17-3	Q-2 (166)	2.5
EC58PL12	6DH7-3	Q-2 (247)	2.0
EC59PL01	6CEY6-4	P-6 (247)	2.0
EC68PL01	6DH8-2	P-4 (247)	2.0
EC68PL03	6CEY6-4	Q-2 (247)	3.0
SN70LCDCSP-01	R1370G-3	Fixed	6.5
SN70LCDCSP-02	R1370J-3	Fixed	5.0
EC80PL04	6CGY6-3	P-6 (247)	2.5
EC80PL05	6CGY6-3	Q-0 (247)	3.0

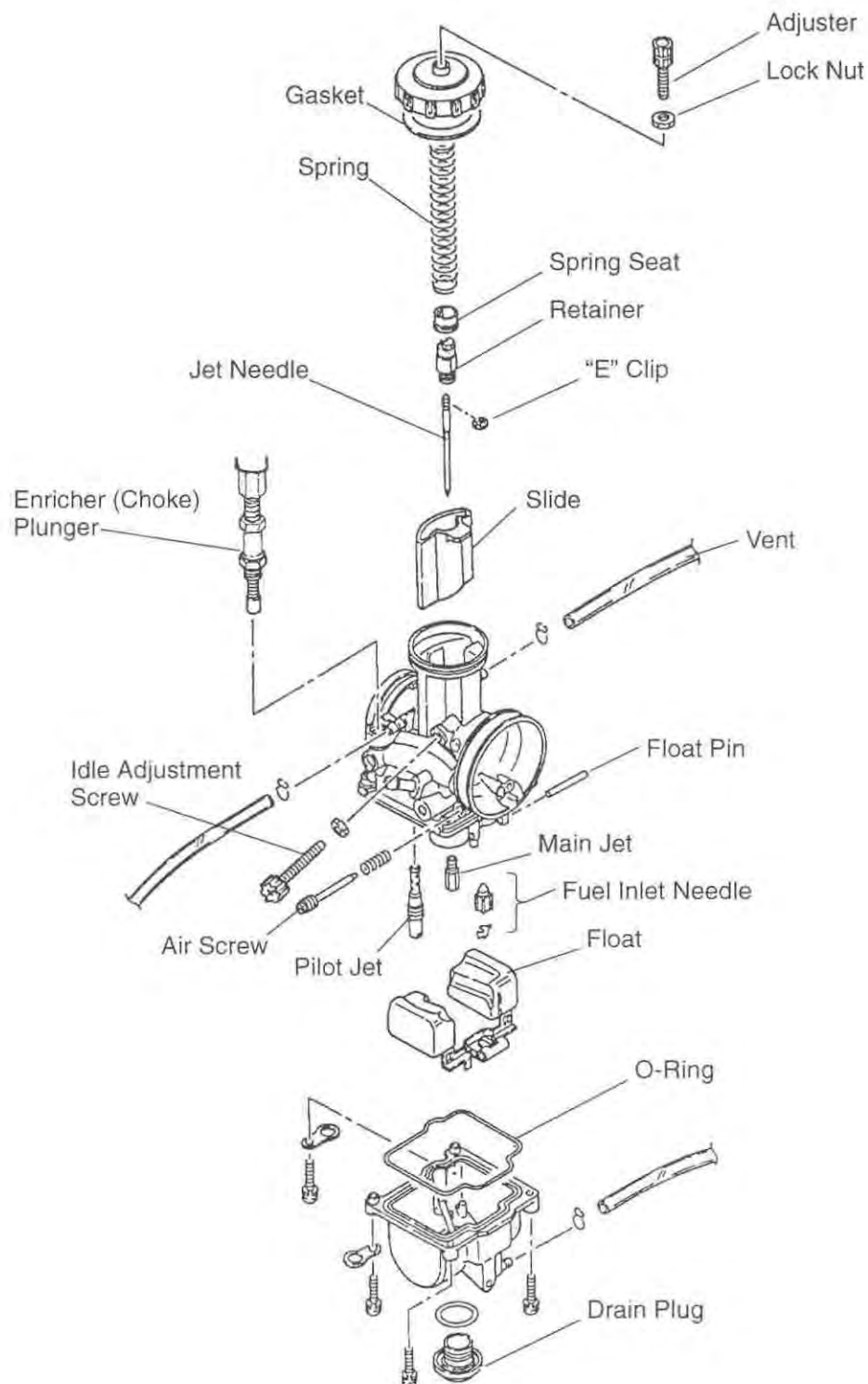
FUEL SYSTEM/CARBURETION

1998 Condensed Data -

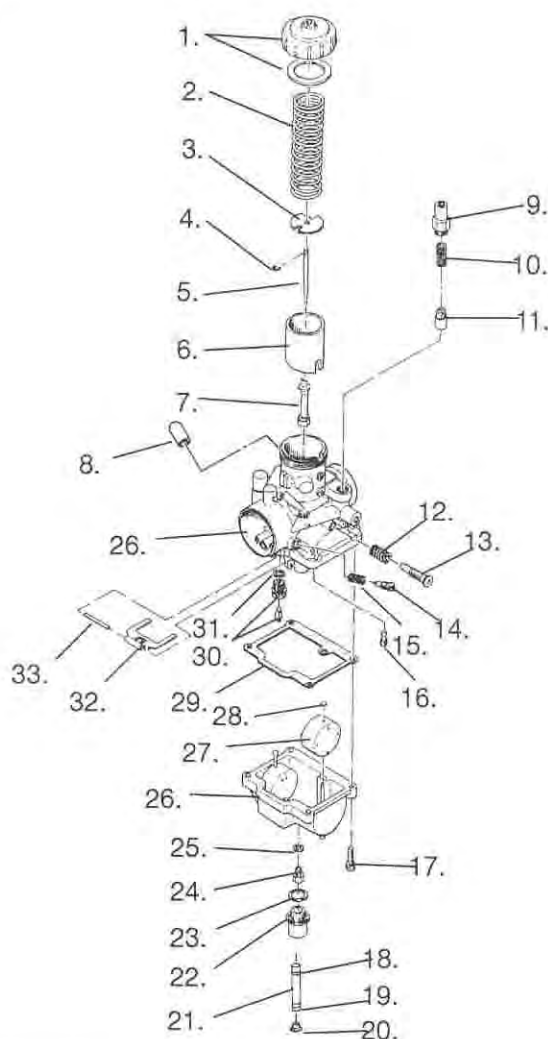
Machine Model	Engine Model	Cyl. Disp. CCs	Carburetor Model, Mount Type & No.	Std. Main Jet & Type	Std. Pilot Jet	Air Screw (Turns Out)	Fuel Octane Reqmt.	Jet Needle & E Clip	Needle Jet #	Throt. Valve Cut-away
Indy Lite/ Lite Deluxe/ Lite Touring	EC34-2PM02A	339	VM30SS (2)Zinc	150 Hex	35	1 1/2	87*	5DP7 #2	0-6 (169)	2.5 AL
Indy Sport/ Sport Touring/ TranSport, XCF	EC44-3PM024	432	VM34SS (2)Zinc	185 Hex	35	1	87*	6FJ6 #3	P-8 (166)	2.0
Indy Super Sport	EC50PM061	488	VM34SS (2)Zinc	250 Hex	45	1	87*	6DH7 #3	0-8 (480)	2.0
Indy Trail/Touring	EC50PM043	488	VM34SS (2)Zinc	230 Hex	40	1	87*	6DH7 #3	P-8 (166)	3.0
Indy Trail RMK	EC50PM051	488	VM34 (2)Zinc (ACCS)	270 Hex	45	1	87*	6EJ3 #3	0-6 (480)	2.0
Indy 440 LC	EC45PL091	432	VM34SS (2)Zinc	270 Hex	40	3/4	87*	6DH7 #2	P-2 (480)	2.0
Indy 440 XCR	SN44-44LCDCSP-01	438	VM34SS	360 Hex	45	1 1/2	87*	6DH7 #3	P-4 (286)	2.0
Indy 500/ 500 Classic	EC50PL171	488	VM38SS (2) AL	350 Hex	45	3/4	87*	6F9 #3	P-6 (480)	2.5
Indy 500 RMK	EC50PL161	488	VM34SS (2)Zinc (ACCS)	260 Hex	55	1 1/4	87*	6FJ43 #2	P-0 (480)	2.5
Indy Classic Trng	EC50PL191	488	VM34SS (2)Zinc	250 Hex	40	3/4	87*	6EJ26 #3	P-2 (480)	3.0
Indy WideTrak LX	EC50PL201	488	VM34SS (2)Zinc	195 Hex	35	1/2	87*	6EJ26 #2	P-6 (166)	3.0
Indy XLT LTD/ XLT Touring	EC58PL130	597	VM34SS (3)Zinc	240 Hex	40	1	87*	6DP17 #3	Q-4 (480)	2.5
Indy XLT SP	EC58PL140	597	VM38SS (3)AL	330 Hex	35	1.5	87*	6DH7 #3	Q-0 (247)	2.0
Indy XLT Classic	EC58PL150	597	VM38SS (3)AL	340 Hex	35	1.5	87*	6DH7 #3	Q-0 (247)	2.0
Indy 600 XCR	EC59PL020	598	VM38SS (3) AL	PTO Ctr Mag 360 380 380 Hex	40	1/2	91	6CEY6 #4	P-6 (247)	2.0
Indy 600 XC	SN60-70LCDCSP-01	593	Keihin PWK 39 (2) AL	185 Hex	45	1	87*	R1368G #3	FIXED	6.5
Indy 600 RMK	SN60-70LCDCSP-02	600	Keihin PWK 39 (2) AL	160 Hex	45	1/2	87*	R1368G #2	FIXED	6.0
Indy Ultra/ Ultra Touring	EC68PL050	679	VM38 (3) AL	340 Hex	40	1	87*	6DH8 #2	P-4 (247)	2.0
Indy 700 XC	SN70-70LCDCSP-02	701	Keihin PWK 39 (2) AL	185	38	1	87*	R1368G #3	FIXED	6.0
Indy 700 XCR	EC68PL060	679	VM38 (3) AL	380	50	1	91	6CEY6 #4	Q-2 (247)	3.0
Indy 700 RMK	SN70-70LCDCSP-01	701	Keihin PWK 39 (2) AL	158	42	1	87*	R1371G #3	FIXED	5.5
Indy Storm	EC80PL052	794	VM38 (3) AL	PTO Ctr Mag 410 400 420	50	1	91	6CGY6 #3	Q-0 (247)	3.0CH

* Non-Oxygenated. When using oxygenated fuel increase octane minimum to 89.

FUEL SYSTEM/CARBURETION Exploded View - Keihin



FUEL SYSTEM/CARBURETION **Exploded View - VM30SS**

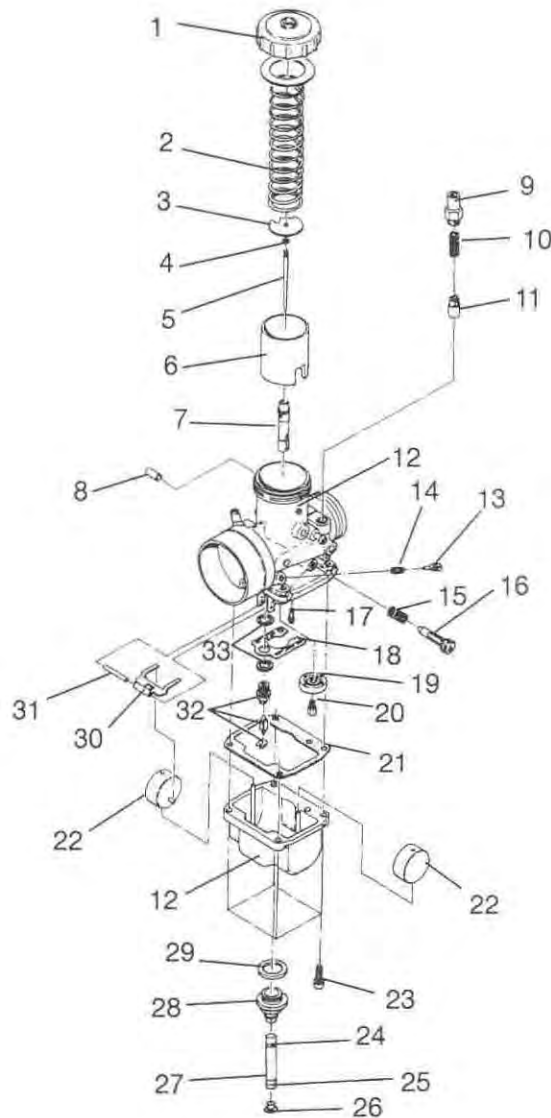


Ref. Qty.	Description
1. 1	Asm., Mixing Chamber Top (Incl. Gasket)
2. 1	Spring, Throttle
3. 1	Plate, Throttle
4. 1	E-Ring
5. 1	Jet Needle
6. 1	Throttle Valve
7. 1	Needle Jet
8. 1	Cap
9. 1	Cap, Plunger
10. 1	Spring, Plunger
11. 1	Asm., Plunger
12. 1	Spring, Throttle Adjuster
13. 1	Screw, Throttle Stop
14. 1	Screw, Air
15. 1	Spring, Throttle Stop Screw
16. 1	Pilot Jet
17. 4	Asm., Screw and Washer

Ref. Qty.	Description
18. 1	Clamp, Hose
19. 1	Clamp, Hose
20. 1	Plug, Trap
21. 1	Line, Fuel
22. 1	Nipple
23. 1	O-Ring
24. 1	Main Jet
25. 1	Washer
26. 2	Asm., Carburetor (Incl. 1.-17.,23.-33.)
27. 2	Asm., Float
28. 2	Cap
29. 1	Gasket, Float Chamber
30. 1	Needle & Seat
31. 1	Packing, Needle Valve
32. 1	Arm, Float
33. 1	Pin, Float

FUEL SYSTEM/CARBURETION

Exploded View - VM34SS



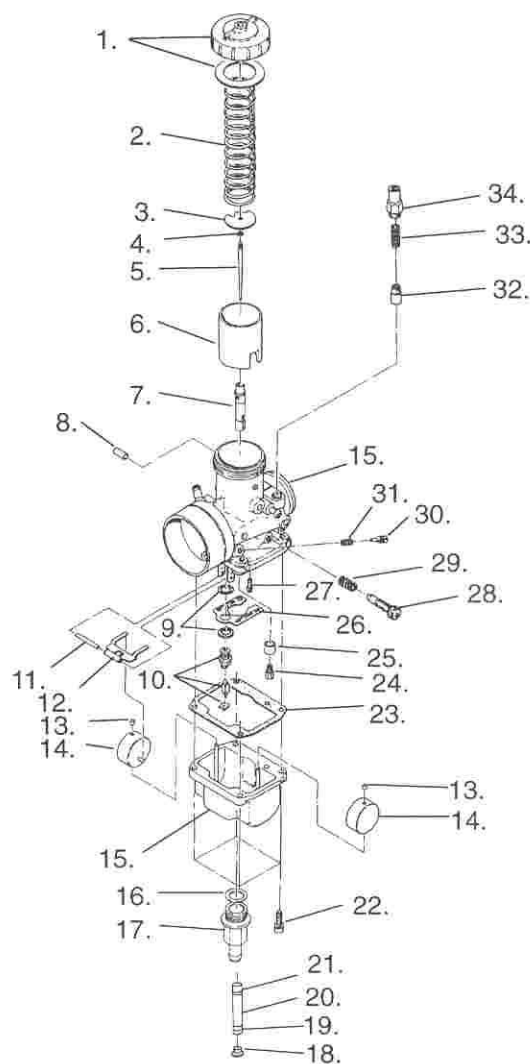
Ref. Qty Description

1.	1	Asm., Mixing Chamber Top (Incl. Gasket)
2.	1	Spring, Throttle
3.	1	Plate, Throttle
4.	1	E-Ring
5.	1	Jet Needle
6.	1	Throttle Valve
7.	1	Needle Jet
8.	1	Cap
9.	1	Guide, Holder
10.	1	Spring, Plunger
11.	1	Asm., Plunger
12.	2	Asm., Carburetor (Incl. 1.-17.,23.-31.)
13.	1	Screw, Air
14.	1	Spring, (Air Adjuster)
15.	1	Spring, Throttle Adjuster
16.	1	Screw, Throttle Stop

Ref. Qty Description

17.	1	Pilot Jet
18.	1	Plate
19.	1	Ring
20.	1	Main Jet
21.	1	Gasket, Float Chamber
22.	2	Asm., Float
23.	4	Asm., Screw and Washer
24.	1	Clamp, Hose
25.	1	Clamp, Hose
26.	1	Plug, Trap
27.	AR	Tube, Sediment
28.	1	Nipple
29.	1	O-Ring
30.	1	Arm, Float
31.	1	Pin, Float
32.	1	Asm., Fuel Inlet Needle Valve
33.	1	Packing, Needle Valve

FUEL SYSTEM/CARBURETION **Exploded View - VM38SS**



Ref. Qty Description

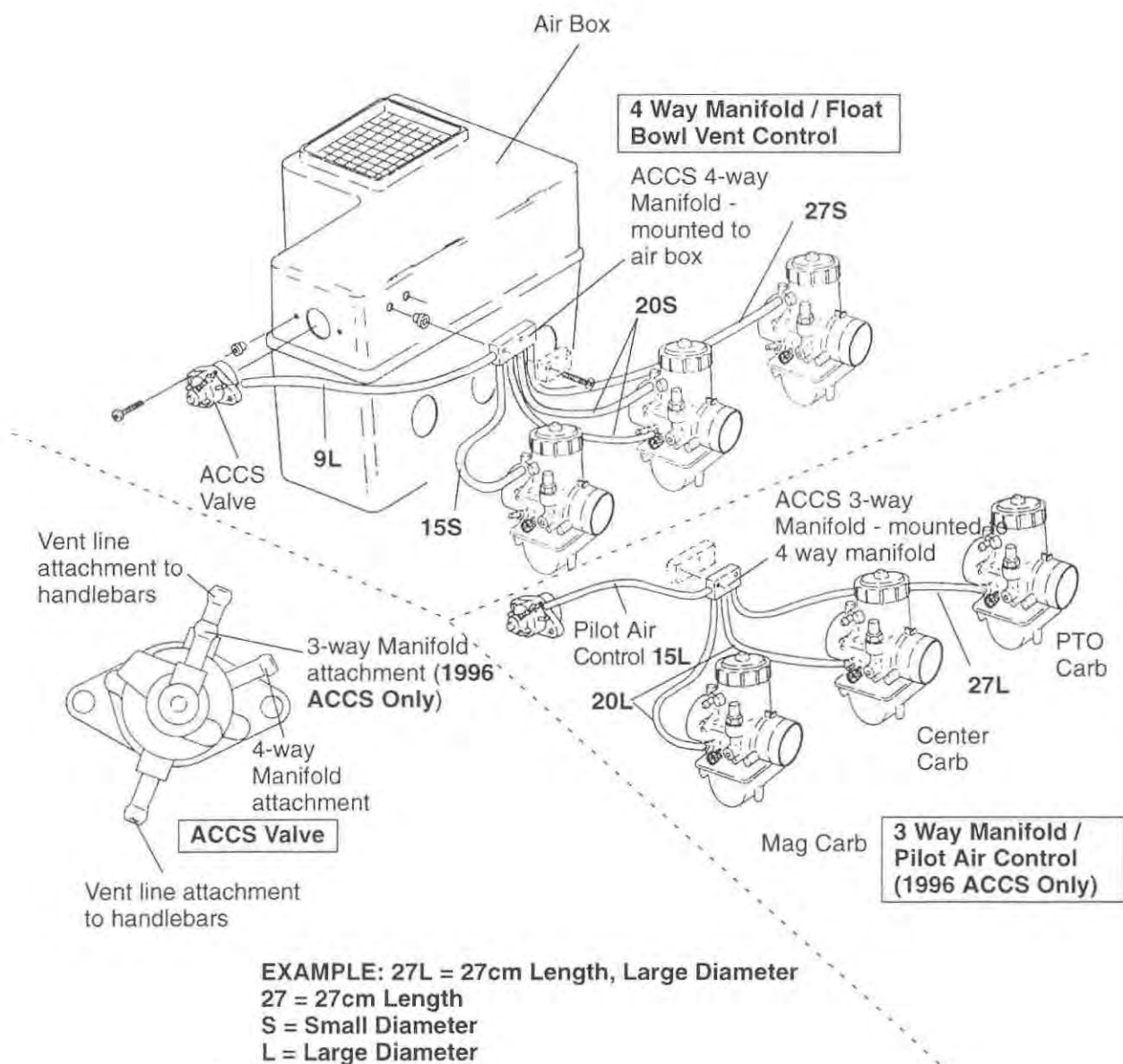
1.	1	Asm., Mixing Chamber, Top (Incl. Gasket)
2.	1	Spring
3.	1	Plate
4.	1	E-Ring
5.	1	Jet Needle (6F9-3)
6.	1	Throttle Valve (2.5)
7.	1	Needle Jet (P-8) (247)
8.	1	Cap
9.	2	Packing
10.	1	Asm., Needle Valve (1.5)
11.	1	Float Pin
12.	1	Float Arm
13.	2	Cap
14.	2	Asm., Float
15.	2	Asm., Carburetor (Incl. 1.-16.,22.-34.)
16.	1	O-Ring
17.	1	Nipple

Ref. Qty Description

18.	2	Plug, Trap
19.	2	Clamp, Hose
20.	AR	Line, Fuel
21.	2	Clamp, Hose
22.	4	Asm., Screw and Washer
23.	1	Gasket, Float Chamber
24.	1	Main Jet (#340)
25.	1	Ring
26.	1	Plate
27.	1	Pilot Jet (#40)
28.	1	Throttle Stop Screw
29.	1	Spring
30.	1	Air Screw
31.	1	Spring
32.	1	Asm., Plunger
33.	1	Plunger Spring
34.	1	Plunger Cap

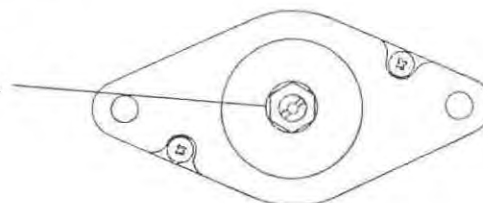
FUEL SYSTEM/CARBURETION Exploded View - 1996-Current VM34SS with ACCS

1996-Current ACCS Systems



NOTE: There is only one ACCS valve. The illustration above has been divided to show the separation of systems.

Do not change calibration setting or serious engine damage may result.



FUEL SYSTEM/CARBURETION

1996 Jetting Compensation Charts

Indy Lite

EC34-2PM02

Carburetor Type - VM30SS

Main Jet - 145

Pilot Jet - 35

Cut Away - 2.5 AL

Air Screw - 1.5 Turn

Jet Needle - 5DP7-2

Needle Jet - O-6 (169)

		AMBIENT TEMPERATURE			
		Below -20°F Below -29°C	-20° to +10°F -29° to -12°C	+10° to +40°F -12° to +5°C	Above +40°F Above 5°C
Alt. Met. (Ft)	0-900 (0-3000)	155	*145	135	130
	900-1800 (3000-6000)	140	135	125	120
	1800-2700 (6000-9000)	130	120	115	110
	2700-3700 (9000-12000)	120	110	105	100

- Shaded zone should drop Jet Needle one position (raise E-clip)

* - Production Setting

Indy Lite GT

EC34-2PM02

Carburetor Type - VM30SS

Main Jet - 145

Pilot Jet - 35

Cut Away - 2.5 AL

Air Screw - 1.5 Turn

Jet Needle - 5DP7-2

Needle Jet - O-6 (169)

		AMBIENT TEMPERATURE			
		Below -20°F Below -29°C	-20° to +10°F -29° to -12°C	+10° to +40°F -12° to +5°C	Above +40°F Above 5°C
Alt. Met. (Ft)	0-900 (0-3000)	155	*145	135	130
	900-1800 (3000-6000)	140	135	125	120
	1800-2700 (6000-9000)	130	120	115	110
	2700-3700 (9000-12000)	120	110	105	100

- Shaded zone should drop Jet Needle one position (raise E-clip)

* - Production Setting

Indy Lite Deluxe

EC34-2PME02

Carburetor Type - VM30SS

Main Jet - 145

Pilot Jet - 35

Cut Away - 2.5 AL

Air Screw - 1.5 Turn

Jet Needle - 5DP7-2

Needle Jet - O-6 (169)

		AMBIENT TEMPERATURE			
		Below -20°F Below -29°C	-20° to +10°F -29° to -12°C	+10° to +40°F -12° to +5°C	Above +40°F Above 5°C
Alt. Met. (Ft)	0-900 (0-3000)	155	145	135	130
	900-1800 (3000-6000)	140	135	125	120
	1800-2700 (6000-9000)	125	120	115	110
	2700-3700 (9000-12000)	110	110	105	100

- Shaded zone should drop Jet Needle one position (raise E-clip)

Indy Sport

EC44-3PM01

Carburetor Type - VM34SS

Main Jet - 180

Pilot Jet - 35

Cut Away - 2.5 CH

Air Screw - 1.25 Turn

Jet Needle - 6DH7-3

Needle Jet - P-4 (166)

		AMBIENT TEMPERATURE			
		Below -20°F Below -29°C	-20° to +10°F -29° to -12°C	+10° to +40°F -12° to +5°C	Above +40°F Above 5°C
Alt. Met. (Ft)	0-900 (0-3000)	190	180	170	160
	900-1800 (3000-6000)	180	165	155	145
	1800-2700 (6000-9000)	160	150	140	130
	2700-3700 (9000-12000)	145	140	130	120

- Shaded zone should drop Jet Needle one position (raise E-clip)

FUEL SYSTEM/CARBURETION 1996 Jetting Compensation Charts

Indy Sport Touring

EC44-3PM01

Carburetor Type - VM34SS

Main Jet - 180

Pilot Jet - 35

Cut Away - 2.5

Air Screw - 1.25 Turn

Jet Needle - 6DH7-3

Needle Jet - P-4 (166)

		AMBIENT TEMPERATURE			
		Below -20°F Below -29°C	-20° to +10°F -29° to -12°C	+10° to +40°F -12° to +5°C	Above +40°F Above 5°C
Alt. Met. (Ft)	0-900 (0-3000)	190	180	170	160
	900-1800 (3000-6000)	180	165	155	145
	1800-2700 (6000-9000)	160	150	140	130
	2700-3700 (9000-12000)	145	140	130	120

- Shaded zone should drop Jet Needle one position (raise E-clip)

Indy TransSport

EC44-3PM01

Carburetor Type - VM34SS

Main Jet - 180

Pilot Jet - 35

Cut Away - 2.5

Air Screw - 1.25 Turn

Jet Needle - 6DH7-3

Needle Jet - P-4 (166)

		AMBIENT TEMPERATURE			
		Below -20°F Below -29°C	-20° to +10°F -29° to -12°C	+10° to +40°F -12° to +5°C	Above +40°F Above 5°C
Alt. Met. (Ft)	0-900 (0-3000)	190	*180	170	160
	900-1800 (3000-6000)	175	165	155	150
	1800-2700 (6000-9000)	160	150	140	135
	2700-3700 (9000-12000)	150	140	130	130

- Shaded zone should drop Jet Needle one position (raise E-clip)

* - Production Setting

Indy Super Sport

EC44-3PM02

Carburetor Type - VM34SS

Main Jet - 180

Pilot Jet - 35

Cut Away - 2.0

Air Screw - 1.25 Turn

Jet Needle - 6FJ6-3

Needle Jet - P-8 (166)

		AMBIENT TEMPERATURE			
		Below -20°F Below -29°C	-20° to +10°F -29° to -12°C	+10° to +40°F -12° to +5°C	Above +40°F Above 5°C
Alt. Met. (Ft)	0-900 (0-3000)	190	180	170	160
	900-1800 (3000-6000)	180	165	155	145
	1800-2700 (6000-9000)	160	150	140	130
	2700-3700 (9000-12000)	145	140	130	120

- Shaded zone should drop Jet Needle one position (raise E-clip)

Indy Trail

EC50PM04

Carburetor Type - VM34SS

Main Jet - 220

Pilot Jet - 35

Cut Away - 3.0

Air Screw - 1.5 Turn

Jet Needle - 6DH7-3

Needle Jet - P-8 (166)

		AMBIENT TEMPERATURE			
		Below -20°F Below -29°C	-20° to +10°F -29° to -12°C	+10° to +40°F -12° to +5°C	Above +40°F Above 5°C
Alt. Met. (Ft)	0-900 (0-3000)	230	220	210	200
	900-1800 (3000-6000)	210	200	190	180
	1800-2700 (6000-9000)	195	185	175	170
	2700-3700 (9000-12000)	180	170	170	170

- Shaded zone should drop Jet Needle one position (raise E-clip)

Indy Trail Touring

EC50PME04

Carburetor Type - VM34SS

Main Jet - 220

Pilot Jet - 35

Cut Away - 3.0

Air Screw - 1.5 Turn

Jet Needle - 6DH7-3

Needle Jet - P-8 (166)

		AMBIENT TEMPERATURE			
		Below -20°F Below -29°C	-20° to +10°F -29° to -12°C	+10° to +40°F -12° to +5°C	Above +40°F Above 5°C
Alt. Met. (Ft)	0-900 (0-3000)	260	240	220	210
	900-1800 (3000-6000)	230	220	200	195
	1800-2700 (6000-9000)	210	200	190	180
	2700-3700 (9000-12000)	190	180	170	165

- Shaded zone should drop Jet Needle one position (raise E-clip)

FUEL SYSTEM/CARBURETION

1996 Jetting Compensation Charts

Indy 440 LC

EC45PL02

Carburetor Type - VM34SS

Main Jet - 260

Pilot Jet - 40

Cut Away - 2.0

Air Screw - 1.5 Turn

Jet Needle - 6DH7-2

Needle Jet - P-2 (480)

		AMBIENT TEMPERATURE			
		Below -20°F Below -29°C	-20° to +10°F -29° to -12°C	+10° to +40°F -12° to +5°C	Above +40°F Above 5°C
Alt. Met. (Ft)	0-900 (0-3000)	280	260	240	230
	900-1800 (3000-6000)	250	240	230	220
	1800-2700 (6000-9000)	230	220	210	200
	2700-3700 (9000-12000)	210	200	190	180

- Shaded zone should drop Jet Needle one position (raise E-clip)

Indy Classic

EC50PLE11

Carburetor Type - VM38SS

Main Jet - 340

Pilot Jet - 40

Cut Away - 2.5

Air Screw - 1.0 Turn

Jet Needle - 6F9-3

Needle Jet - P-8 (247)

		AMBIENT TEMPERATURE			
		Below -20°F Below -29°C	-20° to +10°F -29° to -12°C	+10° to +40°F -12° to +5°C	Above +40°F Above 5°C
Alt. Met. (Ft)	0-900 (0-3000)	360	*340	320	300
	900-1800 (3000-6000)	320	300	280	260
	1800-2700 (6000-9000)	280	260	240	220
	2700-3700 (9000-12000)	240	230	210	200

- Shaded zone should drop Jet Needle one position (raise E-clip)

* - Production Setting

Indy Classic Touring

EC50PL14

Carburetor Type - VM34SS

Main Jet - 240

Pilot Jet - 40

Cut Away - 3.0 CH

Air Screw - 3/4 Turn

Jet Needle - 6EJ26-2

Needle Jet - P-4 (480)

		AMBIENT TEMPERATURE			
		Below -20°F Below -29°C	-20° to +10°F -29° to -12°C	+10° to +40°F -12° to +5°C	Above +40°F Above 5°C
Alt. Met. (Ft)	0-900 (0-3000)	250	*240	230	220
	900-1800 (3000-6000)	230	220	210	200
	1800-2700 (6000-9000)	210	200	190	180
	2700-3700 (9000-12000)	195	185	175	165

- Shaded zone should drop Jet Needle one position (raise E-clip)

* - Production Setting

Indy 500

EC50PL11

Carburetor Type - VM38SS

Main Jet - 340

Pilot Jet - 40

Cut Away - 2.5 CH

Air Screw - 1 Turn

Jet Needle - 6F9-3

Needle Jet - P-8 (247)

		AMBIENT TEMPERATURE			
		Below -20°F Below -29°C	-20° to +10°F -29° to -12°C	+10° to +40°F -12° to +5°C	Above +40°F Above 5°C
Alt. Met. (Ft)	0-900 (0-3000)	360	*340	320	300
	900-1800 (3000-6000)	320	300	280	260
	1800-2700 (6000-9000)	280	260	240	220
	2700-3700 (9000-12000)	240	230	210	200

- Shaded zone should drop Jet Needle one position (raise E-clip)

* - Production Setting

FUEL SYSTEM/CARBURETION 1996 Jetting Compensation Charts

Indy 500 SKS

EC50PL11

Carburetor Type - VM38SS

Main Jet - 340

Pilot Jet - 40

Cut Away - 2.5 CH

Air Screw - 1 Turn

Jet Needle - 6F9-3

Needle Jet - P-8 (247)

		AMBIENT TEMPERATURE			
		Below -20°F Below -29°C	-20° to +10°F -29° to -12°C	+10° to +40°F -12° to +5°C	Above +40°F Above 5°C
Alt. Met. (Ft)	0-900 (0-3000)	360	*340	320	300
	900-1800 (3000-6000)	320	300	280	260
	1800-2700 (6000-9000)	280	260	240	220
	2700-3700 (9000-12000)	240	230	210	200

- Shaded zone should drop Jet Needle one position (raise E-clip)

* - Production Setting

Indy 500 RMK

EC50PL15

Carburetor Type - VM38SS

Main Jet - 240

Pilot Jet - 45

Cut Away - 2.0

Air Screw - 1 Turn

Jet Needle - 6F9-2

Needle Jet - P-4 (247)

		AMBIENT TEMPERATURE			
		Below -20°F Below -29°C	-20° to +10°F -29° to -12°C	+10° to +40°F -12° to +5°C	Above +40°F Above 5°C
Alt. Met. (Ft)	0-900 (0-3000)	360	340	320	300
	900-1800 (3000-6000)	320	300	280	260
	1800-2700 (6000-9000)	280	260	*240	220
	2700-3700 (9000-12000)	240	230	210	200

- Shaded zone should raise Jet Needle one position (lower E-clip to #3)

- Shaded zone should raise Jet Needle two positions (lower E-clip to #4)

* - Production Setting

Indy WideTrak GT

EC50PM03

Carburetor Type - VM34SS

Main Jet - 200

Pilot Jet - 30

Cut Away - 3.0 CH

Air Screw - 1 Turn

Jet Needle - 6DH7-3

Needle Jet - P-6 (166)

		AMBIENT TEMPERATURE			
		Below -20°F Below -29°C	-20° to +10°F -29° to -12°C	+10° to +40°F -12° to +5°C	Above +40°F Above 5°C
Alt. Met. (Ft)	0-900 (0-3000)	210	200	190	180
	900-1800 (3000-6000)	195	185	175	165
	1800-2700 (6000-9000)	180	170	160	150
	2700-3700 (9000-12000)	160	155	145	135

- Shaded zone should drop Jet Needle one position (raise E-clip)

Indy WideTrak LX

EC50PL12

Carburetor Type - VM34SS

Main Jet - 190

Pilot Jet - 35

Cut Away - 3.0

Air Screw - 3/4 turn

Jet Needle - 6EJ26-2

Needle Jet - P-6 (166)

		AMBIENT TEMPERATURE			
		Below -20°F Below -29°C	-20° to +10°F -29° to -12°C	+10° to +40°F -12° to +5°C	Above +40°F Above 5°C
Alt. Met. (Ft)	0-900 (0-3000)	200	*190	180	170
	900-1800 (3000-6000)	185	175	165	155
	1800-2700 (6000-9000)	170	160	150	140
	2700-3700 (9000-12000)	150	145	135	130

- Shaded zone should drop Jet Needle one position (raise E-clip)

* - Production Setting

FUEL SYSTEM/CARBURETION

1996 Jetting Compensation Charts

Indy 440 XCR

EC45PL07

Carburetor Type - VM34SS

Main Jet - 260

Pilot Jet - 50

Cut Away - 2.0

Air Screw - 1 Turn

Jet Needle - 6DH3-3

Needle Jet - O-4 (286)

		AMBIENT TEMPERATURE			
		Below -20°F Below -29°C	-20° to +10°F -29° to -12°C	+10° to +40°F -12° to +5°C	Above +40°F Above 5°C
Alt. Met. (Ft)	0-900 (0-3000)	270	*260	250	230
	900-1800 (3000-6000)	260	240	230	220
	1800-2700 (6000-9000)	230	220	210	195
	2700-3700 (9000-12000)	210	195	185	175

- Shaded zone should drop Jet Needle one position (raise E-clip)

* - Production Setting

Indy 440 XCR SP

EC45PL08

Carburetor Type - VM34

Main Jet - 260

Pilot Jet - 50

Cut Away - 2.0

Air Screw - 1 Turn

Jet Needle - 6DH3-3

Needle Jet - O-4 (286)

		AMBIENT TEMPERATURE			
		Below -20°F Below -29°C	-20° to +10°F -29° to -12°C	+10° to +40°F -12° to +5°C	Above +40°F Above 5°C
Alt. Met. (Ft)	0-900 (0-3000)	280	260	250	230
	900-1800 (3000-6000)	260	250	230	220
	1800-2700 (6000-9000)	230	220	200	190
	2700-3700 (9000-12000)	200	185	180	170

- Shaded zone should drop Jet Needle one position (raise E-clip)

Indy 600 XCR

EC58PL02

Carburetor Type - VM38AL Slide

Main Jet - 260

Pilot Jet - 35

Cut Away - 2.5

Air Screw - 1.0 Turn

Jet Needle - 6DH7-3

Needle Jet - Q-2 (247)

		AMBIENT TEMPERATURE			
		Below -20°F Below -29°C	-20° to +10°F -29° to -12°C	+10° to +40°F -12° to +5°C	Above +40°F Above 5°C
Alt. Met. (Ft)	0-900 (0-3000)	270	260	240	230
	900-1800 (3000-6000)	250	240	220	210
	1800-2700 (6000-9000)	220	220	210	190
	2700-3700 (9000-12000)	200	200	190	180

- Shaded zone should drop Jet Needle one position (raise E-clip)

Indy 600 XCR SP

EC59PL01

Carburetor Type - VM38SS

Main Jet - 400

Pilot Jet - 40

Cut Away - 2.5

Air Screw - 1.5 Turn

Jet Needle - 6CEY6-3

Needle Jet - R-0 (247)

		AMBIENT TEMPERATURE			
		Below -20°F Below -29°C	-20° to +10°F -29° to -12°C	+10° to +40°F -12° to +5°C	Above +40°F Above 5°C
Alt. Met. (Ft)	0-900 (0-3000)	420	400	370	350
	900-1800 (3000-6000)	390	370	350	330
	1800-2700 (6000-9000)	350	330	310	300
	2700-3700 (9000-12000)	310	300	280	270

- Shaded zone should drop Jet Needle one position (raise E-clip)

Indy XLT

EC58PL03

Carburetor Type - VM34SS

Main Jet - 210

Pilot Jet - 35

Cut Away - 2.0

Air Screw - 1.0 Turn

Jet Needle - 6DP17-3

Needle Jet - Q-2

		AMBIENT TEMPERATURE			
		Below -20°F Below -29°C	-20° to +10°F -29° to -12°C	+10° to +40°F -12° to +5°C	Above +40°F Above 5°C
Alt. Met. (Ft)	0-900 (0-3000)	220	210	200	185
	900-1800 (3000-6000)	200	190	180	165
	1800-2700 (6000-9000)	175	170	160	145
	2700-3700 (9000-12000)	160	150	140	130

- Shaded zone should drop Jet Needle one position (raise E-clip)

FUEL SYSTEM/CARBURETION 1996 Jetting Compensation Charts

Indy XLT SKS

EC58PL03

Carburetor Type - VM34SS

Main Jet - 210

Pilot Jet - 35

Cut Away - 2.0

Air Screw - 1.0 Turn

Jet Needle - 6DP17-3

Needle Jet - Q-2 (166)

		AMBIENT TEMPERATURE			
		Below -20°F Below -29°C	-20° to +10°F -29° to -12°C	+10° to +40°F -12° to +5°C	Above +40°F Above 5°C
Alt. Met. (Ft)	0-900 (0-3000)	220	210	200	185
	900-1800 (3000-6000)	200	190	180	165
	1800-2700 (6000-9000)	175	170	160	145
	2700-3700 (9000-12000)	160	150	140	130

- Shaded zone should drop Jet Needle one position (raise E-clip)

Indy XLT RMK

EC58PL07

Carburetor Type - VM34SS

Main Jet - 190

Pilot Jet - 35

Pilot Air Jet 1 (PAJ1) - 1.0

Pilot Air Jet 2 (PAJ2) - 1.6

Cut Away - 2.0

Air Screw - N/A (ACCS)

Jet Needle - 6DP17-3

Needle Jet - Q-6 (480)

		AMBIENT TEMPERATURE			
		Below -20°F Below -29°C	-20° to +10°F -29° to -12°C	+10° to +40°F -12° to +5°C	Above +40°F Above 5°C
Main Jet		230	210	*190	180

* - Production Setting

Indy XLT SP

EC58PL02

Carburetor Type - VM38AL

Main Jet - 260

Pilot Jet - 35

Cut Away - 2.5

Air Screw - 1.0 Turn

Jet Needle - 6DH7-3

Needle Jet - Q-2 (247)

		AMBIENT TEMPERATURE			
		Below -20°F Below -29°C	-20° to +10°F -29° to -12°C	+10° to +40°F -12° to +5°C	Above +40°F Above 5°C
Alt. Met. (Ft)	0-900 (0-3000)	270	260	240	230
	900-1800 (3000-6000)	250	240	220	210
	1800-2700 (6000-9000)	220	220	210	190
	2700-3700 (9000-12000)	200	200	190	180

- Shaded zone should drop Jet Needle one position (raise E-clip)

Indy XLT Touring

EC58PLE05

Carburetor Type - VM34SS

Main Jet - 250

Pilot Jet - 35

Cut Away - 2.5

Air Screw - 1.0 Turn

Jet Needle - 6DP17-3

Needle Jet - Q-2 (166)

		AMBIENT TEMPERATURE			
		Below -20°F Below -29°C	-20° to +10°F -29° to -12°C	+10° to +40°F -12° to +5°C	Above +40°F Above 5°C
Alt. Met. (Ft)	0-900 (0-3000)	270	*250	240	230
	900-1800 (3000-6000)	240	230	220	210
	1800-2700 (6000-9000)	220	210	200	190
	2700-3700 (9000-12000)	200	190	180	170

- Shaded zone should drop Jet Needle one position (raise E-clip)

* - Production Setting

FUEL SYSTEM/CARBURETION

1996 Jetting Compensation Charts

Indy Ultra RMK

EC68PL04

Carburetor Type - VM38

Main Jet - 280

Cut Away - 1.5

Jet Needle - 6DH8-2

Pilot Jet - 50

Air Screw - 1.0 Turn

Needle Jet - P-4 (247)

		AMBIENT TEMPERATURE			
		Below -20°F Below -29°C	-20° to +10°F -29° to -12°C	+10° to +40°F -12° to +5°C	Above +40°F Above 5°C
Alt. Met. (Ft)	0-900 (0-3000)	350	340	320	300
	WARNING: YOU MUST CHANGE CYLINDER HEAD TO RUN BELOW 8000 FEET (1800 METERS)!!				
	900-1800 (3000-6000)	320	310	300	280
	1800-2700 (6000-9000)	290	280	270	260
	2700-3700 (9000-12000)	270	260	250	240

- Shaded zone change cylinder head

- Shaded zone production setting

No Jet Needle Changes are Recommended

Indy Ultra SKS

EC68PL01

Carburetor Type - VM38

Main Jet - 340

Cut Away - 2.0

Jet Needle - 6DH8-2

Pilot Jet - 50

Air Screw - 1.0 Turn

Needle Jet - P-4 (247)

		AMBIENT TEMPERATURE			
		Below -20°F Below -29°C	-20° to +10°F -29° to -12°C	+10° to +40°F -12° to +5°C	Above +40°F Above 5°C
Alt. Met. (Ft)	0-900 (0-3000)	350	340	320	300
	900-1800 (3000-6000)	320	310	300	280
	1800-2700 (6000-9000)	290	280	270	260
	2700-3700 (9000-12000)	270	260	250	240

Indy Ultra SP

EC68PL01

Carburetor Type - VM38

Main Jet - 340

Cut Away - 2.0

Jet Needle - 6DH8-2

Pilot Jet - 50

Air Screw - 1.0 Turn

Needle Jet - P-4 (247)

		AMBIENT TEMPERATURE			
		Below -20°F Below -29°C	-20° to +10°F -29° to -12°C	+10° to +40°F -12° to +5°C	Above +40°F Above 5°C
Alt. Met. (Ft)	0-900 (0-3000)	350	340	320	300
	900-1800 (3000-6000)	320	310	300	280
	1800-2700 (6000-9000)	290	280	270	260
	2700-3700 (9000-12000)	270	260	250	240

Indy Storm

EC80PL05

Carburetor Type - VM38SS

Main Jet - 400-400-420

Cut Away - 3.0

Jet Needle - 6CGY6-3

Pilot Jet - 45

Air Screw - 1.0 Turn

Needle Jet - Q-0 (247)

		AMBIENT TEMPERATURE			
		Below -20°F Below -29°C	-20° to +10°F -29° to -12°C	+10° to +40°F -12° to +5°C	Above +40°F Above 5°C
Alt. Met. (Ft)	0-900 (0-3000)	420 420 440	400 400 420	380 380 400	360 360 380
	900-1800 (3000-6000)	390 390 410	370 370 390	350 350 370	330 330 350
	1800-2700 (6000-9000)	360 360 380	340 340 360	320 320 340	300 300 320
	2700-3700 (9000-12000)	320 320 340	300 300 320	280 280 300	260 260 280

- Shaded zone should drop Jet Needle one position (raise E-clip)

- Production Setting

PTO smallest - Mag biggest, PTO-Center-Mag left to right

FUEL SYSTEM/CARBURETION 1996 Jetting Compensation Charts

Indy Storm SKS

EC80PL05

Carburetor Type - VM38SS

Main Jet - 400-400-420

Pilot Jet - 45

Cut Away - 3.0

Air Screw - 1.0 Turn

Jet Needle - 6CGY6-3

Needle Jet - Q-0 (247)

		AMBIENT TEMPERATURE			
		Below -20°F Below -29°C	-20° to +10°F -29° to -12°C	+10° to +40°F -12° to +5°C	Above +40°F Above 5°C
Alt. Met. (Ft)	0-900 (0-3000)	420	400	380	360
		420	400	380	360
		440	420	400	380
	900-1800 (3000-6000)	390	370	350	330
		390	370	350	330
		410	390	370	350
	1800-2700 (6000-9000)	360	340	320	300
		360	340	320	300
		380	360	340	320
	2700-3700 (9000-12000)	320	300	280	260
		320	300	280	260
		340	320	300	280

 - Shaded zone should drop Jet Needle one position (raise E-clip)

 - Production Setting

PTO smallest - Mag biggest, PTO-Center-Mag left to right

Indy Storm RMK

EC80PL04

Carburetor Type - VM38SS

Main Jet - 330-330-350

Pilot Jet - 50

Cut Away - 3.0

Air Screw - 1.0 Turn

Jet Needle - 6CGY6-3

Needle Jet - P-6 (247)

		AMBIENT TEMPERATURE			
		Below -20°F Below -29°C	-20° to +10°F -29° to -12°C	+10° to +40°F -12° to +5°C	Above +40°F Above 5°C
Alt. Met. (Ft)	0-900 (0-3000)	435	410	390	370
		435	410	390	370
		455	430	410	390
	900-1800 (3000-6000)	405	380	360	340
		405	380	360	340
		425	400	380	360
	BELOW 6000 FT (1800 M) INSTALL DOUBLE HEAD GASKET				
	1800-2700 (6000-9000)	375	350	330	310
		375	350	330	310
		395	370	350	330
	2700-3700 (9000-12000)	335	310	300	280
		335	310	300	280
		355	330	310	300

 - Shaded zone should raise Jet Needle one position (lower E-clip to #4)

 - Production Setting

 - Shaded zone should drop Jet Needle one position (raise E-clip)

PTO smallest - Mag biggest, PTO-Center-Mag left to right

FUEL SYSTEM/CARBURETION

1997 Jetting Compensation Charts

Indy Lite

EC34-2PM02

Carburetor Type - VM30SS

Main Jet - 150

Pilot Jet - 35

Cut Away - 2.5 AL

Air Screw - 1.5 Turn

Jet Needle - 5DP7-2

Needle Jet - O-6 (169)

		AMBIENT TEMPERATURE			
		Below -20°F Below -29°C	-20° to +10°F -29° to -12°C	+10° to +40°F -12° to +5°C	Above +40°F Above 5°C
Alt. Met. (Ft)	0-900 (0-3000)	160	150	140	135
	900-1800 (3000-6000)	145	140	130	125
	1800-2700 (6000-9000)	130	125	120	115
	2700-3700 (9000-12000)	115	115	110	105

- Shaded zone should drop Jet Needle one position (raise E-clip)

Indy Lite GT

EC34-2PM02

Carburetor Type - VM30SS

Main Jet - 150

Pilot Jet - 35

Cut Away - 2.5 AL

Air Screw - 1.5 Turn

Jet Needle - 5DP7-2

Needle Jet - O-6 (169)

		AMBIENT TEMPERATURE			
		Below -20°F Below -29°C	-20° to +10°F -29° to -12°C	+10° to +40°F -12° to +5°C	Above +40°F Above 5°C
Alt. Met. (Ft)	0-900 (0-3000)	160	150	140	135
	900-1800 (3000-6000)	145	140	130	125
	1800-2700 (6000-9000)	130	125	120	115
	2700-3700 (9000-12000)	115	115	110	105

- Shaded zone should drop Jet Needle one position (raise E-clip)

Indy Lite Deluxe

EC34-2PM02

Carburetor Type - VM30SS

Main Jet - 150

Pilot Jet - 35

Cut Away - 2.5 AL

Air Screw - 1.5 Turn

Jet Needle - 5DP7-2

Needle Jet - O-6 (169)

		AMBIENT TEMPERATURE			
		Below -20°F Below -29°C	-20° to +10°F -29° to -12°C	+10° to +40°F -12° to +5°C	Above +40°F Above 5°C
Alt. Met. (Ft)	0-900 (0-3000)	160	150	140	135
	900-1800 (3000-6000)	145	140	130	125
	1800-2700 (6000-9000)	130	125	120	115
	2700-3700 (9000-12000)	115	115	110	105

- Shaded zone should drop Jet Needle one position (raise E-clip)

Indy Sport

EC44-3PM02

Carburetor Type - VM34SS

Main Jet - 185

Pilot Jet - 35

Cut Away - 2.0

Air Screw - 1 Turn

Jet Needle - 6FJ6-3

Needle Jet - P-8 (166)

		AMBIENT TEMPERATURE			
		Below -20°F Below -29°C	-20° to +10°F -29° to -12°C	+10° to +40°F -12° to +5°C	Above +40°F Above 5°C
Alt. Met. (Ft)	0-900 (0-3000)	195	185	175	165
	900-1800 (3000-6000)	185	170	160	150
	1800-2700 (6000-9000)	165	155	145	135
	2700-3700 (9000-12000)	150	145	135	125

- Shaded zone should drop Jet Needle one position (raise E-clip)

Indy Sport Touring

EC44-3PM02

Carburetor Type - VM34SS

Main Jet - 185

Pilot Jet - 35

Cut Away - 2.0

Air Screw - 1.0 Turn

Jet Needle - 6FJ6-3

Needle Jet - P-8 (166)

		AMBIENT TEMPERATURE			
		Below -20°F Below -29°C	-20° to +10°F -29° to -12°C	+10° to +40°F -12° to +5°C	Above +40°F Above 5°C
Alt. Met. (Ft)	0-900 (0-3000)	195	185	175	165
	900-1800 (3000-6000)	185	170	160	150
	1800-2700 (6000-9000)	165	155	145	135
	2700-3700 (9000-12000)	150	145	135	125

- Shaded zone should drop Jet Needle one position (raise E-clip)

FUEL SYSTEM/CARBURETION 1997 Jetting Compensation Charts

Indy TranSport

EC44-3PM02

Carburetor Type - VM34SS

Main Jet - 185

Pilot Jet - 35

Cut Away - 2.0

Air Screw - 1.0 Turn

Jet Needle - 6FJ6-3

Needle Jet - P-8 (166)

		AMBIENT TEMPERATURE			
		Below -20°F Below -29°C	-20° to +10°F -29° to -12°C	+10° to +40°F -12° to +5°C	Above +40°F Above 5°C
Alt. Met. (Ft)	0-900 (0-3000)	195	185	175	165
	900-1800 (3000-6000)	185	170	160	150
	1800-2700 (6000-9000)	165	155	145	135
	2700-3700 (9000-12000)	160	145	135	125

- Shaded zone should drop Jet Needle one position (raise E-clip)

Indy Super Sport

EC50PM06

Carburetor Type - VM34SS

Main Jet - 250

Pilot Jet - 45

Cut Away - 2.0

Air Screw - 1 Turn

Jet Needle - 6DH7-3

Needle Jet - O-8 (480)

		AMBIENT TEMPERATURE			
		Below -20°F Below -29°C	-20° to +10°F -29° to -12°C	+10° to +40°F -12° to +5°C	Above +40°F Above 5°C
Alt. Met. (Ft)	0-900 (0-3000)	260	250	240	230
	900-1800 (3000-6000)	250	230	220	210
	1800-2700 (6000-9000)	220	210	210	200
	2700-3700 (9000-12000)	210	200	200	200

- Shaded zone should drop Jet Needle one position (raise E-clip)

Indy Trail

EC50PM04

Carburetor Type - VM34SS

Main Jet - 230

Pilot Jet - 35

Cut Away - 3.0

Air Screw - 1.5 Turn

Jet Needle - 6DH7-3

Needle Jet - P-8 (166)

		AMBIENT TEMPERATURE			
		Below -20°F Below -29°C	-20° to +10°F -29° to -12°C	+10° to +40°F -12° to +5°C	Above +40°F Above 5°C
Alt. Met. (Ft)	0-900 (0-3000)	240	230	220	210
	900-1800 (3000-6000)	220	210	200	190
	1800-2700 (6000-9000)	200	195	185	180
	2700-3700 (9000-12000)	190	180	180	180

- Shaded zone should drop Jet Needle one position (raise E-clip)

Indy Trail Touring

EC50PM04

Carburetor Type - VM34SS

Main Jet - 230

Pilot Jet - 35

Cut Away - 3.0

Air Screw - 1.5 Turn

Jet Needle - 6DH7-3

Needle Jet - P-8 (166)

		AMBIENT TEMPERATURE			
		Below -20°F Below -29°C	-20° to +10°F -29° to -12°C	+10° to +40°F -12° to +5°C	Above +40°F Above 5°C
Alt. Met. (Ft)	0-900 (0-3000)	240	230	220	210
	900-1800 (3000-6000)	220	210	200	190
	1800-2700 (6000-9000)	200	195	185	180
	2700-3700 (9000-12000)	190	180	180	180

- Shaded zone should drop Jet Needle one position (raise E-clip)

Indy Trail RMK

EC50PM05

Carburetor Type - VM34SS

Main Jet - 270

Pilot Jet - 45

Cut Away - 2.0

Air Screw - 1 Turn

Jet Needle - 6DH7-2

Needle Jet - P-2 (480)

		AMBIENT TEMPERATURE			
		Below -20°F Below -29°C	-20° to +10°F -29° to -12°C	+10° to +40°F -12° to +5°C	Above +40°F Above 5°C
Alt. Met. (Ft)	0-900 (0-3000)	310 #4	290 #3	270 #3	250 #2
	900-1800 (3000-6000)	310 #3	290 #3	270 #2	250 #2
	1800-2700 (6000-9000)	310 #3	290 #2	270 #2	250 #2
	2700-3700 (9000-12000)	310 #2	290 #2	270 #2	250 #1

- Production Setting

FUEL SYSTEM/CARBURETION

1997 Jetting Compensation Charts

Indy 440 LC

EC45PL09

Carburetor Type - VM34SS

Main Jet - 270

Pilot Jet - 40

Cut Away - 2.0

Air Screw - .75 Turn

Jet Needle - 6DH7-2

Needle Jet - P-2 (480)

		AMBIENT TEMPERATURE			
		Below -20°F Below -29°C	-20° to +10°F -29° to -12°C	+10° to +40°F -12° to +5°C	Above +40°F Above 5°C
Alt. Met. (Ft)	0-900 (0-3000)	290	270	250	240
	900-1800 (3000-6000)	260	250	240	230
	1800-2700 (6000-9000)	240	230	220	210
	2700-3700 (9000-12000)	220	210	200	190

- Shaded zone should drop Jet Needle one position (raise E-clip)

Indy 500 Classic

EC50PL17

Carburetor Type - VM38SS

Main Jet - 350

Pilot Jet - 40

Cut Away - 2.5CH

Air Screw - 1.0 Turn

Jet Needle - 6F9-3

Needle Jet - P-8 (247)

		AMBIENT TEMPERATURE			
		Below -20°F Below -29°C	-20° to +10°F -29° to -12°C	+10° to +40°F -12° to +5°C	Above +40°F Above 5°C
Alt. Met. (Ft)	0-900 (0-3000)	370	*350	330	310
	900-1800 (3000-6000)	330	310	290	270
	1800-2700 (6000-9000)	290	270	250	230
	2700-3700 (9000-12000)	250	240	220	210

- Shaded zone should drop Jet Needle one position (raise E-clip)

* - Production Setting

Indy Classic Touring

EC50PL19

Carburetor Type - VM34SS

Main Jet - 250

Pilot Jet - 40

Cut Away - 3.0 CH

Air Screw - 1.0 Turn

Jet Needle - 6EJ26-3

Needle Jet - P-2 (480)

		AMBIENT TEMPERATURE			
		Below -20°F Below -29°C	-20° to +10°F -29° to -12°C	+10° to +40°F -12° to +5°C	Above +40°F Above 5°C
Alt. Met. (Ft)	0-900 (0-3000)	260	*250	240	230
	900-1800 (3000-6000)	240	230	220	210
	1800-2700 (6000-9000)	220	210	195	185
	2700-3700 (9000-12000)	200	190	180	175

- Shaded zone should drop Jet Needle one position (raise E-clip)

* - Production Setting

Indy 500

EC50PL17

Carburetor Type - VM38SS

Main Jet - 350

Pilot Jet - 40

Cut Away - 2.5CH

Air Screw - 1.0 Turn

Jet Needle - 6F9-3

Needle Jet - P-8 (247)

		AMBIENT TEMPERATURE			
		Below -20°F Below -29°C	-20° to +10°F -29° to -12°C	+10° to +40°F -12° to +5°C	Above +40°F Above 5°C
Alt. Met. (Ft)	0-900 (0-3000)	370	*350	330	310
	900-1800 (3000-6000)	330	310	290	270
	1800-2700 (6000-9000)	290	270	250	230
	2700-3700 (9000-12000)	250	240	220	210

- Shaded zone should drop Jet Needle one position (raise E-clip)

* - Production Setting

FUEL SYSTEM/CARBURETION 1997 Jetting Compensation Charts

Indy XCF

EC44-3PM02

Carburetor Type - VM34SS

Main Jet - 185

Pilot Jet - 35

Cut Away - 2.0

Air Screw - 1 Turn

Jet Needle - 6FJ6-3

Needle Jet - P-8 (166)

		AMBIENT TEMPERATURE			
		Below -20°F Below -29°C	-20° to +10°F -29° to -12°C	+10° to +40°F -12° to +5°C	Above +40°F Above 5°C
Alt. Met. (Ft)	0-900 (0-3000)	195	185	175	165
	900-1800 (3000-6000)	185	170	160	150
	1800-2700 (6000-9000)	165	155	145	135
	2700-3700 (9000-12000)	150	145	135	125

- Shaded zone should drop Jet Needle one position (raise E-clip)

Indy 500 SKS

EC50PL17

Carburetor Type - VM38SS

Main Jet - 350

Pilot Jet - 40

Cut Away - 2.5CH

Air Screw - 1.0 Turn

Jet Needle - 6F9-3

Needle Jet - P-8 (247)

		AMBIENT TEMPERATURE			
		Below -20°F Below -29°C	-20° to +10°F -29° to -12°C	+10° to +40°F -12° to +5°C	Above +40°F Above 5°C
Alt. Met. (Ft)	0-900 (0-3000)	370	*350	330	310
	900-1800 (3000-6000)	330	310	290	270
	1800-2700 (6000-9000)	290	270	250	230
	2700-3700 (9000-12000)	250	240	220	210

- Shaded zone should drop Jet Needle one position (raise E-clip)

* - Production Setting

Indy 500 RMK

EC50PL16

Carburetor Type - VM34SS

Main Jet - 250

Pilot Jet - 40

Cut Away - 2.5CH

Air Screw - .75 Turn

Jet Needle - 6EJ26-3

Needle Jet - P-2 (480)

		AMBIENT TEMPERATURE			
		Below -20°F Below -29°C	-20° to +10°F -29° to -12°C	+10° to +40°F -12° to +5°C	Above +40°F Above 5°C
Alt. Met. (Ft)	0-900 (0-3000)	290 #4	270 #4	250 #4	240 #3
	900-1800 (3000-6000)	290 #4	270 #4	250 #3	240 #3
	1800-2700 (6000-9000)	290 #4	270 #3	*250 #3	240 #3
	2700-3700 (9000-12000)	290 #3	270 #3	250 #3	240 #2

- Shaded zone should raise Jet Needle one position (lower E-clip to #3)

- Shaded zone should raise Jet Needle two positions (lower E-clip to #4)

* - Production Setting

Indy WideTrak GT

EC50PM03

Carburetor Type - VM34SS

Main Jet - 200

Pilot Jet - 30

Cut Away - 3.0 CH

Air Screw - 1 Turn

Jet Needle - 6DH7-3

Needle Jet - P-6 (166)

		AMBIENT TEMPERATURE			
		Below -20°F Below -29°C	-20° to +10°F -29° to -12°C	+10° to +40°F -12° to +5°C	Above +40°F Above 5°C
Alt. Met. (Ft)	0-900 (0-3000)	210	*200	190	180
	900-1800 (3000-6000)	195	185	175	165
	1800-2700 (6000-9000)	180	170	160	150
	2700-3700 (9000-12000)	160	155	145	135

- Shaded zone should drop Jet Needle one position (raise E-clip)

* - Production Setting

FUEL SYSTEM/CARBURETION

1997 Jetting Compensation Charts

Indy WideTrak LX

EC50PL20

Carburetor Type - VM34SS

Main Jet - 195

Pilot Jet - 35

Cut Away - 3.0

Air Screw - 1/2 turn

Jet Needle - 6EJ26-2

Needle Jet - P-6 (166)

		AMBIENT TEMPERATURE			
		Below -20°F Below -29°C	-20° to +10°F -29° to -12°C	+10° to +40°F -12° to +5°C	Above +40°F Above 5°C
Alt. Met. (Ft)	0-900 (0-3000)	205	*195	185	175
	900-1800 (3000-6000)	190	180	170	170
	1800-2700 (6000-9000)	175	165	155	145
	2700-3700 (9000-12000)	155	150	140	135

- Shaded zone should drop Jet Needle one position (raise E-clip)

* - Production Setting

Indy 440 XC

EC50PL08

Carburetor Type - VM34SS

Main Jet - 240

Pilot Jet - 50

Cut Away - 1.5

Air Screw - .75 Turn

Jet Needle - 6DH3-3

Needle Jet - O-4 (286)

		AMBIENT TEMPERATURE			
		Below -20°F Below -29°C	-20° to +10°F -29° to -12°C	+10° to +40°F -12° to +5°C	Above +40°F Above 5°C
Alt. Met. (Ft)	0-900 (0-3000)	250	240	230	220
	900-1800 (3000-6000)	230	220	210	200
	1800-2700 (6000-9000)	210	200	190	180
	2700-3700 (9000-12000)	195	185	175	170

- Shaded zone should drop Jet Needle one position (raise E-clip)

Indy 600 XCR

EC59PL01

Carburetor Type - VM38SS

Main Jet - P-360/C-380/M-380 Pilot Jet - 40

Cut Away - 2.0

Air Screw - .5 Turn

Jet Needle - 6CEY6-4

Needle Jet - P-6 (247)

		AMBIENT TEMPERATURE			
		Below -20°F Below -29°C	-20° to +10°F -29° to -12°C	+10° to +40°F -12° to +5°C	Above +40°F Above 5°C
Alt. Met. (Ft)	0-900 (0-3000)	400	380	360	PTO Gen Mag Example- 320/340/340 340
	900-1800 (3000-6000)	360	350	330	310
	1800-2700 (6000-9000)	330	320	300	280
	2700-3700 (9000-12000)	300	290	270	260

- Shaded zone should drop Jet Needle one position (raise E-clip)

Indy 600 XCR SE

EC59PL01

Carburetor Type - VM38SS

Main Jet - P-360/C-380/M-380 Pilot Jet - 40

Cut Away - 2.0

Air Screw - .5 Turn

Jet Needle - 6CEY6-4

Needle Jet - P-6 (247)

		AMBIENT TEMPERATURE			
		Below -20°F Below -29°C	-20° to +10°F -29° to -12°C	+10° to +40°F -12° to +5°C	Above +40°F Above 5°C
Alt. Met. (Ft)	0-900 (0-3000)	400	380	360	(PTO Gen Mag) Example- 320/340/340 340
	900-1800 (3000-6000)	360	350	330	310
	1800-2700 (6000-9000)	330	320	300	280
	2700-3700 (9000-12000)	300	290	270	260

- Shaded zone should drop Jet Needle one position (raise E-clip)

FUEL SYSTEM/CARBURETION 1997 Jetting Compensation Charts

Indy 600 XC

EC58PL08

Carburetor Type - VM38SS

Main Jet - 270

Pilot Jet - 35

Cut Away - 2.0CH

Air Screw - .75 Turn

Jet Needle - 6DH7-3

Needle Jet - Q-2 (247)

		AMBIENT TEMPERATURE			
		Below -20°F Below -29°C	-20° to +10°F -29° to -12°C	+10° to +40°F -12° to +5°C	Above +40°F Above 5°C
Alt. Met. (Ft)	0-900 (0-3000)	290	270	250	240
	900-1800 (3000-6000)	260	250	240	230
	1800-2700 (6000-9000)	240	230	220	210
	2700-3700 (9000-12000)	220	210	200	190

- Shaded zone should drop Jet Needle one position (raise E-clip)

Indy XLT

EC58PL03

Carburetor Type - VM34SS

Main Jet - 220

Pilot Jet - 35

Cut Away - 2.0

Air Screw - 1.0 Turn

Jet Needle - 6DP17-3

Needle Jet - Q-2 (166)

		AMBIENT TEMPERATURE			
		Below -20°F Below -29°C	-20° to +10°F -29° to -12°C	+10° to +40°F -12° to +5°C	Above +40°F Above 5°C
Alt. Met. (Ft)	0-900 (0-3000)	230	220	210	200
	900-1800 (3000-6000)	210	200	190	180
	1800-2700 (6000-9000)	195	185	175	170
	2700-3700 (9000-12000)	180	170	170	170

- Shaded zone should drop Jet Needle one position (raise E-clip)

Indy XLT SKS

EC58PL03

Carburetor Type - VM34SS

Main Jet - 220

Pilot Jet - 35

Cut Away - 2.0

Air Screw - 1.0 Turn

Jet Needle - 6DP17-3

Needle Jet - Q-2 (166)

		AMBIENT TEMPERATURE			
		Below -20°F Below -29°C	-20° to +10°F -29° to -12°C	+10° to +40°F -12° to +5°C	Above +40°F Above 5°C
Alt. Met. (Ft)	0-900 (0-3000)	230	220	210	200
	900-1800 (3000-6000)	210	200	190	180
	1800-2700 (6000-9000)	195	185	175	170
	2700-3700 (9000-12000)	180	170	170	170

- Shaded zone should drop Jet Needle one position (raise E-clip)

Indy XLT RMK

EC58PL07

Carburetor Type - VM34SS (ACCS)

Main Jet - 240

Pilot Jet - 50

Cut Away - 2.0

Air Screw - .75

Jet Needle - 6EJ3-2

Needle Jet - P-2 (480)

		AMBIENT TEMPERATURE			
		# Indicates E-clip Location from top of Jet Needle			
		Below -20°F Below -29°C	-20° to +10°F -29° to -12°C	+10° to +40°F -12° to +5°C	Above +40°F Above 5°C
Alt. Met. (Ft)	0-900 (0-3000)	280 #3	260 #2	240 #2	230 #2
	900-1800 (3000-6000)	280 #2	260 #2	240 #2	230 #2
	1800-2700 (6000-9000)	280 #2	260 #2	*240 #2	230 #2
	2700-3700 (9000-12000)	280 #2	260 #2	240 #2	230 #1

* - Production Setting

FUEL SYSTEM/CARBURETION

1997 Jetting Compensation Charts

Indy XLT SP

EC58PL12

Carburetor Type - VM38ALSS

Main Jet - 270

Pilot Jet - 35

Cut Away - 2.0

Air Screw - 1.5 Turn

Jet Needle - 6DH7-3

Needle Jet - Q-2 (247)

		AMBIENT TEMPERATURE			
		Below -20°F Below -29°C	-20° to +10°F -29° to -12°C	+10° to +40°F -12° to +5°C	Above +40°F Above 5°C
Alt. Met. (F)	0-900 (0-3000)	290	270	250	240
	900-1800 (3000-6000)	270	250	240	230
	1800-2700 (6000-9000)	240	230	220	210
	2700-3700 (9000-12000)	220	210	200	190

- Shaded zone should drop Jet Needle one position (raise E-clip)

Indy XLT Touring

EC58PL09

Carburetor Type - VM34CS

Main Jet - 260

Pilot Jet - 35

Cut Away - 2.5

Air Screw - 1.0 Turn

Jet Needle - 6DP17-3

Needle Jet - Q-2 (166)

Inlet Needle Seat - 1.5

		AMBIENT TEMPERATURE			
		Below -20°F Below -29°C	-20° to +10°F -29° to -12°C	+10° to +40°F -12° to +5°C	Above +40°F Above 5°C
Alt. Met. (F)	0-900 (0-3000)	280	260*	240	230
	900-1800 (3000-6000)	250	240	230	220
	1800-2700 (6000-9000)	230	220	210	190
	2700-3700 (9000-12000)	210	200	190	180

- Shaded zone should drop Jet Needle one position (raise E-clip)

* - Production Setting

Indy XLT LTD

EC58PL09

Carburetor Type - VM34CS

Main Jet - 260

Pilot Jet - 35

Cut Away - 2.5

Air Screw - 1.0 Turn

Jet Needle - 6DP17-3

Needle Jet - Q-2 (166)

Inlet Needle Seat - 1.5

		AMBIENT TEMPERATURE			
		Below -20°F Below -29°C	-20° to +10°F -29° to -12°C	+10° to +40°F -12° to +5°C	Above +40°F Above 5°C
Alt. Met. (F)	0-900 (0-3000)	280	260*	240	230
	900-1800 (3000-6000)	250	240	230	220
	1800-2700 (6000-9000)	230	220	210	190
	2700-3700 (9000-12000)	210	200	190	180

- Shaded zone should drop Jet Needle one position (raise E-clip)

* - Production Setting

Indy XLT LTD SP

EC58PL12

Carburetor Type - VM38ALSS

Main Jet - 310

Pilot Jet - 35

Cut Away - 2.0

Air Screw - 1 Turn

Jet Needle - 6DH7-3

Needle Jet - Q-2 (247)

		AMBIENT TEMPERATURE			
		Below -20°F Below -29°C	-20° to +10°F -29° to -12°C	+10° to +40°F -12° to +5°C	Above +40°F Above 5°C
Alt. Met. (F)	0-900 (0-3000)	330	310	290	270
	900-1800 (3000-6000)	310	290	270	260
	1800-2700 (6000-9000)	280	270	250	240
	2700-3700 (9000-12000)	260	240	230	220

- Shaded zone should drop Jet Needle one position (raise E-clip)

FUEL SYSTEM/CARBURETION 1997 Jetting Compensation Charts

Indy Ultra

EC68PL01

Carburetor Type - VM38

Main Jet - 340

Cut Away - 2.0

Jet Needle - 6DH8-2

Pilot Jet - 40

Air Screw - 1.0 Turn

Needle Jet - P-4 (247)

Indy Ultra SP

EC68PL01

Carburetor Type - VM38

Main Jet - 340

Cut Away - 2.0

Jet Needle - 6DH8-2

Pilot Jet - 40

Air Screw - 1.0 Turn

Needle Jet - P-4 (247)

Indy Ultra Touring

EC68PL01

Carburetor Type - VM38

Main Jet - 340

Cut Away - 2.0

Jet Needle - 6DH8-2

Pilot Jet - 40

Air Screw - 1.0 Turn

Needle Jet - P-4 (247)

Indy Ultra SPX

EC68PL03

Carburetor Type - VM38

Main Jet - 380

Cut Away - 3.0

Jet Needle - 6CEY6-4

Pilot Jet - 50

Air Screw - 1.0

Needle Jet - Q-2 (247)

Indy Ultra SPX SE

EC68PL03

Carburetor Type - VM38

Main Jet - 380

Cut Away - 3.0

Jet Needle - 6CEY6-4

Pilot Jet - 50

Air Screw - 1.0

Needle Jet - Q-2 (247)

		AMBIENT TEMPERATURE			
		Below -20°F Below -29°C	-20° to +10°F -29° to -12°C	+10° to +40°F -12° to +5°C	Above +40°F Above 5°C
Alt. Met. (Ft)	0-900 (0-3000)	350	340	320	300
	900-1800 (3000-6000)	320	310	300	280
	1800-2700 (6000-9000)	290	280	270	260
	2700-3700 (9000-12000)	270	260	250	240

		AMBIENT TEMPERATURE			
		Below -20°F Below -29°C	-20° to +10°F -29° to -12°C	+10° to +40°F -12° to +5°C	Above +40°F Above 5°C
Alt. Met. (Ft)	0-900 (0-3000)	350	340	320	300
	900-1800 (3000-6000)	320	310	300	280
	1800-2700 (6000-9000)	290	280	270	260
	2700-3700 (9000-12000)	270	260	250	240

		AMBIENT TEMPERATURE			
		Below -20°F Below -29°C	-20° to +10°F -29° to -12°C	+10° to +40°F -12° to +5°C	Above +40°F Above 5°C
Alt. Met. (Ft)	0-900 (0-3000)	350	340	320	300
	900-1800 (3000-6000)	320	310	300	280
	1800-2700 (6000-9000)	290	280	270	260
	2700-3700 (9000-12000)	270	260	250	240

		AMBIENT TEMPERATURE			
		Below -20°F Below -29°C	-20° to +10°F -29° to -12°C	+10° to +40°F -12° to +5°C	Above +40°F Above 5°C
Alt. Met. (Ft)	0-900 (0-3000)	400 #4	*380 #4	360 #3	340 #3
	900-1800 (3000-6000)	370 #4	350 #3	330 #3	310 #2
	1800-2700 (6000-9000)	340 #3	320 #3	300 #2	280 #2
	2700-3700 (9000-12000)	310 #3	290 #2	270 #2	250 #1

* - Production Setting

		AMBIENT TEMPERATURE			
		Below -20°F Below -29°C	-20° to +10°F -29° to -12°C	+10° to +40°F -12° to +5°C	Above +40°F Above 5°C
Alt. Met. (Ft)	0-900 (0-3000)	400 #4	*380 #4	360 #3	340 #3
	900-1800 (3000-6000)	370 #4	350 #3	330 #3	310 #2
	1800-2700 (6000-9000)	340 #3	320 #3	300 #2	280 #2
	2700-3700 (9000-12000)	310 #3	290 #2	270 #2	250 #1

* - Production Setting

FUEL SYSTEM/CARBURETION

1997 Jetting Compensation Charts

Indy 700 SKS

SN70LCDCSP-01

Carburetor Type - Keihin PWK 39

Main Jet - 185 Long Hex Pilot Jet - 40

Cut Away - 6.5

Air Screw - 1 Turn

Jet Needle - R1370G-3

Needle Jet - Fixed

		AMBIENT TEMPERATURE			
		Below -20°F Below -29°C	-20° to +10°F -29° to -12°C	+10° to +40°F -12° to +5°C	Above +40°F Above 5°C
Alt. Met. (Ft)	0-900 (0-3000)	190	*185	178	172
	900-1800 (3000-6000)	178	175	168	162
	1800-2700 (6000-9000)	168	165	158	155
	2700-3700 (9000-12000)	158	155	150	145

- Above 6000ft use JN R1370J-3, 5.0 CA, 55 pilot, and 1/2 turn air screw

- Lower Jet Needle 1 position (raise E-clip) and install RMK components listed above

* - Production Setting

Indy 700 RMK

SN70LCDCSP-02

Carburetor Type - Keihin PWK 39

Main Jet - 158 Long Hex Pilot Jet - 55

Cut Away - 5.0

Air Screw - 1/2 Turn

Jet Needle - R1370J-3

Needle Jet - Fixed

		AMBIENT TEMPERATURE			
		Below -20°F Below -29°C	-20° to +10°F -29° to -12°C	+10° to +40°F -12° to +5°C	Above +40°F Above 5°C
Alt. Met. (Ft)	0-900 (0-3000)	190	185	178	172
	900-1800 (3000-6000)	178	175	168	162
	1800-2700 (6000-9000)	168	165	*158	155
	2700-3700 (9000-12000)	158	155	150	145

- Lower Jet Needle 1 position (raise E-clip)

- Below 6000ft use JN R1370G-3, 6.5 CA, 40 pilot, and 1 turn air screw

* - Production Setting

Indy 700 XC

SN70LCDCSP-01

Carburetor Type - Keihin PWK 39

Main Jet - 185 Long Hex Pilot Jet - 40

Cut Away - 6.5

Air Screw - 1 Turn

Jet Needle - R1370G-4

Needle Jet - Fixed

		AMBIENT TEMPERATURE			
		# Indicates E-clip Location from top of Jet Needle			
Alt. Met. (Ft)	0-900 (0-3000)	Below -20°F Below -29°C	-20° to +10°F -29° to -12°C	+10° to +40°F -12° to +5°C	Above +40°F Above 5°C
		190 #4	*185 #4	178 #4	172 #3
	900-1800 (3000-6000)	178 #4	175 #4	168 #3	162 #3
		168 #4	165 #3	158 #3	155 #3
	2700-3700 (9000-12000)	158 #3	155 #3	150 #3	145 #3

* - Production Setting

Indy Storm

EC80PL05

Carburetor Type - VM38SS

Main Jet - 410-400-420 Pilot Jet - 50

Cut Away - 3.0

Air Screw - 1.0 Turn

Jet Needle - 6CGY6-3

Needle Jet - Q-0 (247)

		AMBIENT TEMPERATURE			
		# Indicates E-clip Location from top of Jet Needle			
Alt. Met. (Ft)	#3	Below -20°F Below -29°C	-20° to +10°F -29° to -12°C	+10° to +40°F -12° to +5°C	Above +40°F Above 5°C
		430/420/440 #3	*410/400/420 #3	390/380/400 #3	370/360/380 #3
	900-1800 (3000-6000)	380/370/390 #3	360/350/370 #3	340/330/350 #3	320/310/330 #2
		340/330/350 #3	320/310/330 #3	300/290/310 #2	290/280/300 #2
	2700-3700 (9000-12000)	290/280/300 #3	270/260/280 #2	250/240/260 #2	240/230/250 #2

* - Production Setting

Mag biggest, PTO-Center-Mag left to right

FUEL SYSTEM/CARBURETION 1997 Jetting Compensation Charts

Indy Storm SE

EC80PL05

Carburetor Type - VM38SS

Main Jet - 410-400-420 Pilot Jet - 50

Cut Away - 3.0 Air Screw - 1.0 Turn

Jet Needle - 6CGY6-3 Needle Jet - Q-0 (247)

		AMBIENT TEMPERATURE			
		Below -20°F Below -29°C	-20° to +10°F -29° to -12°C	+10° to +40°F -12° to +5°C	Above +40°F Above 5°C
#3	0-900 (0-3000)	430/420/440 #3	*410/400/420 #3	390/380/400 #3	370/360/380 #3
	900-1800 (3000-6000)	380/370/390 #3	360/350/370 #3	340/330/350 #3	320/310/330 #2
	1800-2700 (6000-9000)	340/330/350 #3	320/310/330 #3	300/290/310 #2	290/280/300 #2
	2700-3700 (9000-12000)	290/280/300 #3	270/260/280 #2	250/240/260 #2	240/230/250 #2

Indy Storm RMK

EC80PL04

Carburetor Type - VM38SS

Main Jet - 300-290-310 Pilot Jet - 55

Cut Away - 2.5 Air Screw - 1.0 Turn

Jet Needle - 6CGY6-3 Needle Jet - P-6 (247)

		AMBIENT TEMPERATURE			
		Below -20°F Below -29°C	-20° to +10°F -29° to -12°C	+10° to +40°F -12° to +5°C	Above +40°F Above 5°C
#3	0-900 (0-3000)	430/420/440 #4	410/400/420 #4	390/380/400 #4	370/360/380 #4
	900-1800 (3000-6000)	380/370/390 #4	360/350/370 #4	340/330/350 #4	320/310/330 #3
	1800-2700 (6000-9000)	340/330/350 #4	320/310/330 #4	*300/290/310 #3	290/280/300 #3
	2700-3700 (9000-12000)	290/280/300 #4	270/260/280 #3	250/240/260 #3	240/230/250 #2

* - Production Setting

Mag biggest, PTO-Center-Mag left to right

Indy 440 XCR

SN44LCDCSP-01

Carburetor Type - VM34SS

Main Jet - 360 Pilot Jet - 40

Cut Away - 2.0 Air Screw - 1/2 Turn

Jet Needle - 6DH7-4 Needle Jet - P-4 (286 or 159)

		AMBIENT TEMPERATURE			
		# Indicates E-clip Location from top of Jet Needle			
		Below -20°F Below -29°C	-20° to +10°F -29° to -12°C	+10° to +40°F -12° to +5°C	Above +40°F Above 5°C
#3	0-900 (0-3000)	380 #4	*360 #4	340 #3	320 #3
	900-1800 (3000-6000)	340 #4	320 #3	300 #3	280 #3
	1800-2700 (6000-9000)	300 #3	290 #3	270 #3	250 #3
	2700-3700 (9000-12000)	270 #3	260 #3	240 #3	220 #3

* - Production Setting

FUEL SYSTEM/CARBURETION

1998 Jetting Compensation Charts

Lite Lite Deluxe Lite Touring EC34-2PM02 VM30SS Main Jet - 150 Pilot Jet - 35 Cut Away - 2.5 AL Air Screw - 1.5 Turn Jet Needle - 5DP7-2 Needle Jet - O-6 (169)	Alt. Met.(Ft)	AMBIENT TEMPERATURE # Indicates E-clip Location from top of Jet Needle			
		Below -20°F Below -29°C	-20° to +10°F -29° to -12°C	+10° to +40°F -12° to +5°C	Above +40°F Above 5°C
	0-900 (0-3000)	150 #2	*150 #2	140 #2	135 #2
	900-1800 (3000-6000)	145 #2	140 #2	130 #2	125 #1
	1800-2700 (6000-9000)	130 #2	125 #2	120 #1	115 #1
	2700-3700 (9000-12000)	115 #2	115 #1	110 #1	105 #1

Sport Sport Touring TransPort XCF EC44-3PM024 VM34SS Main Jet - 185 Pilot Jet - 35 Cut Away - 2.0 Air Screw - 1 Turn Jet Needle - 6FJ6-3 Needle Jet - P-8 (166)	Alt. Met.(Ft)	AMBIENT TEMPERATURE # Indicates E-clip Location from top of Jet Needle			
		Below -20°F Below -29°C	-20° to +10°F -29° to -12°C	+10° to +40°F -12° to +5°C	Above +40°F Above 5°C
	0-900 (0-3000)	195 #3	*185 #3	175 #3	165 #2
	900-1800 (3000-6000)	185 #3	170 #3	160 #2	150 #2
	1800-2700 (6000-9000)	165 #3	155 #2	145 #2	135 #2
	2700-3700 (9000-12000)	150 #2	145 #2	135 #2	125 #2

Super Sport EC50PM061 VM34SS Main Jet - 250 Pilot Jet - 45 Cut Away - 2.0 Air Screw - 1 Turn Jet Needle - 6DH7-3 Needle Jet - O-8 (480)	Alt. Met.(Ft)	AMBIENT TEMPERATURE # Indicates E-clip Location from top of Jet Needle			
		Below -20°F Below -29°C	-20° to +10°F -29° to -12°C	+10° to +40°F -12° to +5°C	Above +40°F Above 5°C
	0-900 (0-3000)	260 #3	*250 #3	240 #3	230 #3
	900-1800 (3000-6000)	250 #3	230 #3	220 #3	210 #2
	1800-2700 (6000-9000)	220 #3	210 #3	210 #2	200 #2
	2700-3700 (9000-12000)	210 #3	200 #2	200 #2	200 #2

Trail Trail Touring EC50PM043 VM34SS Main Jet - 230 Pilot Jet - 40 Cut Away - 3.0 Air Screw - 1.0 Turn Jet Needle - 6DH7-3 Needle Jet - P-8 (166)	Alt. Met.(Ft)	AMBIENT TEMPERATURE # Indicates E-clip Location from top of Jet Needle			
		Below -20°F Below -29°C	-20° to +10°F -29° to -12°C	+10° to +40°F -12° to +5°C	Above +40°F Above 5°C
	0-900 (0-3000)	240 #3	*230 #3	220 #3	210 #3
	900-1800 (3000-6000)	220 #3	210 #3	200 #3	190 #2
	1800-2700 (6000-9000)	200 #3	195 #3	185 #2	180 #2
	2700-3700 (9000-12000)	190 #3	180 #2	180 #2	180 #2

FUEL SYSTEM/CARBURETION

1998 Jetting Compensation Charts

Trail RMK EC50PM051 VM34 (ACCS)	Alt. Met.(Ft)	AMBIENT TEMPERATURE # Indicates E-clip Location from top of Jet Needle			
		Below -20°F Below -29°C	-20° to +10°F -29° to -12°C	+10° to +40°F -12° to +5°C	Above +40°F Above 5°C
Main Jet - 270 Pilot Jet - 45 Cut Away - 2.0 Air Screw - 1 Turn Jet Needle - 6EJ3-3 Needle Jet - O-6 (480)	0-900 (0-3000)	310 #3	290 #3	270 #3	250 #3
	900-1800 (3000-6000)	310 #3	290 #3	270 #3	250 #3
	1800-2700 (6000-9000)	310 #3	290 #3	*270 #3*	250 #3
	2700-3700 (9000-12000)	310 #3	290 #3	270 #3	250 #3

440 LC EC45PL091 VM34SS	Alt. Met.(Ft)	AMBIENT TEMPERATURE # Indicates E-clip Location from top of Jet Needle			
		Below -20°F Below -29°C	-20° to +10°F -29° to -12°C	+10° to +40°F -12° to +5°C	Above +40°F Above 5°C
Main Jet - 270 Pilot Jet - 40 Cut Away - 2.0 Air Screw - .75 Turn Jet Needle - 6DH7-2 Needle Jet - P-2 (480)	0-900 (0-3000)	290 #2	*270 #2	250 #2	240 #2
	900-1800 (3000-6000)	260 #2	250 #2	240 #2	230 #3
	1800-2700 (6000-9000)	240 #2	230 #2	220 #3	210 #3
	2700-3700 (9000-12000)	220 #2	210 #3	200 #3	190 #3

1998 440 XCR SN44-44LCDCSP-01 VM34SS	Alt. Met.(Ft)	AMBIENT TEMPERATURE # Indicates E-clip Location from top of Jet Needle			
		Below -20°F Below -29°C	-20° to +10°F -29° to -12°C	+10° to +40°F -12° to +5°C	Above +40°F Above 5°C
Main Jet - 360 Hex Pilot Jet - 45 Cut Away - 2.0 Air Screw - 1.5 Turns Jet Needle - 6DH7-3 Needle Jet - P-4 (286)	0-900 (0-3000)	380 #3	360 #3	340 #3	320 #3
	900-1800 (3000-6000)	340 #3	320 #3	300 #3	280 #3
	1800-2700 (6000-9000)	300 #3	290 #3	270 #3	250 #3
	2700-3700 (9000-12000)	270 #3	250 #3	240 #3	220 #3

500 500 Classic EC50PL171 VM38SS	Alt. Met.(Ft)	AMBIENT TEMPERATURE # Indicates E-clip Location from top of Jet Needle			
		Below -20°F Below -29°C	-20° to +10°F -29° to -12°C	+10° to +40°F -12° to +5°C	Above +40°F Above 5°C
Main Jet - 350 Pilot Jet - 45 Cut Away - 2.5 Air Screw - .75 Turn Jet Needle - 6F9-3 Needle Jet - P-6 (480)	0-900 (0-3000)	370 #3	350 #3	330 #3	310 #3
	900-1800 (3000-6000)	330 #3	310 #3	290 #3	270 #2
	1800-2700 (6000-9000)	290 #3	270 #3	250 #2	230 #2
	2700-3700 (9000-12000)	250 #3	240 #2	220 #2	210 #2

500 RMK EC50PL161 VM34SS (ACCS)	Alt. Met.(Ft)	AMBIENT TEMPERATURE # Indicates E-clip Location from top of Jet Needle			
		Below -20°F Below -29°C	-20° to +10°F -29° to -12°C	+10° to +40°F -12° to +5°C	Above +40°F Above 5°C
Main Jet - 260 Pilot Jet - 55 Cut Away - 2.5 Air Screw - 1.25 Turn Jet Needle - 6FJ43-2 Needle Jet - P-0 (480)	0-900 (0-3000)	290 #4	270 #3	260 #3	240 #3
	900-1800 (3000-6000)	290 #4	270 #3	260 #3	240 #2
	1800-2700 (6000-9000)	290 #3	270 #3	*260 #2	240 #2
	2700-3700 (9000-12000)	290 #3	270 #2	260 #2	240 #2

FUEL SYSTEM/CARBURETION

1998 Jetting Compensation Charts

Classic Touring EC50PL191 VM34SS Main Jet - 250 Pilot Jet - 40 Cut Away - 3.0 CH Air Screw - 3/4 Turn Jet Needle - 6EJ26-3 Needle Jet - P-2 (480)	Alt. Met.(Ft)	AMBIENT TEMPERATURE # Indicates E-clip Location from top of Jet Needle			
		Below -20°F Below -29°C	-20° to +10°F -29° to -12°C	+10° to +40°F -12° to +5°C	Above +40°F Above 5°C
	0-900 (0-3000)	260 #3	*250 #3	240 #3	230 #3
	900-1800 (3000-6000)	240 #3	230 #3	220 #3	210 #2
	1800-2700 (6000-9000)	220 #3	210 #3	195 #2	185 #2
	2700-3700 (9000-12000)	200 #3	190 #2	180 #2	175 #2

WideTrak LX EC50PL201 VM34SS Main Jet - 195 Pilot Jet - 35 Cut Away - 3.0 Air Screw - 1/2 turn Jet Needle - 6EJ26-2 Needle Jet - P-6 (166)	Alt. Met.(Ft)	AMBIENT TEMPERATURE # Indicates E-clip Location from top of Jet Needle			
		Below -20°F Below -29°C	-20° to +10°F -29° to -12°C	+10° to +40°F -12° to +5°C	Above +40°F Above 5°C
	0-900 (0-3000)	210 #2	*195 #2	185 #2	175 #2
	900-1800 (3000-6000)	190 #2	180 #2	170 #2	170 #1
	1800-2700 (6000-9000)	175 #2	165 #2	155 #1	145 #1
	2700-3700 (9000-12000)	155 #2	150 #1	140 #1	135 #1

XLT LTD XLT Touring EC58PL130 VM34SS Main Jet - 240 Pilot Jet - 40 Cut Away - 2.5 Air Screw - 1.0 Turn Jet Needle - 6DP17-3 Needle Jet - Q-4 (480)	Alt. Met.(Ft)	AMBIENT TEMPERATURE # Indicates E-clip Location from top of Jet Needle			
		Below -20°F Below -29°C	-20° to +10°F -29° to -12°C	+10° to +40°F -12° to +5°C	Above +40°F Above 5°C
	0-900 (0-3000)	250 #3	*240 #3	220 #3	210 #3
	900-1800 (3000-6000)	230 #3	220 #3	210 #2	195 #2
	1800-2700 (6000-9000)	210 #3	200 #2	190 #2	180 #2
	2700-3700 (9000-12000)	190 #3	180 #2	175 #2	165 #2

XLT SP EC58PL140 Type - VM38SS Main Jet - 330 Pilot Jet - 35 Cut Away - 2.0 Air Screw - 1.5 Turn Jet Needle - 6DH7-3 Needle Jet - Q-0 (247)	Alt. Met.(Ft)	AMBIENT TEMPERATURE # Indicates E-clip Location from top of Jet Needle			
		Below -20°F Below -29°C	-20° to +10°F -29° to -12°C	+10° to +40°F -12° to +5°C	Above +40°F Above 5°C
	0-900 (0-3000)	350 #3	*330 #3	310 #3	300 #3
	900-1800 (3000-6000)	320 #3	300 #3	280 #3	270 #2
	1800-2700 (6000-9000)	290 #3	270 #3	250 #2	240 #2
	2700-3700 (9000-12000)	270 #3	250 #2	230 #2	220 #2

XLT Classic EC58PL150 VM38SS Main Jet - 340 Pilot Jet - 35 Cut Away - 2.0 Air Screw - 1.5 Turn Jet Needle - 6DH7-3 Needle Jet - Q-0 (247)	Alt. Met.(Ft)	AMBIENT TEMPERATURE # Indicates E-clip Location from top of Jet Needle			
		Below -20°F Below -29°C	-20° to +10°F -29° to -12°C	+10° to +40°F -12° to +5°C	Above +40°F Above 5°C
	0-900 (0-3000)	360 #3	*340 #3	320 #3	310 #3
	900-1800 (3000-6000)	330 #3	310 #3	290 #3	280 #2
	1800-2700 (6000-9000)	300 #3	280 #3	260 #2	250 #2
	2700-3700 (9000-12000)	280 #3	260 #2	240 #2	230 #2

FUEL SYSTEM/CARBURETION

1998 Jetting Compensation Charts

600 XCR EC59PL020 VM38SS Main Jet- Pto/Cen/Mag 360/380/380 Pilot Jet - 40 Cut Away - 2.0 Air Screw - .5 Turn Jet Needle - 6CEY6-4 Needle Jet - P-6 (247)	Alt. Met.(Ft)	AMBIENT TEMPERATURE (PTO/CENTER/MAG) # Indicates E-clip Location from top of Jet Needle			
		Below -20°F Below -29°C	-20° to +10°F -29° to -12°C	+10° to +40°F -12° to +5°C	Above +40°F Above 5°C
	0-900 (0-3000)	380/400/400 #4	*360/380/380 #4	340/360/360 #4	320/340/340 #3
	900-1800 (3000-6000)	340/360/360 #4	330/350/360 #4	310/330/330 #3	290/310/310 #3
	1800-2700 (6000-9000)	310/330/330 #4	300/320/320 #3	280/300/300 #3	260/280/280 #3
	2700-3700 (9000-12000)	280/300/300 #3	270/290/290 #3	250/270/270 #3	240/260/260 #3

600 XC SN60-701CDCSP-01 Keihin - PWK 39 Main Jet-185 Long Hex Pilot Jet - 45 Cut Away - 6.5 Air Screw - 1 Turn Jet Needle- R1368G-3 Needle Jet - 2.9mm Fixed	Alt. Met.(Ft)	AMBIENT TEMPERATURE # Indicates E-clip Location from top of Jet Needle			
		Below -20°F Below -29°C	-20° to +10°F -29° to -12°C	+10° to +40°F -12° to +5°C	Above +40°F Above 5°C
	0-900 (0-3000)	188 #3	*185 #3	178 #3	172 #3
	900-1800 (3000-6000)	178 #3	175 #3	168 #3	162 #3
	1800-2700 (6000-9000)	168 #3	165 #3	160 #2	155 #2
	2700-3700 (9000-12000)	158 #3	155 #2	150 #2	145 #2

600 RMK SN60-70LCDCSP-02 Type-Keihin PWK 39 Main Jet - 160 Pilot Jet - 45 Cut Away - 6.0 Air Screw - .5 Jet Needle R1368G-2 Needle Jet - 2.9mm Fixed	Alt. Met.(Ft)	AMBIENT TEMPERATURE # Indicates E-clip Location from top of Jet Needle			
		Below -20°F Below -29°C	-20° to +10°F -29° to -12°C	+10° to +40°F -12° to +5°C	Above +40°F Above 5°C
	0-900 (0-3000)	188 #3	185 #3	178 #3	172 #3
	900-1800 (3000-6000)	178 #2	175 #2	168 #2	162 #2
	1800-2700 (6000-9000)	168 #2	165 #2	*160 #2	155 #1
	2700-3700 (9000-12000)	158 #2	155 #2	150 #1	145 #1

 - Shaded zone turn Air Screw to 1 turn

Ultra Ultra Touring EC68PL050 VM38 Main Jet - 340 Pilot Jet - 40 Cut Away - 2.0 Air Screw - 1.0 Turn Jet Needle - 6DH8-2 Needle Jet - P-4 (247)	Alt. Met.(Ft)	AMBIENT TEMPERATURE # Indicates E-clip Location from top of Jet Needle			
		Below -20°F Below -29°C	-20° to +10°F -29° to -12°C	+10° to +40°F -12° to +5°C	Above +40°F Above 5°C
	0-900 (0-3000)	350 #2	*340 #2	320 #2	300 #2
	900-1800 (3000-6000)	320 #2	310 #2	300 #2	280 #2
	1800-2700 (6000-9000)	290 #2	280 #2	270 #2	260 #2
	2700-3700 (9000-12000)	270 #2	260 #2	250 #2	240 #2

FUEL SYSTEM/CARBURETION

1998 Jetting Compensation Charts

700 XC SN70-70LDCDCSP-02 Keihin PWK 39 MainJet-185 Long Hex Pilot Jet - 38 Cut Away - 6.0 Air Screw - 1 Turn Jet Needle - R1368G-3 Needle Jet- 2.9mm Fixed	Alt. Met.(Ft)	AMBIENT TEMPERATURE # Indicates E-clip Location from top of Jet Needle			
		Below -20°F Below -29°C	-20° to +10°F -29° to -12°C	+10° to +40°F -12° to +5°C	Above +40°F Above 5°C
	0-900 (0-3000)	190 #3	*185 #3	178 #3	172 #3
	900-1800 (3000-6000)	178 #3	175 #3	168 #3	162 #3
	1800-2700 (6000-9000)	170 #3	165 #3	158 #2	155 #2
	2700-3700 (9000-12000)	158 #3	155 #2	150 #2	145 #2

700 XCR EC68PL060 VM38 Main Jet - 380 Pilot Jet - 50 Cut Away - 3.0 Air Screw - 1.0 Turn Jet Needle - 6CEY6-4 Needle Jet - Q-2 (247)	Alt. Met.(Ft)	AMBIENT TEMPERATURE # Indicates E-clip Location from top of Jet Needle			
		Below -20°F Below -29°C	-20° to +10°F -29° to -12°C	+10° to +40°F -12° to +5°C	Above +40°F Above 5°C
	0-900 (0-3000)	400 #4	*380 #4	360 #3	340 #3
	900-1800 (3000-6000)	370 #4	350 #3	330 #3	310 #2
	1800-2700 (6000-9000)	340 #3	320 #3	300 #2	280 #2
	2700-3700 (9000-12000)	310 #3	290 #2	270 #2	250 #1

700 RMK SN70-70LDCDCSP-01 Keihin PWK 39 MainJet-158 Long Hex Pilot Jet - 42 Cut Away - 5.5 Air Screw - 1 Turn Jet Needle - R1371G-3 Needle Jet- 2.9mm Fixed	Alt. Met.(Ft)	AMBIENT TEMPERATURE # Indicates E-clip Location from top of Jet Needle			
		Below -20°F Below -29°C	-20° to +10°F -29° to -12°C	+10° to +40°F -12° to +5°C	Above +40°F Above 5°C
	0-900 (0-3000)	190 #3	165 #3	175 #3	172 #3
	900-1800 (3000-6000)	178 #3	175 #3	165 #3	162 #3
	1800-2700 (6000-9000)	168 #3	162 #3	158* #3	152 #2
	2700-3700 (9000-12000)	158 #3	155 #3	148 #2	145 #2



- Shaded zone should turn Air Screw to 1/4 turn.

Storm EC80PL052 VM38 PTO - CEN - MAG MainJet-410-400-420 Pilot Jet - 50 Cut Away - 3.0 CH Air Screw - 1.0 Turn Jet Needle - 6CGY6-3 Needle Jet - Q-0 (247)	Alt. Met.(Ft)	AMBIENT TEMPERATURE (PTO/CENTER/MAG) # Indicates E-clip Location from top of Jet Needle			
		Below -20°F Below -29°C	-20° to +10°F -29° to -12°C	+10° to +40°F -12° to +5°C	Above +40°F Above 5°C
	0-900 (0-3000)	430/420/440 #3	410/400/420 *#3	390/380/400 #3	370/360/380 #3
	900-1800 (3000-6000)	380/370/390 #3	360/350/370 #3	340/330/350 #3	320/310/330 #2
	1800-2700 (6000-9000)	340/330/350 #3	320/310/330 #3	300/290/310 #2	290/280/300 #2
	2700-3700 (9000-12000)	290/280/300 #3	270/260/280 #2	250/240/260 #2	240/230/250 #2

Main jets listed left to right - PTO-Center-Mag

FUEL SYSTEM/CARBURETION

Gasoline Volatility

Whenever servicing the carburetor or fuel system, it is important to heed the following warnings.

WARNING

Gasoline is extremely flammable and explosive under certain conditions.

-  Always stop the engine and refuel outdoors or in a well ventilated area.
-  Do not smoke or allow open flames or sparks in or near the area where refueling is performed or where gasoline is stored or used.
-  Do not overfill the tank. Do not fill the tank neck.
-  If you get gasoline in your eyes or if you swallow gasoline, see your doctor immediately.
-  If you spill gasoline on your skin or clothing, immediately wash it off with soap and water and change clothing.
-  Never start the engine or let it run in an enclosed area. Gasoline powered engine exhaust fumes are poisonous and can cause loss of consciousness and death in a short time.

Explanation of Gasoline Volatility

In order for an engine to start easily and run properly, gasoline must be able to burn without causing detonation, vapor lock, flooding, or icing of fuel lines, fuel pumps, or carburetors. One of the sometimes misunderstood properties of gasoline is its volatility, or ability to vaporize at different ambient temperatures and altitudes during the year.

When gasoline is blended, it is given a Reid Vapor Pressure (RVP) number which reflects its ability to vaporize or mix with air at a given temperature range. Gasoline vapor pressure is measured by putting a sample of fuel inside a closed container and applying a specified amount of heat to the container for a certain amount of time. This pressure will vary from about 7.0 PSI during the summer to approximately 13.5 PSI during the colder months. Service stations selling a large volume of fuel will normally have the correct blend to work well at all times throughout the year.

When the weather is very cold, gasoline must be able to atomize very quickly in order for an engine to start and warm up properly. If summer blend fuel, which has a low Reid Vapor number, is being used, little or no vaporization will occur. Droplets will form causing flooding and very hard starting.

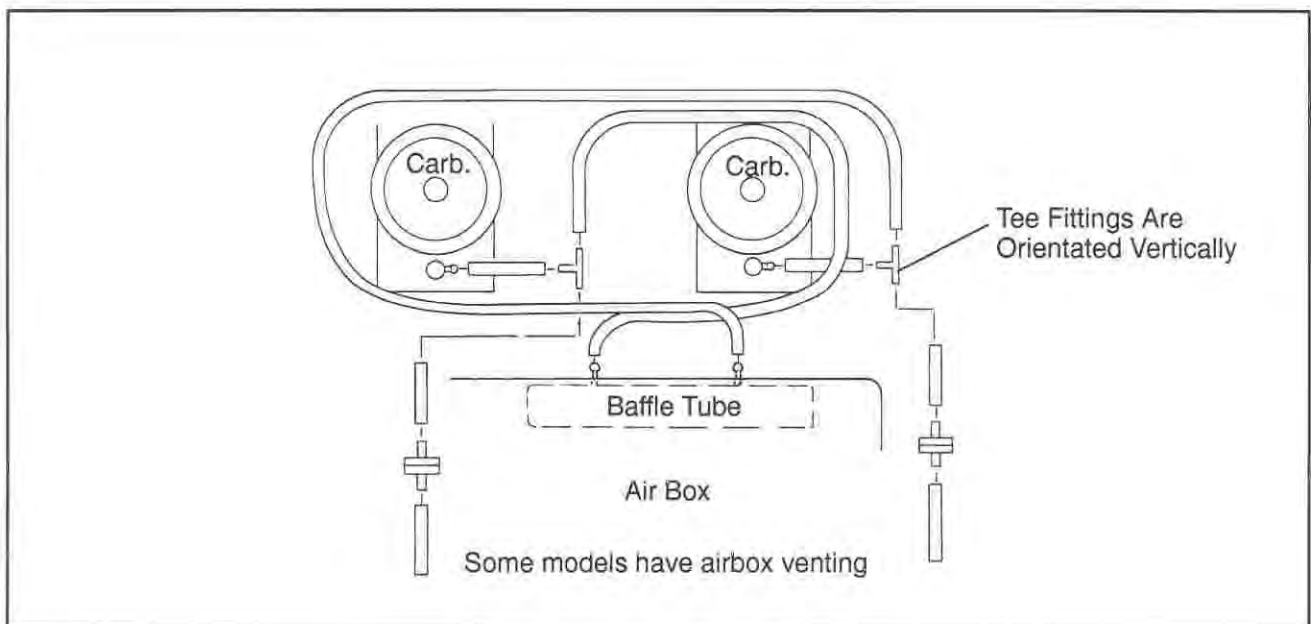
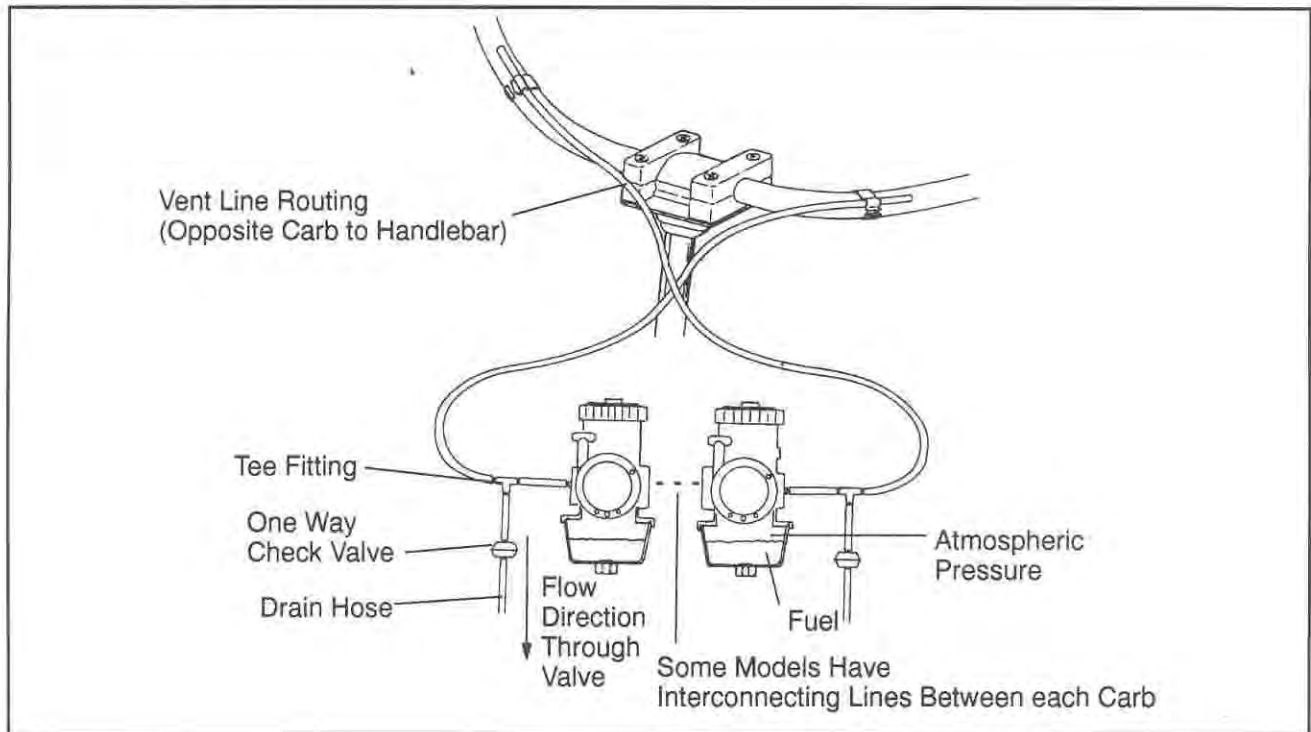
If winter blend fuel is being used during the summer months, it may cause vapor lock (boiling fuel) inside the fuel lines, fuel pump, or carburetor. This will cause warm engine driveability problems and hard starting when warm. Some states are limiting the Reid Vapor number to 9.0 PSI year around to help meet evaporative emissions standards.

Warm Weather ↑ ↓ Cold Weather	Maximum Reid Vapor		Ambient Air Temp. Range		Low Vaporization Rate ↑ ↓ High Vaporization Rate
	Class	Pressure	Low	High	
	A	7.0 PSI	60° F	110° F +	
	B	9.0 PSI	50° F	110° F	
	C	10.5 PSI	40° F	97° F	
	D	12.0 PSI	30° F	85° F	
	E	13.5 PSI	20° F	69° F	
Add 2.4° F for each 1000 feet above seal level.					

Float Chamber Venting

Fuel flows through a carburetor by creating a pressure difference between the venturi and the float bowl. The greater the pressure difference, the greater the fuel flow. On some models the float bowl is vented to the handlebars. This provides consistent atmospheric pressure for a consistent fuel flow. If the vent lines become kinked, plugged, or exposed to fluctuating pressures (under hood) the pressure difference will change, causing erratic fuel flow.

Polaris has introduced airbox venting on some models. The vent lines are connected to a baffle inside the airbox. This provides a more consistent pressure difference between the carburetor venturi and the float bowl as the vacuum inside the airbox changes. For example, if the airbox foam filter becomes plugged with snow when riding in powder, the airbox vacuum increases. Without airbox venting, the pressure difference would increase substantially, choking or flooding the engine. With airbox venting, the pressure difference remains the same, creating a leaner mixture to compensate for reduced air flow.



FUEL SYSTEM/CARBURETION

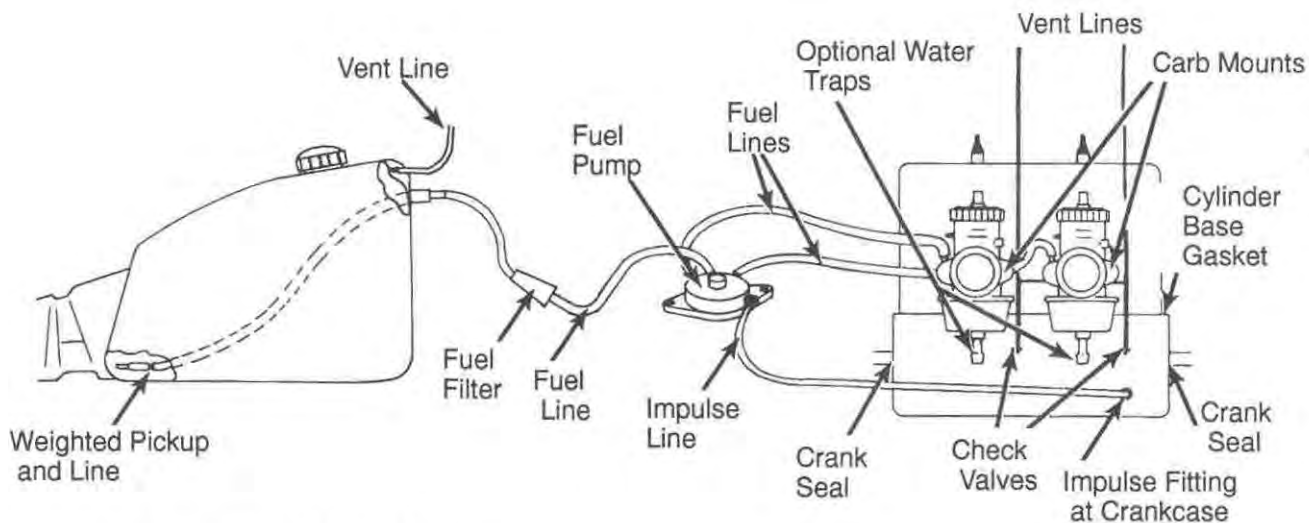
Fuel Delivery System - Typical

The fuel system contains many components which directly affect fuel mixture and driveability. When performing diagnosis or carburetor maintenance, the entire fuel delivery system should be inspected. The illustration below shows parts of the system requiring periodic maintenance to ensure there is no fuel or air leaks present.

Fuel filters should be replaced at least once per season or more often if any contamination is suspected.

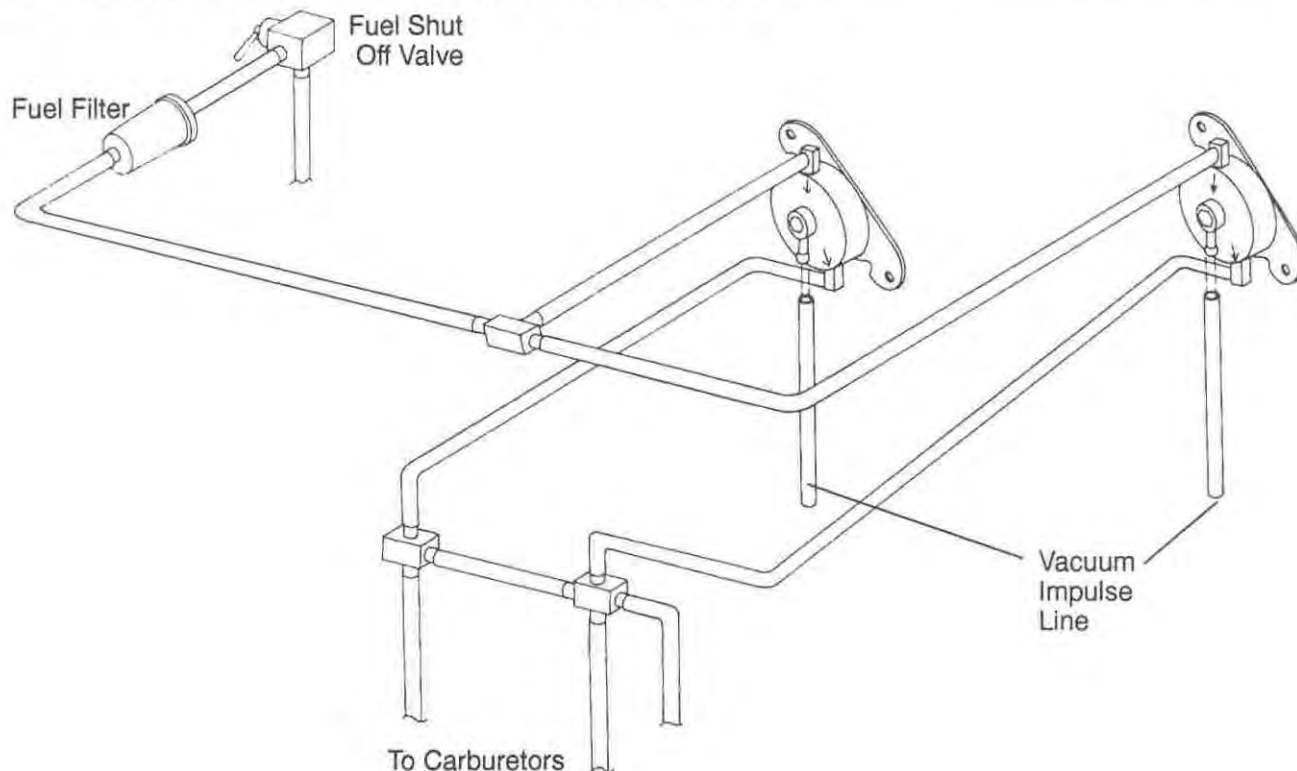
Fuel lines should be replaced every other season or more often if they become brittle or swollen. Fittings should be inspected at that time for cracks or leaks.

Test run and check the fuel system for leaks any time parts are replaced. Verify that all lines are routed correctly away from any moving parts.



Fuel Hose - Indy Storm/SKS/RMK

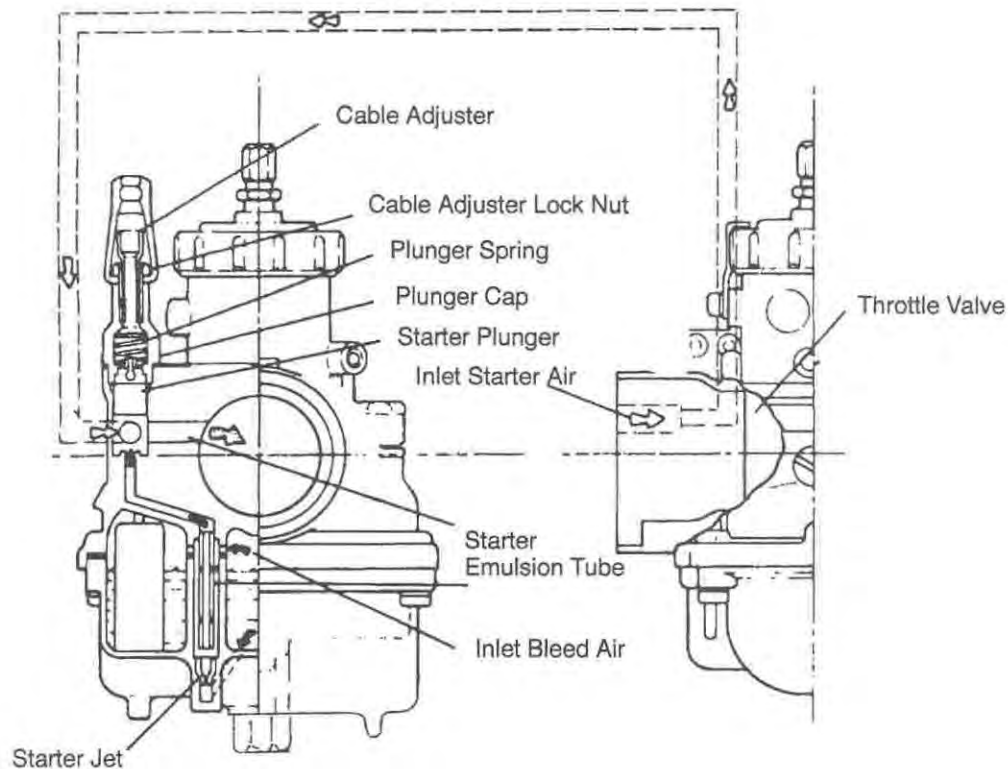
The Storm fuel system incorporates dual fuel pumps. It is important to pay particular attention to correct routing of the fuel lines in order to provide an adequate fuel supply to the engine.



FUEL SYSTEM/CARBURETION

Starter System - Closed Throttle

Mikuni carburetors use a starter system rather than a choke. In this type of carburetor, fuel and air for starting the engine are metered with entirely independent jets. The fuel metered in the starter jet is mixed with air and is broken into tiny particles in the emulsion tube. The mixture then flows into the plunger area, mixes again with air coming from the air intake port for starting and is delivered to the engine through the fuel discharge nozzle in the optimum air/fuel ratio. The starter is opened and closed by means of the starter plunger. The starter type carburetor is constructed to utilize the negative pressure of the inlet pipe, so it is important that the throttle valve is closed when starting the engine.



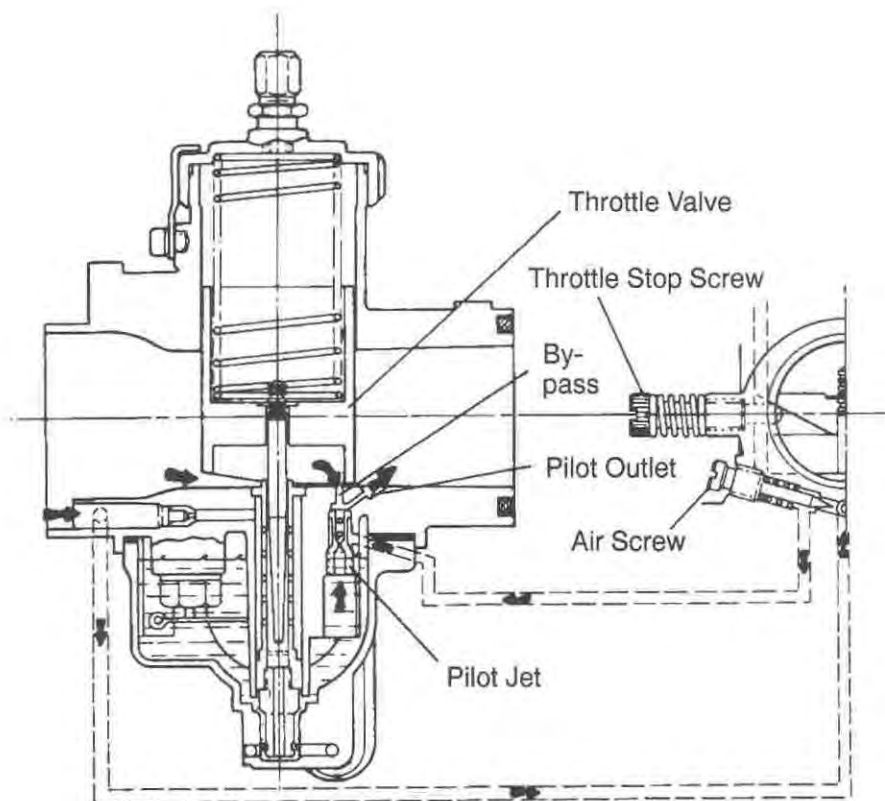
FUEL SYSTEM/CARBURETION

Pilot System (0-3/8 Throttle)

The pilot system's main function is to meter fuel at idle and low speed driving. Though its main function is to supply fuel at low speed, it does feed fuel continuously throughout the entire operating range.

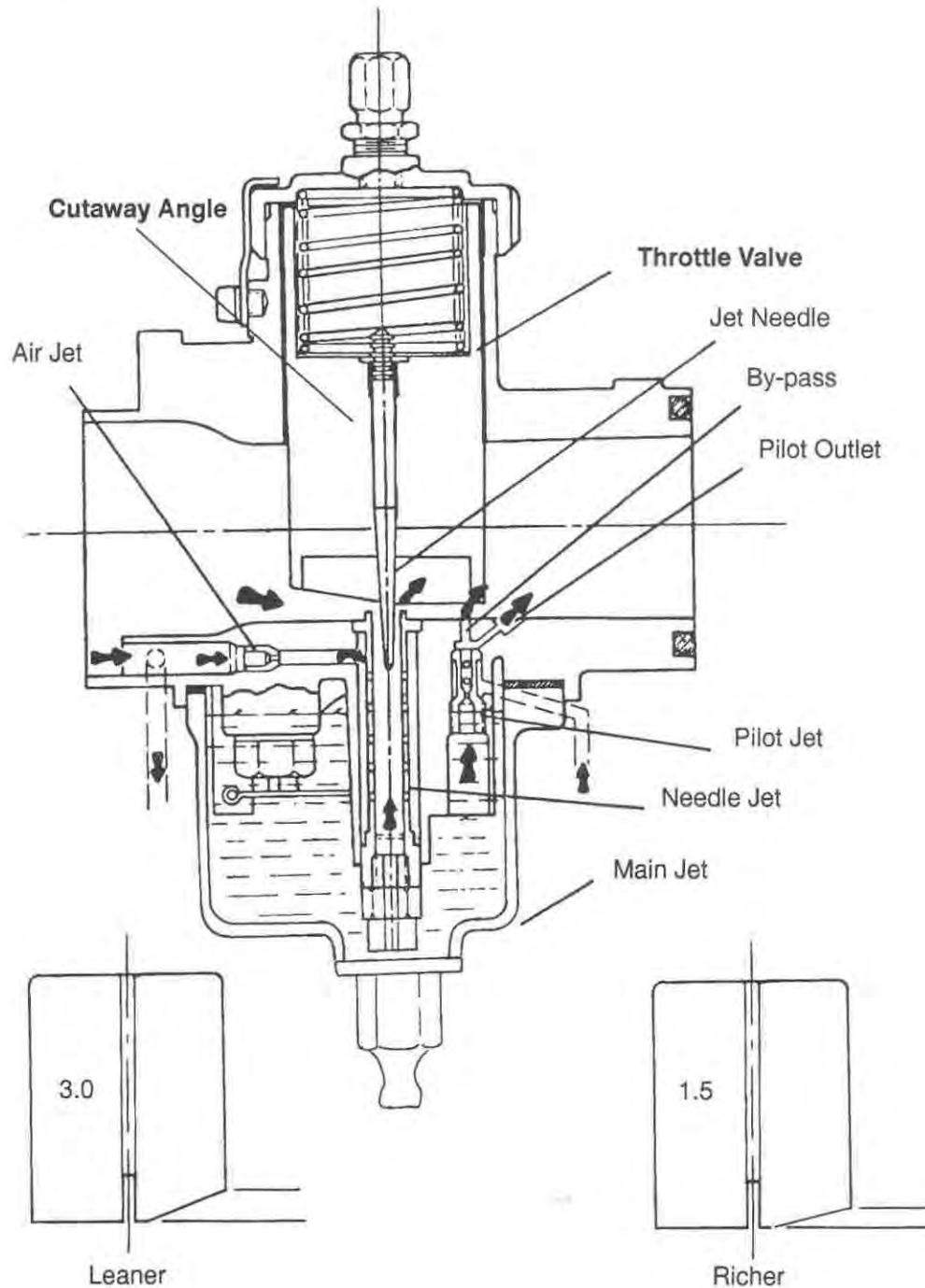
Fuel for the pilot jet is drawn from the float bowl, mixed with air regulated by the air screw, and delivered to the engine through the pilot outlet.

The mixture is regulated to some degree by adjusting the air screw. When the air screw is closed, the fuel mixture is made richer as the amount of air is reduced. When the air screw is opened, the mixture is made more lean as the amount of air is increased.



FUEL SYSTEM/CARBURETION Slide Cutaway (1/8-3/8 Throttle)

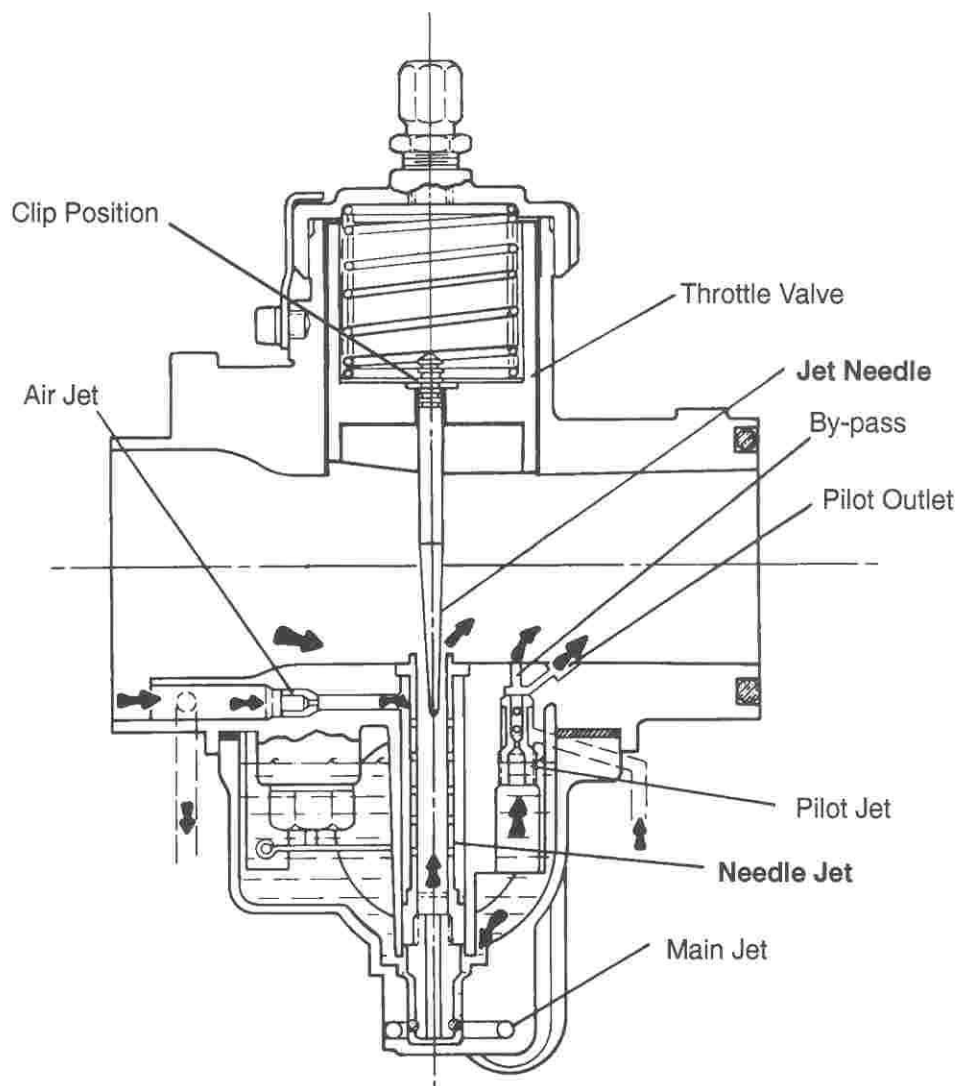
Throttle valve cutaway effect is most noticeable at 1/4 throttle opening. The amount of cutaway is pre-determined for a given engine to maintain a 14:1 air/fuel ratio at part throttle. A steep angle would indicate a fairly lean mixture because there is less resistance to air flow. A flat angle would provide a much richer mixture because there is more resistance to air flow. The venturi shape can be adjusted for each engine's breathing characteristics by using a different valve cutaway angle. A number will be stamped into the bottom of the valve (e.g. 2.5) indicating the size of the cutaway. The higher the number, the steeper the angle.



FUEL SYSTEM/CARBURETION

Jet Needle/Needle Jet (3/8-3/4 Throttle)

The jet needle and needle jet have the most effect between 3/8 and 3/4 throttle opening. Some mixture adjustment can be accomplished by changing the location of the "E" clip on the needle. Moving the clip down raises the needle in the jet passage and richens the mixture. Moving the clip up lowers the needle in the jet passage and leans the mixture. Letter and number codes are stamped into the needle and the jet indicating sizes and tapers of each.

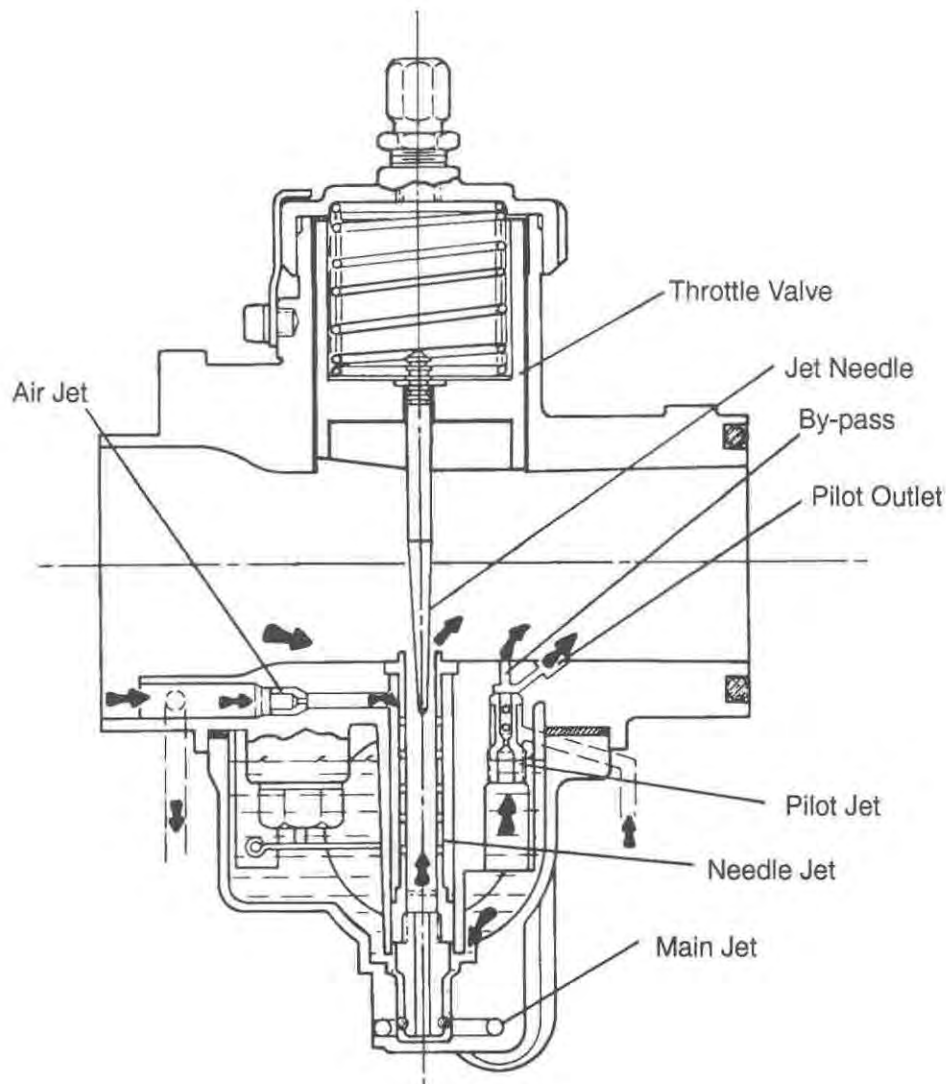


FUEL SYSTEM/CARBURETION

Main System (3/4 to Full Throttle)

The main system is designed for delivering fuel between low speed and high speed operation. This system is made up of the jet needle, needle jet, and main jet. The main system begins to take effect as soon as there is enough air flow into the carburetor venturi to draw fuel up through the main jet and needle jet assembly. This system works in conjunction with the needle jet system.

During low speed driving, there is very little clearance between the jet needle and the needle jet; therefore, very little fuel from the main jet can pass between the jet needle and the needle jet. As the throttle valve opening is increased, the tapered jet needle is raised farther out of the needle jet, allowing greater fuel flow. Under full throttle opening, the cross sectioned area of clearance between the jet needle and the needle jet becomes greater than the cross sectioned area of the main jet. Thus the main jet is now controlling the amount of fuel flow.



FUEL SYSTEM/CARBURETION

Function

The function of a carburetor is to produce a combustible air/fuel mixture by breaking fuel into tiny particles in the form of vapor, to mix the fuel with air in a proper ratio, and to deliver the mixture to the engine. A proper ratio means an ideal air/fuel mixture which can burn without leaving an excess of fuel or air. Whether the proper mixture ratio is maintained or not is the key to efficient engine operation.

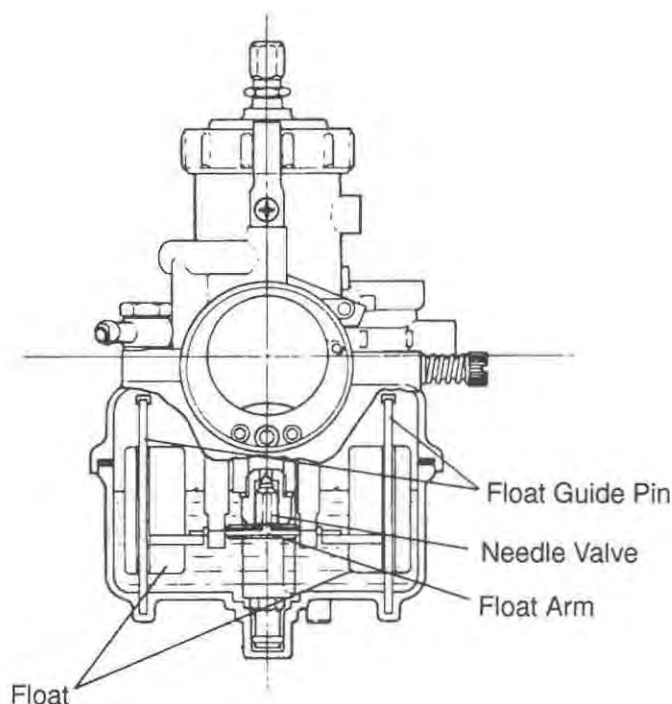
The engine of a vehicle is operated under a wide range of conditions, from idling with the throttle valve remaining almost closed, to full load or maximum output with the throttle valve fully opened. In order to meet the requirements for the proper mixture ratio under these varying conditions, a low speed fuel system, or pilot system, and a main fuel system are provided in Mikuni VM type carburetors.

The Mikuni carburetor has varying operations depending upon varying driving conditions. It is constructed of a float system, pilot system, main system, and starter system or initial starting device.

Float System

The float system is designed to maintain a constant height of gasoline during operation. When the fuel flowing from the fuel pump into the float chamber through the needle valve reaches the constant fuel level, the floats rise. When the buoyancy of the float and the fuel pressure of the fuel pump balance, the needle valve sticks fast to the needle seat, preventing further delivery of gasoline, thereby holding the standard level of gasoline.

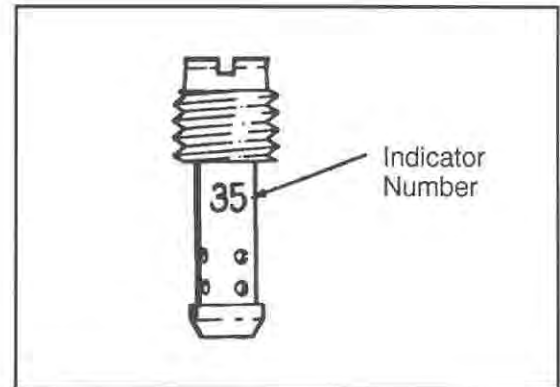
The fuel level in the bowl assists in controlling the amount of fuel in the fuel mixture. Too high a level allows more fuel than necessary to leave the nozzle, enriching the mixture. Too low a level results in a leaner mixture, since not enough fuel leaves the nozzle. Therefore, the predetermined fuel level should not be changed arbitrarily.



FUEL SYSTEM/CARBURETION Component Functions

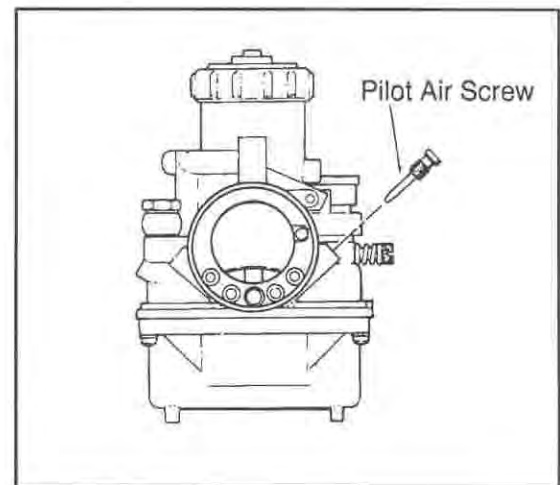
Pilot Jet

From idling to low speeds, the fuel supply is metered by the pilot jet. There are several air bleed openings in the sides of the pilot jet which reduce the fuel to mist. The number stamped on the jet is an indication of the amount of fuel in cc's which passes through the jet during a one minute interval under a given set of conditions.



Pilot Air Screw

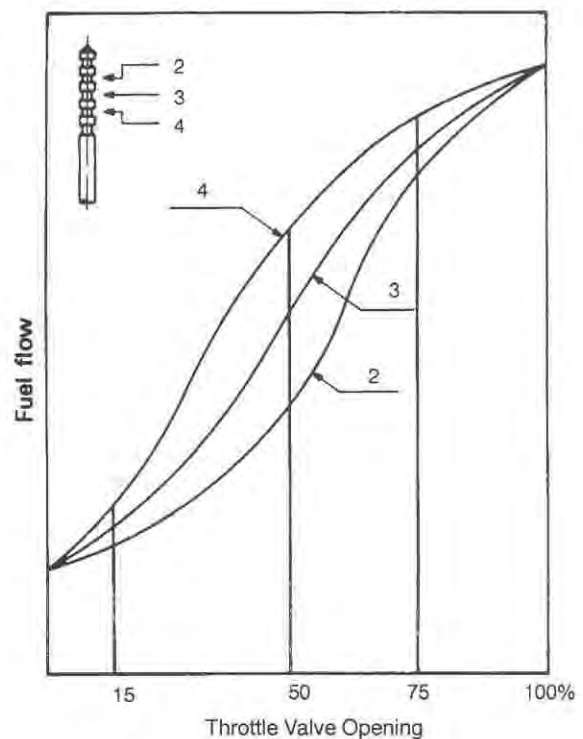
The pilot air screw controls the fuel mixture from idle to low speeds. The tapered tip of the air screw projects into the air passage leading to the pilot jet air bleeds. By turning the screw in or out, the cross sectional area of the air passage is varied, in turn varying the pilot jet air supply and changing the mixture ratio.



Air/Fuel Mixture Ratio

A carburetor with a piston type throttle valve is also called a variable venturi type carburetor. In this type of carburetor, the needle jet and jet needle serve to control a proper air/fuel mixture ratio at the medium throttle valve opening (between 1/4 and 3/4 opening). Having the proper needle jet and jet needle has a major impact on engine performance at partial load.

The jet needle tapers off at one end and the clearance between the jet needle and the needle jet increases as the throttle valve opening gets wider. The air/fuel mixture ratio is controlled by the height of the "E" ring inserted into one of the five slots provided in the head of the jet needle. The chart at right shows the variation of fuel flow based on the height of the "E" ring.

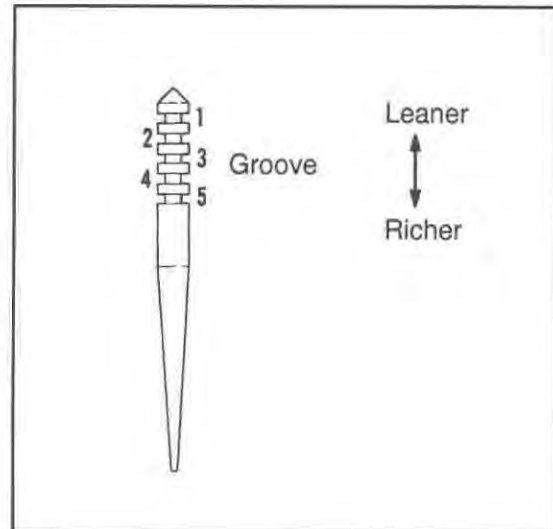


FUEL SYSTEM/CARBURETION

Component Functions

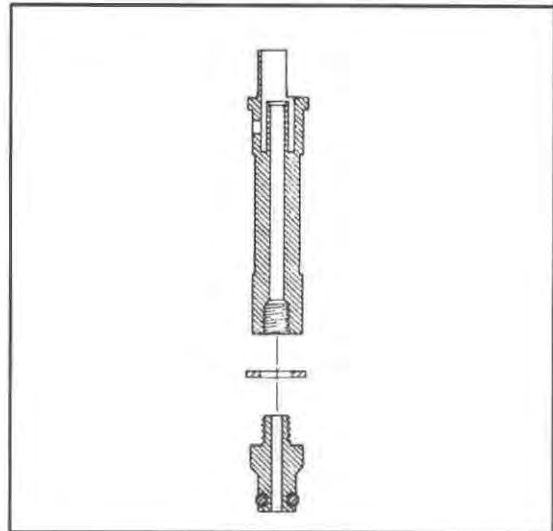
Jet Needle

The jet needle has five adjustment grooves cut into the upper portion, and is tapered from approximately the middle of the needle to the lower end. The top is fixed to the center of the throttle valve by the needle clip, and the tapered end extends into the needle jet. Fuel flows through the space between the needle jet and jet needle. This space does not vary until the throttle reaches the 1/4 open point. At that time the tapered portion of the needle begins to move out of the jet, affecting fuel flow as the opening enlarges. If the needle clip is changed from the standard position to a lower groove, the needle taper starts coming out of the jet sooner, resulting in a richer mixture. Moving the clip higher produces a leaner mixture. If the taper is worn due to vibration, fuel flow may be significantly affected.



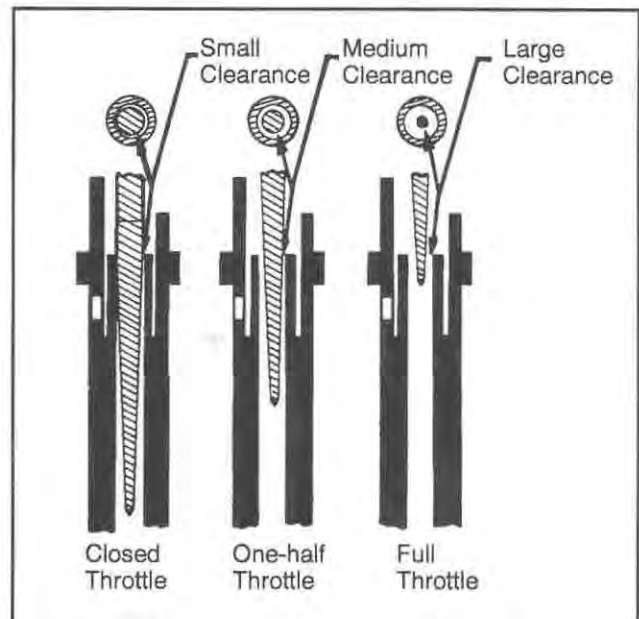
Needle Jet

The needle jet works in conjunction with the jet needle to regulate fuel flow rate. An air bleed opening in the side of the needle jet brings in air measured by the air jet. This air initiates the mixing and atomizing process inside the needle jet. Mixing is augmented by a projection at the needle jet outlet, called the primary choke. The letter number code stamped on the jet indicates jet inside diameter.



Throttle Opening vs. Fuel Flow

In a full throttle condition the cross sectioned area between the jet needle and the needle jet is larger than the cross sectioned area of the main jet. The main jet therefore has greater control over fuel flow.



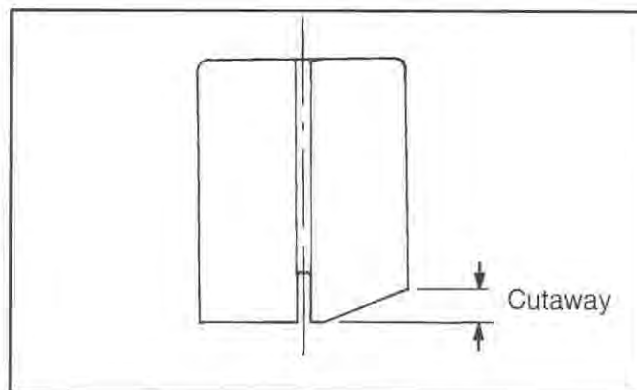
FUEL SYSTEM/CARBURETION

Component Functions

Throttle Valve

The throttle valve controls the rate of engine air intake by moving up and down inside the main bore. At small throttle openings, air flow control is performed chiefly by the cutaway. By controlling air flow the negative pressure over the needle valve is regulated, in turn varying the fuel flow.

The throttle valves are numbered 1.0, 1.5, 2.0, etc., according to the size of the cutaway. The higher the number, the leaner the gasoline/air mixture.



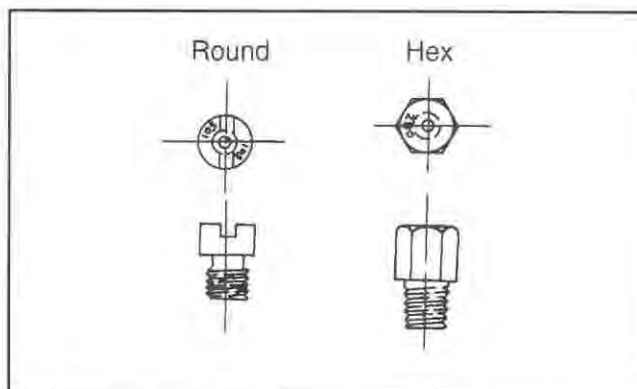
Mikuni Main Jet

When the throttle opening becomes greater and the area between the needle jet and jet needle increases, fuel flow is metered by the main jet. The number on the jet indicates the amount of fuel CCs which will pass through it in one minute under controlled conditions. Larger numbers give a greater flow, resulting in a richer mixture.

Main jets are screwed directly into the needle jet base.

Keihin Main Jet

The number on the Keihin (Round) main jet corresponds to the diameter of the metering orifice.



FUEL SYSTEM/CARBURETION

Component Effect vs Throttle Opening

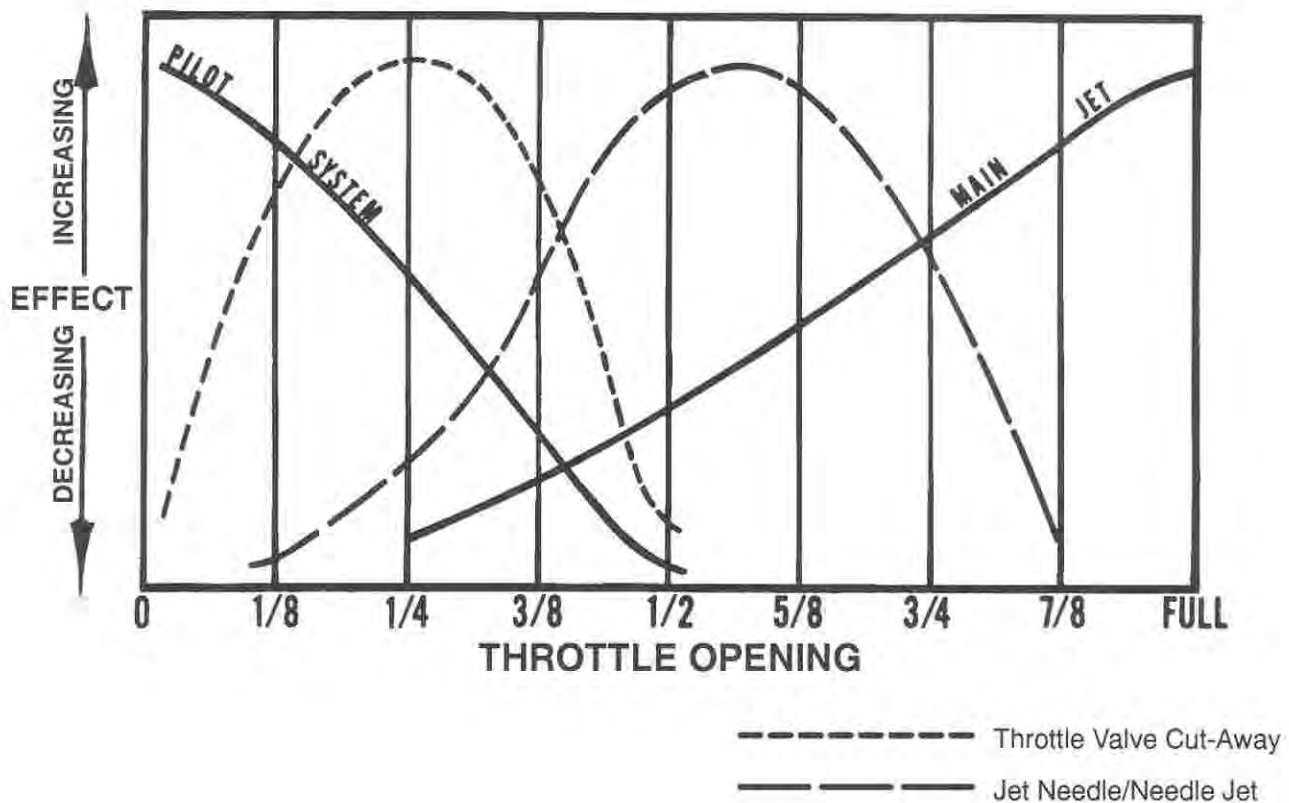
The throttle opening chart below demonstrates component relationship to fuel flow versus throttle valve opening.

The pilot system's main function is that of a low speed jet. Its most effective range of fuel delivery is from idle to approximately $3/8$ throttle valve opening.

The throttle valve controls the rate of engine air by its movement up and down in the carburetor venturi. At small throttle openings the air flow is regulated chiefly by the valve cutaway, with greatest effectiveness at $1/4$ throttle opening. Throttle valves are numbered 1.0, 1.5, 2.0, etc., according to the size of the cutaway. Decreasing the cutaway number will increase the amount of fuel delivered in its effective range.

The jet needle and needle jet have an effective operating range from approximately $1/8$ to $7/8$ throttle opening. The amount of fuel delivered during this range relies upon the jet needle clip position, as well as the needle jet size and other specifications.

The main jet affects fuel delivery at $1/4$ throttle and consistently increases to full throttle opening.



FUEL SYSTEM/CARBURETION

Jetting Guidelines

Changes in altitude and temperature affect air density, which is essentially the amount of oxygen available for combustion. In low elevations and cold temperatures, the air has more oxygen. In higher elevations and higher temperatures, the air is less dense.

Carburetors on *most* Polaris models are calibrated for an altitude of 0-3000 ft (0-900 meters) and ambient temperatures between -20° to +10° F (-29° to -12° C). All carburetors must be re-calibrated if operated outside the production temperature and/or altitude range. The main jet installed in production is not correct for all altitudes and/or temperatures.

CAUTION:

A main jet that is too small will cause a lean operating condition and may cause serious engine damage. Jet the carburetors carefully for elevation and temperature according to the jetting charts in this manual, the specification decal on the hood, or the jetting charts in the Owner's Safety and Maintenance Manual for each particular model. See additional information regarding the use of oxygenated fuels on following page.

NOTE: It is the dealer's responsibility to ensure that the correct jets are installed in the machine for a geographical area. Be very careful when jetting down in warm weather. As the weather turns colder it will be necessary to re-jet upward to prevent engine damage. When selecting the proper main jet *always* use the *lowest* elevation and temperature that is likely to be encountered.

FUEL SYSTEM/CARBURETION

Oxygenated Fuel - Carbureted Models

Oxygenated Fuel

Due to the increased emphasis on reducing auto emissions, some areas of the U.S. are required to use oxygenated fuels. Oxygenated fuels are those which include oxygen in the molecule due to the addition of an ether or alcohol.

Oxygenated fuel containing a mixture of up to 10% ethanol can be used in all models of Polaris snowmobiles if these guidelines are followed:

NOTE: The use of fuel containing *methanol* is not recommended.

On carbureted models

1. Use fuel with a minimum pump octane of 89 or higher (R+M)/2 method. **NOTE:** Some models are calibrated to use a minimum of 91 octane fuel. On these models, only 91 octane or higher should be used. Refer to the Specification Decal or Owner's Safety and Maintenance Manual for octane recommendation.
2. When using 87 octane oxygenated fuel, install main jets that are one size larger than that listed on the jetting chart for a given altitude and temperature. For example, the minimum octane (non-oxygenated) fuel for the 1996 Indy Classic is 87. The main jet installed during production for use at altitudes of 0-3000 ft. and temperatures between -20 and +10°F is a 340. To use 87 octane *oxygenated* fuel, install 350 main jets.
3. Turn the pilot air screws in (clockwise) 3/8 turn from the standard setting. Example: if the production air screw setting is 1 turn out, the setting for 87 octane oxygenated fuel would be 5/8 turn out.

NOTE: The following Indy Classic charts are provided as an example only.

Indy Classic

89 Octane
Oxygenated

		AMBIENT TEMPERATURE			
		Below -20°F Below -29°C	-20° to +10°F -29° to -12°C	+10° to +40°F -12° to +5°C	Above +40 °F Above +5°C
Altitude Meters (Feet)	0-900 (0-3000)	360	*340	320	300
	900-1800 (3000-6000)	320	300	280	260
	1800-2700 (6000-9000)	280	260	240	220
	2700-3700 (9000-12000)	240	230	210	200

■ - Shaded zone should drop Jet Needle one position (raise E-Clip)

* Production Setting

Indy Classic

87 Octane
Oxygenated

		AMBIENT TEMPERATURE			
		Below -20°F Below -29°C	-20° to +10°F -29° to -12°C	+10° to +40°F -12° to +5°C	Above +40 °F Above +5°C
Altitude Meters (Feet)	0-900 (0-3000)	370	350	330	310
	900-1800 (3000-6000)	330	310	290	270
	1800-2700 (6000-9000)	290	270	250	230
	2700-3700 (9000-12000)	250	240	220	210

■ - Shaded zone should drop Jet Needle one position (raise E-Clip)

Oxygenated Fuel

To use 87 octane oxygenated fuel on EFI models:

1. At altitudes below 5000 ft., the compression ratio must be reduced by installing .020" head gasket shims between the cylinder head gasket and cylinder head. The part numbers are shown below. No change is required if machine is operated at altitudes above 5000 feet (1500 meters).

EFI Cylinder Head Shims

Model	Shim Part Number
500 EFI/SKS/RMK	(1) 5211416
RXL	(3) 5211414

Fuel System Deicers

If non-oxygenated fuel is being used, Polaris recommends the regular use of Isopropyl base fuel system deicer (Polaris PN 2870505). Add 1 to 2 ounces per gallon (8-16 milliliters per liter) of gasoline to prevent engine damage resulting from fuel system icing and lean mixtures. Never use deicers or additives that contain *methanol*. Use *only* isopropyl fuel system deicers.

If using oxygenated fuel containing ethanol, additional alcohol deicers or water absorbing additives are not required and should not be used.

Whenever servicing the carburetor or fuel system, it is important to heed the warnings found on page 5.1.

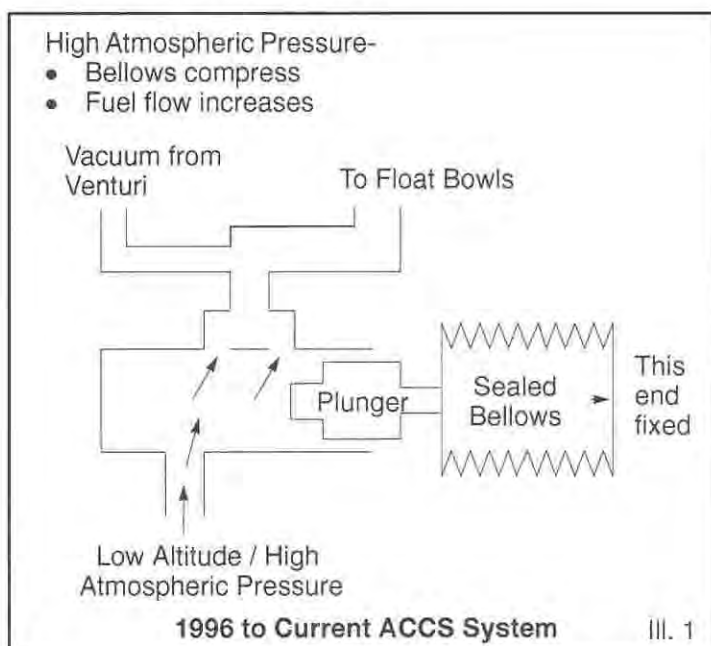
FUEL SYSTEM/CARBURETION

ACCS System

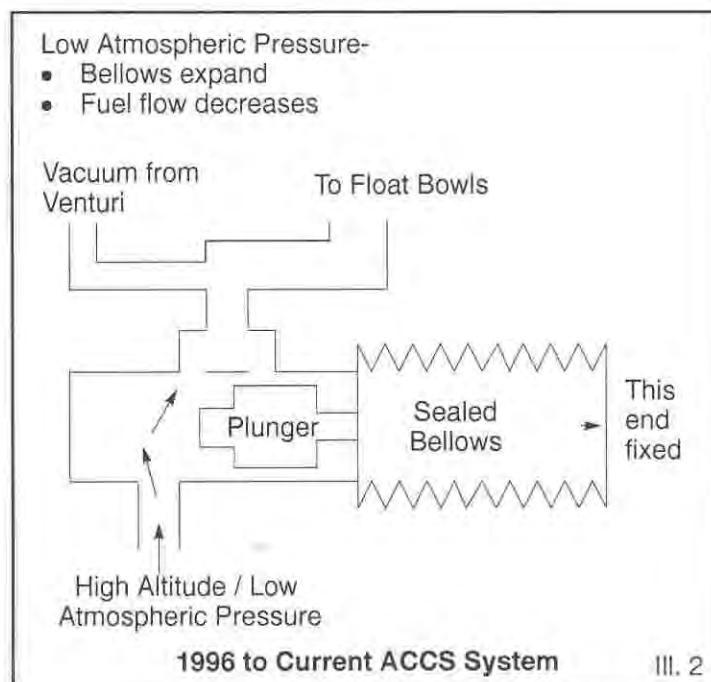
1996 To Current Altitude Compensating Carburetor System (ACCS)

The Altitude Compensating Carburetor System (ACCS) is designed to automatically compensate for changes in altitude. This allows the snowmobile to operate in changing elevations without having to change jets, although extreme temperatures may require re-jetting for optimum performance. Refer to the jetting compensation chart on page 5.15f. The 1996 ACC System compensates for both high speed and low speed changes, eliminating the need to adjust air screws. On 1997 ACCS models, the air screw is adjustable.

A vacuum line is connected to the float bowl. The ACCS valve is connected to this line via the 4-way manifold. At low altitude the ACCS valve supplies atmospheric pressure to the vacuum line and the float bowl (see Ill. 1).



At high altitudes the bellows expand, moving the plunger to the left and closing off some of the passageways through the ACCS valve (see Ill. 2). This prevents atmospheric pressure from reaching the float bowl, allowing the vacuum line to reduce the pressure in the float bowl. This reduces the amount of fuel supplied through the carburetor, preventing the mixture from becoming too rich.

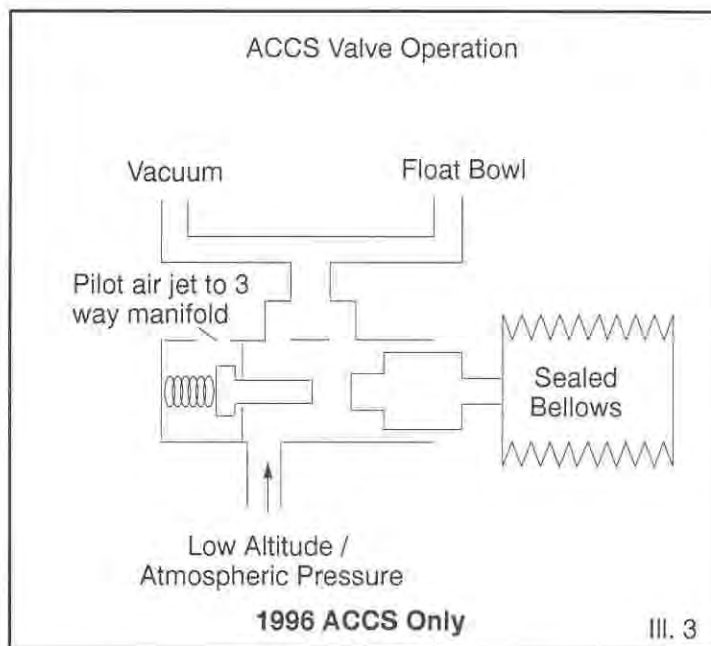


Altitude Compensating Carburetor System (Cont.)

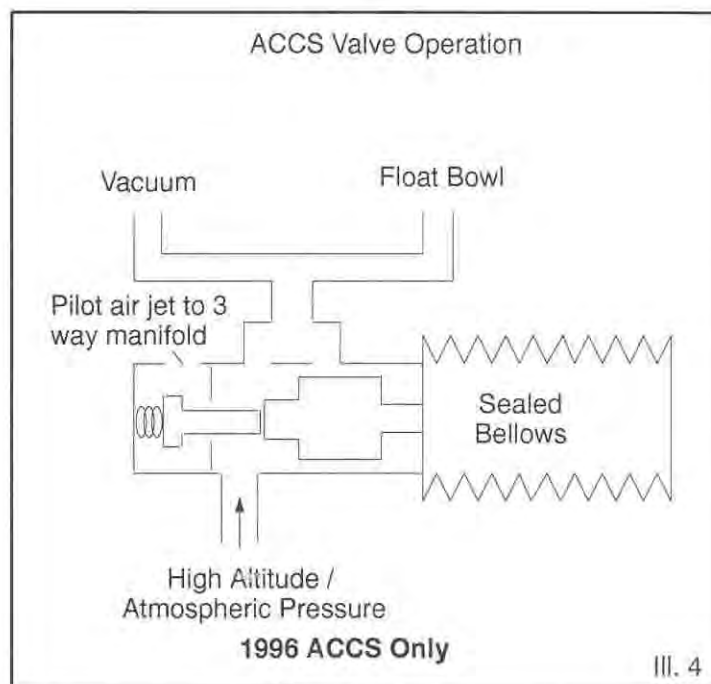
NOTE: The 1997 to current ACCS models are equipped with air screws to adjust the low speed (pilot) air/fuel mixture.

Another feature of the 1996 ACC System automatically adjusts the slow (pilot) air system passageways. This feature serves the same function as an air screw on a standard carburetor system.

A spring loaded plunger is located inside the valve. At low altitude, the spring pushes the plunger into a closed position (see Ill. 3).



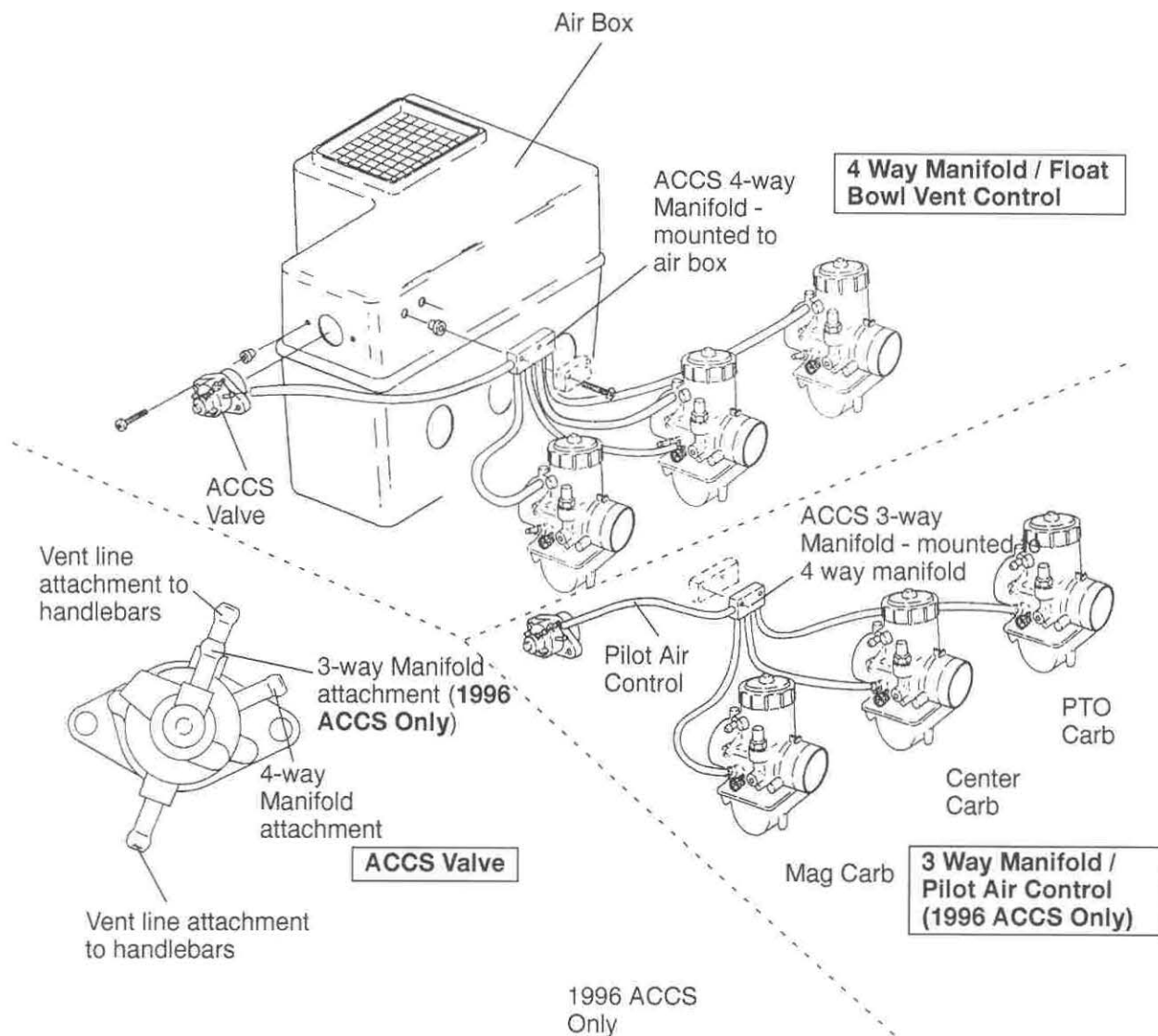
In Ill. 4, the bellows has moved the primary plunger to the left, engaging the secondary plunger and removing it from its seat. Atmospheric pressure is now being supplied to the pilot air jet, supplementing the air flow in the secondary slow air system and making the fuel mixture leaner to compensate for the thinner air at high altitudes.



FUEL SYSTEM/CARBURETION

ACCS System

ACCS System



NOTE: There is only one ACCS valve. The illustration above has been divided to show the separation of systems. See page 5.7a for line connections.

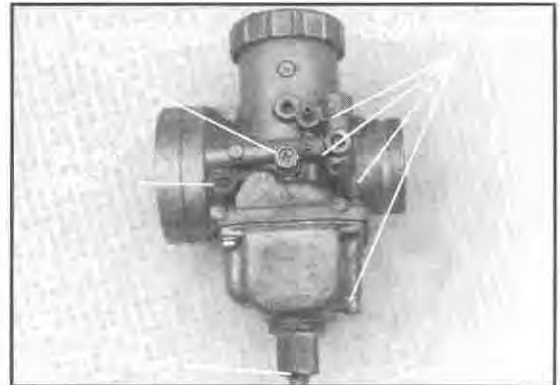
Carburetor Removal, Disassembly, and Inspection (Typical)

Typical VM 38 Shown. Refer to exploded views on pages 5.4 - 5.7a for other types.

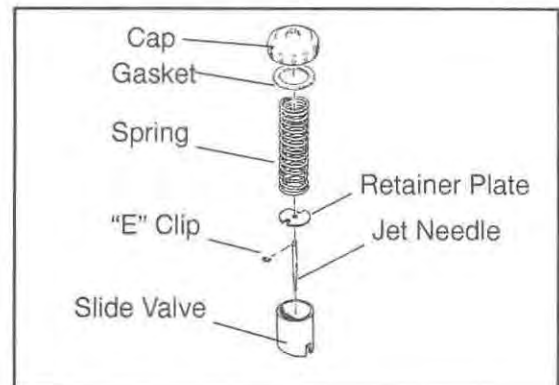
1. Remove carburetor from engine. Before disassembling, clean outside of carburetor thoroughly with solvent.

CAUTION:

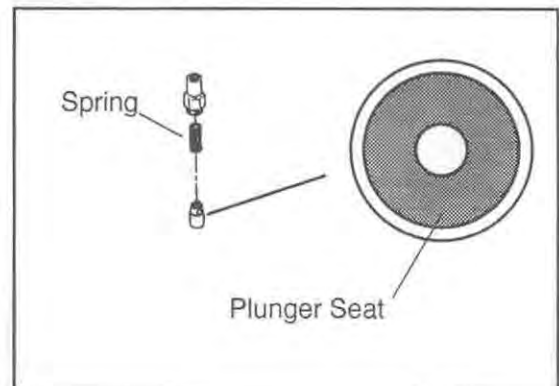
Do not use compressed air to dry at this time. The float chamber could become pressurized resulting in damage to the floats or inlet needle and seat..



2. Remove slide valve. Inspect for nicks or burrs which may cause sticking.
3. Remove jet needle by compressing return spring toward top cap and removing throttle plate which rests on top of needle "E" clip. Note the "E" clip position and inspect needle taper for wear. An indication of wear would be an hourglass shape or polished spots somewhere along the taper.



4. Remove choke plunger. Check condition of seal on tip of plunger. Any nicks or cuts will cause leakage and a rich fuel condition, usually most evident at idle and low speeds. Inspect the plunger seat for damage or foreign material.
5. Check choke cable movement. Plungers and springs should move back and forth freely.

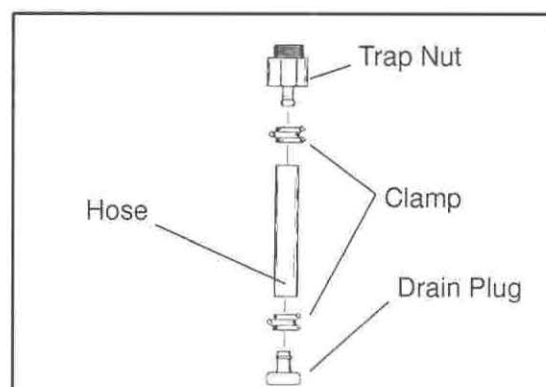


FUEL SYSTEM/CARBURETION

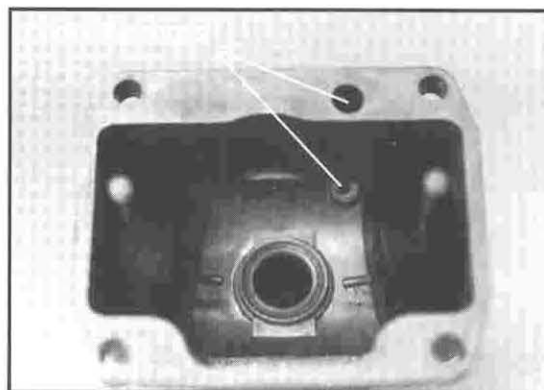
Mikuni Carburetor Service

Carburetor Disassembly and Inspection Cont.

6. Remove water trap assembly from float bowl and inspect O-ring, hose and clamp condition. Refer to exploded view corresponding with carburetor being serviced.



7. Inspect choke fuel supply passage in bowl for obstruction.



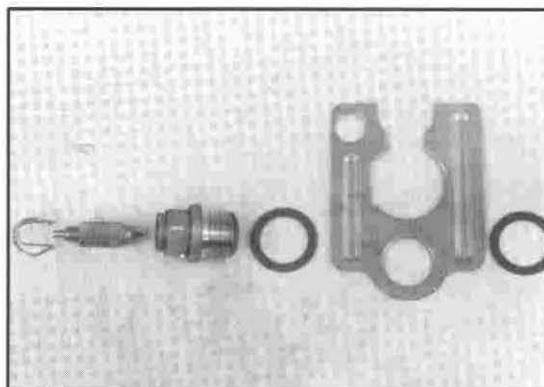
8. Use an automatic center punch to remove float arm pin. Remove inlet needle and seat assembly.



9. Inspect needle for wear and replace sealing washers upon reassembly.

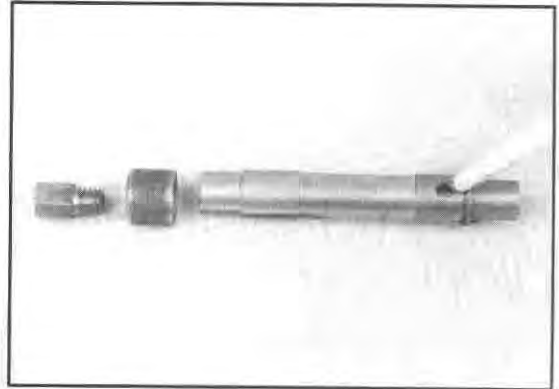
CAUTION:

Do not bend float arm during disassembly. Do not use excessive force to remove float arm pin. The float pin tower castings are very easily damaged and are not repairable.



Carburetor Disassembly and Inspection Cont.

10. Remove main jet and washer (or spacer ring) and push needle jet into the slide valve chamber to remove. Clean air bleed hole in needle jet.



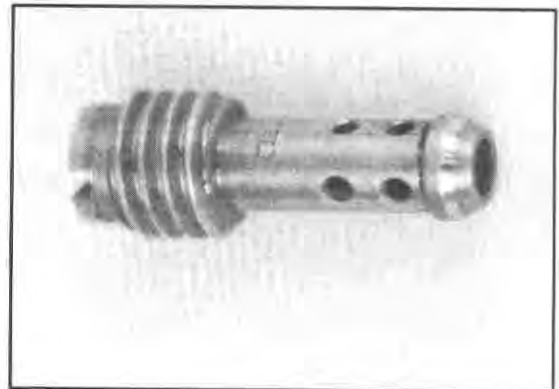
11. Remove pilot jet.

CAUTION:

Wear eye protection when using compressed air or cleaning solvents. Review all fuel system warnings found on page 5.1 before proceeding.

12. Remove pilot air screw and clean all passages in the carburetor body with carburetor cleaner. Dry all passages and jets with compressed air. Replace gaskets and any parts which show wear or damage.
13. Reassemble carburetor, adjusting float level before installing float bowl.

Refer to page 5.38 for float level adjustment and leak testing procedures.



FUEL SYSTEM/CARBURETION

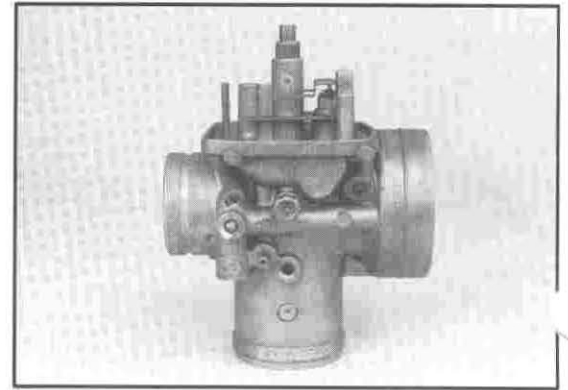
Mikuni Carburetor Adjustments

Float Level Adjustment

1. Remove float bowl.
2. With carburetor in an inverted position, float arm (A) should be parallel with body (B). See illustration at right. Arms must be parallel to each other.
3. To adjust float arm, bend tang contacting inlet needle.

CAUTION:

Never bend the float arm itself.

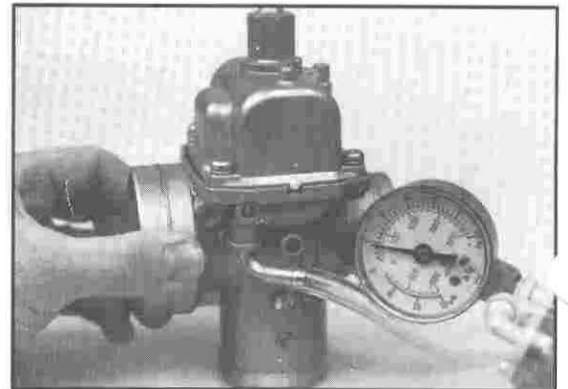


Leak Testing Needle and Seat

1. After adjustment of float level, with carburetor still in an inverted position, install float chamber and connect pressure tester PN 2870975 to fuel inlet fitting.

Pressure Tester PN 2870975

2. Apply approximately 5 PSI pressure and wait for one minute. The needle and seat should hold pressure indefinitely. If the pressure drops rapidly replace the needle and seat assembly and/or sealing washers.

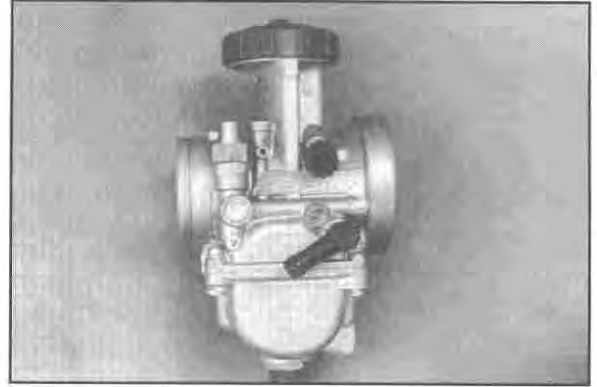


Carburetor Removal, Disassembly, and Inspection

1. Remove carburetor from engine. Before disassembling, clean outside of carburetor thoroughly with solvent.

CAUTION:

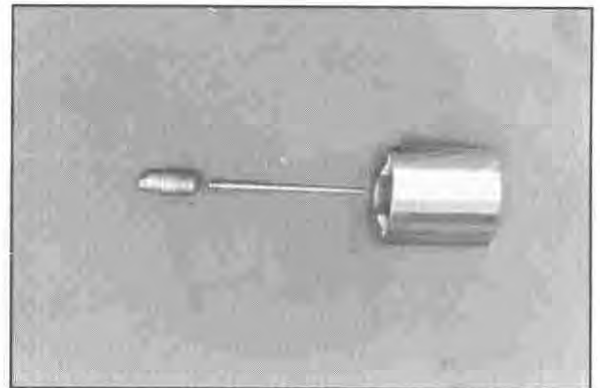
Do not use compressed air to dry at this time. The float chamber could become pressurized resulting in damage to the floats or inlet needle and seat. Do not soak Keihin carburetors in carb cleaner. Clean only with aerosol cleaner.



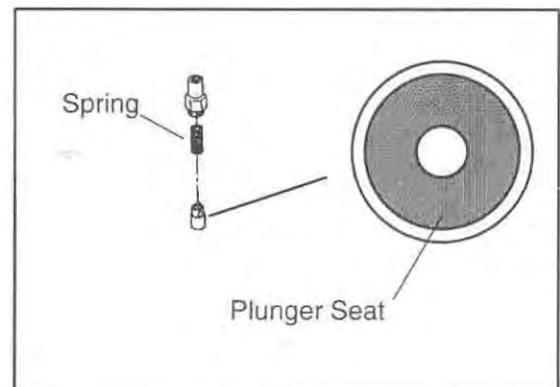
2. Remove slide valve. Inspect for nicks or burrs which may cause sticking.



3. Remove jet needle by compressing return spring toward top cap and removing throttle cable. Disconnect cable holder and remove jet needle. Note "E" clip position and inspect needle taper for wear. An indication of wear would be an hourglass shape or polished spots somewhere along the taper.



4. Remove choke plunger. Check condition of seal on tip of plunger. Any nicks or cuts will cause leakage and a rich fuel condition, usually most evident at idle and low speeds. Inspect the plunger seat for damage or foreign material.
5. Check choke cable movement. Plungers and springs should move back and forth freely.

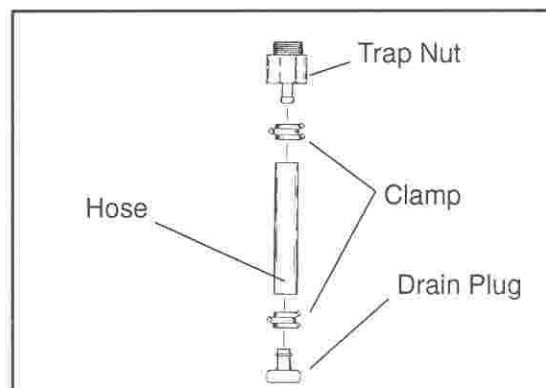


FUEL SYSTEM/CARBURETION

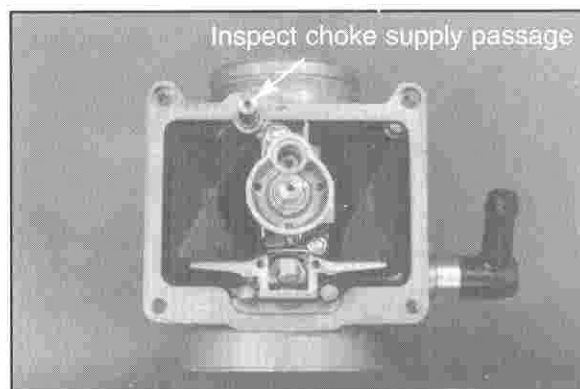
Keihin Carburetor Service

Disassembly Cont.

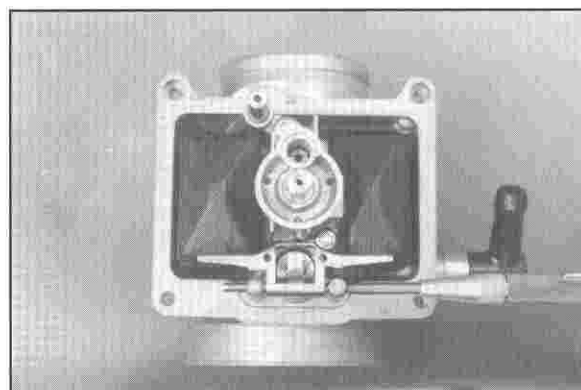
6. Remove water trap assembly from float bowl and inspect O-ring, hose and clamp condition. Refer to exploded view corresponding with carburetor being serviced.



7. Inspect choke fuel supply passage as shown for obstruction.



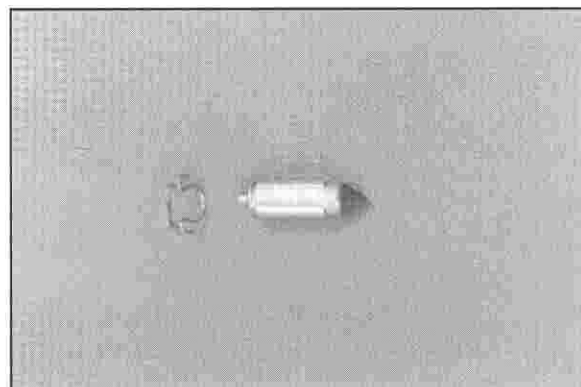
8. Remove float arm pin. Remove inlet needle. **NOTE:** Seat assembly is not replaceable. DO NOT remove.



9. Inspect needle for wear.

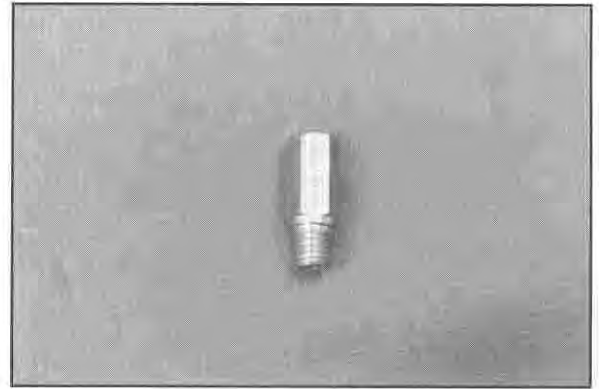
CAUTION:

Do not bend float arm during disassembly. Do not use excessive force to remove float arm pin. The float pin tower castings are very easily damaged and are not repairable.



Carburetor Disassembly Cont.

10. Remove main jet.



11. Remove pilot jet.

CAUTION:

Wear eye protection when using compressed air or cleaning solvents. Review all fuel system warnings found on page 5.1 before proceeding.

12. Remove pilot air screw and clean all passages in the carburetor body with carburetor cleaner. Dry all passages and jets with compressed air. Replace gaskets and any parts which show wear or damage.

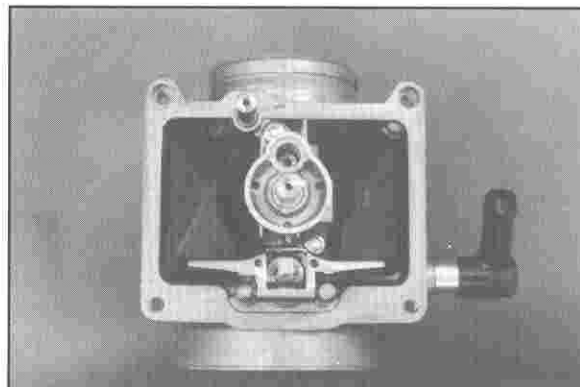


FUEL SYSTEM/CARBURETION

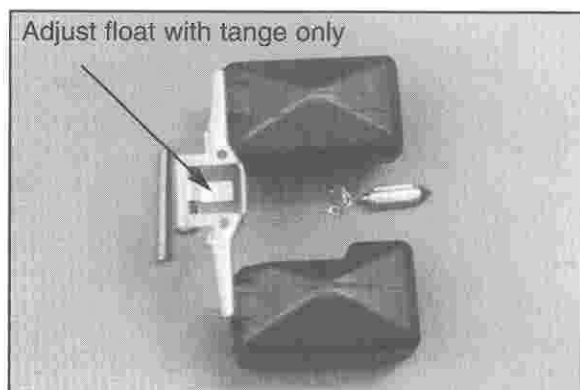
Keihin Carburetor Service

Carburetor Assembly

1. Install pilot jet and main jet.



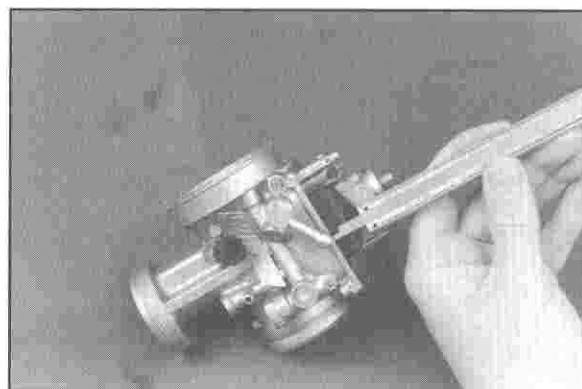
2. Install inlet needle and float assembly.



3. Hold carburetor at angle shown so needle spring is not compressed. Measure from gasket surface of carb body to highest point on float. Measurement should be within specification.

Float Height - Keihin:

16mm $\pm$ 2 mm



4. To adjust float level, bend tang contacting inlet needle. See photo above.

CAUTION:

Do not bend float arm. Adjustment should be made with tang contacting inlet needle.

FUEL SYSTEM/CARBURETION

Keihin Carburetor Service

5. After adjusting float level, place carburetor in an inverted position.
6. Connect pressure tester to fuel inlet fitting. Apply 5 psi pressure and observe for one minute. The needle and seat should hold pressure indefinitely. If the pressure drops, carefully inspect the needle and the needle seat. The needle can be replaced if necessary. The needle seat cannot be replaced. If the seat surface is damaged replace the carburetor.

Pressure Tester PN 2870975



7. Carefully inspect float bowl gasket and replace if necessary. Install float bowl on carburetor.
8. Install idle screw and air adjusting screw.
9. Install jet needle clip onto needle jet.
10. Install jet needle into throttle valve.
11. Screw cable holder into throttle valve to secure jet needle and throttle valve.
12. Inspect gasket under throttle cap. Install throttle cable, spring, and collar. Connect cable to slide valve.
13. Install carburetor top cap until seated on carburetor body.



FUEL SYSTEM/CARBURETION Adjustments

1996 Throttle Gap Chart

Model	Engine Model	Throttle Gap Under Cutaway	Air Screw CCW From Seat	Idle RPM
Lite, Lite GT, Lite Deluxe	EC34-2PM02	.240"/6.1mm	1.5	1600
Sport, Transport, Sport Touring	EC44-3PM01	.236"/6.0mm	1.25	1800
Super Sport	EC44-3PM02	.200"/5.1mm	1.25	1600
440	EC45PL02/06	.210"/5.3mm	1.5	1600
440 XCR	EC45PL07	.210"/5.3mm	1.0	1800
440 XCR SP	EC45PL08	.210"/5.3mm	1.0	2000
WideTrak GT	EC50PM03	.240"/6.1mm	1.0	1600
Trail, Trail Touring	EC50PM04/E04	.240"/6.1mm	1.5	1600
500, 500 SKS	EC50PL11	.210"/5.3mm	1.0	1600
Classic	EC50PLE11	.210"/5.3mm	1.0	1900
WideTrak LX	EC50PL12	.240"/6.1mm	1.5	1600
Classic Touring	EC50PL14	.240"/6.1mm	1.5	1600
500 RMK	EC50PL15	.210"/5.3mm	1.0	1600
XLT SP, 600 XCR	EC58PL02	.221"/5.6mm	1.0	2000
XLT, XLT SKS	EC58PL03	.193"/4.9mm	1.0	1700
XLT Touring	EC58PLE05	.230"/5.8mm	1.0	1700
XLT RMK	EC58PL07	.193"/4.9mm	ACCS	1700
600 XCR SP	EC59PL01	.187"/4.8mm	1.5	2000
Ultra SP, Ultra SKS	EC68PL01	.187"/4.8mm	1.0	1500
Ultra RMK	EC68PL04	.250"/6.4mm	1.0	1800
Storm RMK	EC80PL04	.218"/5.5mm	1.0	1600
Storm, Storm SKS	EC80PL05	.218"/5.5mm	1.0	1600

FUEL SYSTEM/CARBURETION

Throttle Gap Specifications

1997 Throttle Gap Chart

1997 Model	Engine Model	Throttle Gap-Under Cutaway (Under front of slide on Keihin) Drill Size (Inches/mm)	Idle Sync. Gap (Under Cutaway) Drill Size (Inches/mm)	Air Screw (Turns)	Idle RPM	Special Tool Required
Lite, Lite GT, Lite Deluxe	EC34-2PM02	.219"-7/32(5.55mm)	.240"-B(6.10mm)	1.5	1600	
Sport, Sport Trng, Transport, XCF	EC44-3PM02	.180"-15(4.57mm)	.200"-8(5.10mm)	1.0	1600	
440 XC	EC45PL08	.172"-11/64(4.37mm)	.190"-12(4.80mm)	.75	1600	
440	EC45PL09	.190"-12(4.80mm)	.210"-8(5.30mm)	.75	1600	
440 XCR	SN44LCDCSP-01	.172"-11/64(4.37mm)	.190"-12(4.80mm)	1.0	1800	
WideTrak GT	EC50PM03	.219"-7/32(5.55mm)	.240"-B(6.10mm)	1.0	1600	
Trail, Trail Touring	EC50PM04	.219"-7/32(5.55mm)	.240"-B(6.10mm)	1.5	1600	
Trail RMK	EC50PM05	.219"-7/32(5.55mm)	.240"-B(6.10mm)	1.0	1600	
Super Sport	EC50PM06	.180"-15(4.57mm)	.200"-B(5.10mm)	1.0	1600	
500, 500 Classic, 500 SKS	EC50PL17	.190"-12(4.80mm)	.210"-4(5.30mm)	1.0	1600	
500 RMK	EC50PL16	.210"-4(5.3mm)	.228"-1(5.80mm)	.75	1600	
Classic Touring	EC50PL19	.219"-7/32(5.55mm)	.240"-B(6.10mm)	1.0	1600	
WideTrak LX	EC50PL20	.219"-7/32(5.55mm)	.240"-B(6.10mm)	0.5	1600	
XLT, XLT SKS	EC58PL03	.172"-11/64(4.37mm)	.193"-11(4.90mm)	1.0	1700	
XLT RMK	EC58PL07	.172"-11/64(4.37mm)	.193"-11(4.90mm)	.75	1700	
600 XC	EC58PL08	.172"-11/64(4.37mm)	.190"-12(4.80mm)	.75	1700	
XLT LTD, XLT Touring	EC58PL09	.210"-4(5.3mm)	.228"-1(5.80mm)	1.0	1600	
XLT SP, XLT LTD SP	EC58PL12	.166"-19(4.22mm)	.187"-3/16(4.75mm)	1.0	1600	
600 XCR, 600 XCR SE	EC59PL01	.166"-19(4.22mm)	.187"-3/16(4.75mm)	0.5	1600	
Ultra, Ultra Touring, Ultra SP	EC68PL01	.166"-19(4.22mm)	.187"-3/16(4.75mm)	1.0	1800	
Ultra SPX, Ultra SPX SE	EC68PL03	.228"-1(5.79mm)	.248"-1/4(6.30mm)	1.0	1800	
700 SKS, 700 XC	SN70LCDCSP-01	.031"-1/32(0.79mm)*	.0469"-3/64(1.19mm)*	1.0	1500	PN2871810
700 RMK	SN70LCDCSP-02	.078"-5/64(1.98mm)*	.0937"-3/32(2.38mm)*	1.5	1500	PN2871811
Storm RMK	EC80PL04	.228"-1(5.79mm)	.248"-1/4(6.30mm)	1.0	1600	
Storm, Storm SE	EC80PL04	.228"-1(5.79mm)	.248"-1/4(6.30mm)	1.0	1600	

* Requires Special tool with two drill gauges spaced 8mm apart. Measured on forward edge (engine side) of slide.

FUEL SYSTEM/CARBURETION

Throttle Gap Specifications

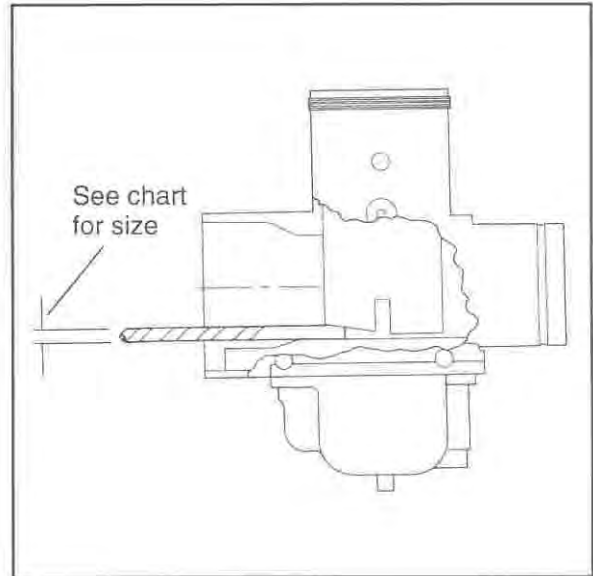
1998 Models

1998 Model	Engine Model	Throttle Gap-Under Cutaway (Front of slide on Keihin)	Idle Sync. Gap Under Cutaway (Front of slide on Keihin)	Air Screw (Turns out)	Idle RPM	Tool
Lite Deluxe Lite / Lite Touring	EC34-2PM02A	.219" - 7/32 (5.55mm)	.240"-#73 (6.1mm) (15/64=.2344")	1.5	1600	
Sport / Sport Tour Transport XCF	EC44-3PM024	.180" - #15 (4.57mm)	.200"(5.1mm) (#7 or 13/64")	1.0	1600	
440 XCR	SN44-44LDCSP-01	.200" - 13/64 (5.1mm)	.217"-(5.5mm) (7/32")	1.25	1600	
440 Indy	EC45PL091	.189" - #12 (4.80mm)	.208"-(5.3mm) (#7 or 13/64")	.75	1600	
Trail Trail Touring	EC50PM043	.219" - 7/32 (5.55mm)	.240" - #73 (6.1mm) (15/64)	1.0	1600	
Trail RMK	EC50PM051	.219" - 7/32 (5.55mm)	.240" - #73 (6.1mm) (15/64)	1.0	1600	
Super Sport	EC50PM061	.180" - #15 (4.57mm)	.200"(5.1mm) (#7 or 13/64")	1.0	1600	
500; 500 Classic (Classic Touring)	EC50PL171 (EC50PL191)	.219" - 7/32 (5.55mm)	.240" - #73 (6.1mm) (15/64)	.75	1600	
500 RMK	EC50PL161	.189" - #12 (4.80mm)	.208"-(5.3mm) (#7 or 13/64")	1.25	1600	
XLT SP (XLT Classic)	EC50PL140 (PL150)	.166" - #19 (4.22mm)	.187" - 3/16" (4.8mm)	1.5	1600	
Widetrak LX	EC50PL201	.219" - 7/32 (5.55mm)	.240" - #73 (6.1mm) (15/64)	0.5	1600	
XLT LTD XLT Tour	EC58PL130	.213 / #3 5.5mm=0.2165"	.234" - A (5.94mm) (7/32")	1.0	1600	
600 XC	SN60-70LDCSP-01	.7mm (.028") Tool PN: 2872093	1.5mm (.059") Tool PN: 2872093	1.0	1500	*
600 RMK	SN60-70LDCSP-02	1.98mm (.078") Tool PN: 2871811	2.38mm (.094") Tool PN: 2871811	0.5	1500	*
600 XCR	EC59PL020	.166" - #19 (4.22mm)	.187" - 3/16" (4.8mm)	.5	1600	
Ultra Ultra Touring	EC68PL050	.166" - #19 (4.22mm)	.187" - 3/16" (4.8mm)	1.0	1800	
700 XCR	EC68PL060	.228" - 1 (5.79mm)	.248" - D (6.3mm) (1/4")	1.0	1800	
700 RMK	SN70-70LDCSP-01	.70mm (.028") Tool PN: 2872093	1.5mm (.059") Tool PN: 2872093	1.0	1500	*
700 XC	SN70-70LDCSP-02	1.3mm (.051") Tool PN: 2872092	1.60mm (.063") Tool PN: 2872092	1.0	1500	*
Storm	EC80PL052	.228" - 1 (5.79mm)	.248" - D (6.3mm) (1/4")	1.0	1600	

* Requires Special tool with two drill gauges spaced 8mm apart. Measured on forward edge (engine side) of slide.

Throttle Synchronization Procedure-1996 Mikuni Carburetors

1. Remove air box, noting position of throttle cable junction block. Reposition throttle cable and junction block in same position when air box is reinstalled.
2. Rotate slide valve adjustment screws (idle screw) out (counterclockwise) approximately two turns. Loosen throttle cable adjuster sleeve jam nuts and turn adjuster down (clockwise) two turns.
3. Referring to charts on pages 5.39-5.39a, select the correct diameter throttle gap drill gauge for the engine.
4. Place drill gauge beneath slide valve cutaway as shown in illustration at right.
5. Turn idle screw in until there is a slight drag on gauge. **NOTE:** Drill gauge must be in center of carb bore. This indicates proper throttle gap. Repeat procedure on all cylinders.
6. Hold throttle cable junction block in same location as noted in step #1. This is *very important*, since synchronization changes if throttle cable or junction block are improperly positioned.
7. With drill gauge installed under throttle slide as shown, turn cable adjuster out (up) until the gauge starts to move. **NOTE:** The drill gauge must be centered in the carburetor bore.
8. Turn cable adjuster clockwise (down) 1/3 turn. Repeat for all cylinders.
9. The throttle slides must raise from the idle position in unison. Check by visually observing a drill gauge in all carburetors, noting and comparing while lightly depressing the throttle lever.
10. Check throttle lever freeplay. If adjustment is required, the throttle cable adjusters must be turned equally to maintain synchronization. Tighten jam nut while holding cable adjusters.
11. Check oil pump adjustment.
12. Reinstall air box and correctly position throttle cable and junction block. Start engine and adjust idle stop screws evenly until proper idle RPM is achieved. (See chart above.) Re-check throttle lever freeplay and reset by turning cable adjusters evenly. Tighten cable adjuster jam nuts.



Throttle Free Play -
(Std.) 0.010 - 0.030" (.25-.76mm)
EZ Throttle 0.050 - 0.060" (1.25-1.50mm)

FUEL SYSTEM/CARBURETION

Adjustments

Throttle Synchronization Procedure-1997 to Current Mikuni and Keihin (With Idle Gap Specified)

1. Remove air box, noting position of throttle cable junction block. Reposition throttle cable and junction block in same position when air box is reinstalled.

Throttle Cable Synchronization (Throttle Gap)

2. Referring to chart on page 5.39a-b, select correct diameter **Throttle Gap** synchronization drill gauge for your engine.

NOTE: Keihin carburetors, require a special tool with two drill gauges separated by an 8mm gap. See chart on page 5.39a and Illustrations at right.

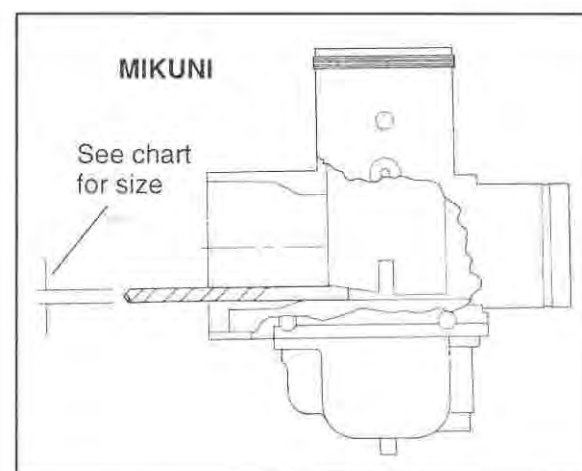
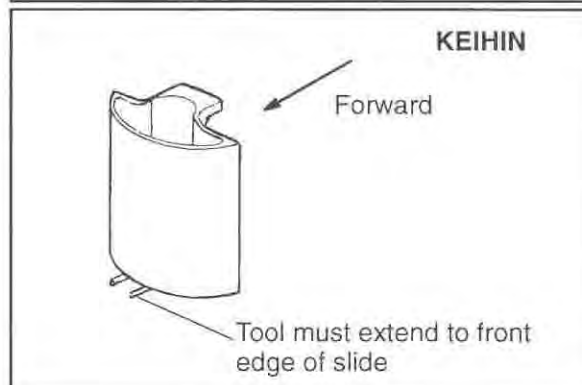
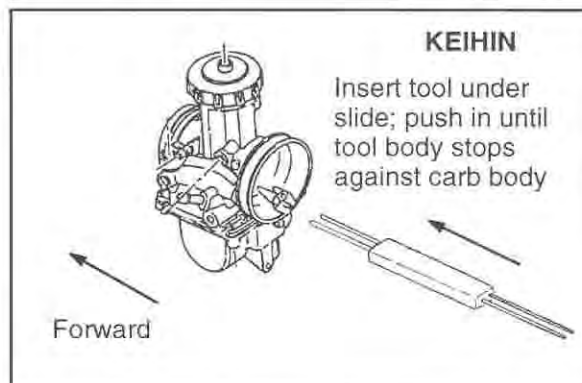
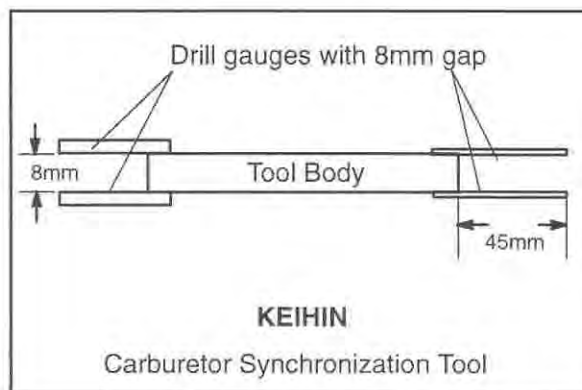
3. Back out idle screws about three turns.
4. Slightly lift throttle slides with throttle lever and insert drill gauge under throttle slide. Allow throttle slides to return.
5. Loosen lock nut and turn throttle cable adjuster (on top of carburetor) in (clockwise) or out (counterclockwise) as required until a slight drag can be felt on the gauge.
6. Securely tighten throttle cable synchronization lock nut.
7. Repeat steps 3 through 5 on remaining carburetor.

Idle Gap Synchronization

8. Referring to chart on page 5.39a, select correct diameter **Idle Gap** drill gauge for the engine.
9. Slightly lift throttle slides with throttle lever and insert idle gap drill gauge under throttle slide. Allow throttle slides to return.
10. Turn idle adjustment screw in as required until only a slight drag can be felt on the gauge.
11. Repeat steps 8 through 10 for remaining cylinders.
12. Verify proper throttle lever free play and adjust if necessary, by loosening cable adjuster locknuts and turning adjusters out equally until throttle lever freeplay is correct.

Throttle Free Play -
(Std.) 0.010 - 0.030" (.25-.76mm)

EZ Throttle 0.050 - 0.060" (1.25-1.50mm)



FUEL SYSTEM/CARBURETION

Adjustments - Choke

Choke Adjustments

With the dash mounted choke control toggle flipped to the full off position, the choke plunger must be seated on the fuel passage way in the carburetor. If the plunger is not seated on the passage way, the engine will flood or run too rich, causing plug fouling and very poor engine performance.

If cable slack is too great there will be excessive toggle free play resulting in hard cold starting. Also, the half on position used for intermittent applications will not function.

If the choke lever assembly becomes damaged, a lever kit is available. This allows replacement of the lever assembly rather than the entire cable assembly. Installation instructions are included with the kit.

Choke Lever Kits -

2 Cylinder PN 2200188

3 Cylinder PN 2200189

Adjustment Procedure

1. Flip choke toggle to full off position.
2. Loosen adjustment locknut (A) on carburetor(s).
3. Turn cable sleeve adjusting nut (B) clockwise on carburetor(s) until $1/4"$ (.6 cm) or more choke toggle free play is evident.
4. Turn cable sleeve adjusting nut counterclockwise on one carburetor until toggle has zero free play, then rotate it clockwise until $1/8"-1/4"$ (.3-.6 cm) toggle free play is evident.
5. Tighten adjustment locknut (A).
6. Repeat steps 4 and 5 for remaining carburetor(s).

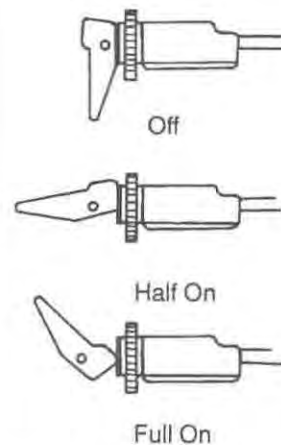
Choke Lever Freeplay -

$1/8 - 1/4"$ (.3 - .6 cm)

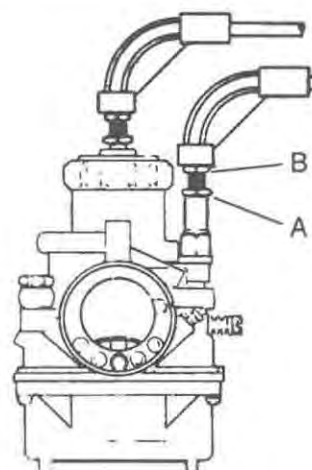
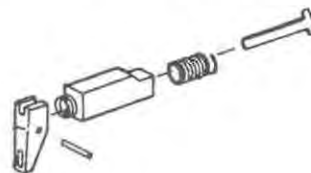
$1/8-1/4"$ (.3-.6 cm)
Freeplay



Choke Toggle Position



Contents of Lever Kit



FUEL SYSTEM/CARBURETION Adjustments

The amount of air drawn into the cylinders is influenced by such factors as altitude, temperature, humidity, etc. Suppose the amount of air drawn into the cylinders at an elevation of zero is taken as 100 (the temperature and humidity in this case are considered constant). The amount of air in question decreases in proportion to a rise in elevation as shown in Chart A. Reduction in the amount of air drawn into the cylinders changes the air/fuel mixture ratio, resulting in a marked drop in power output.

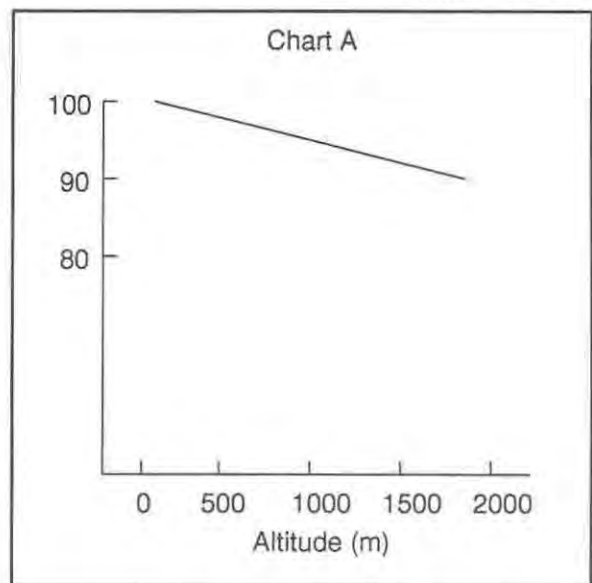
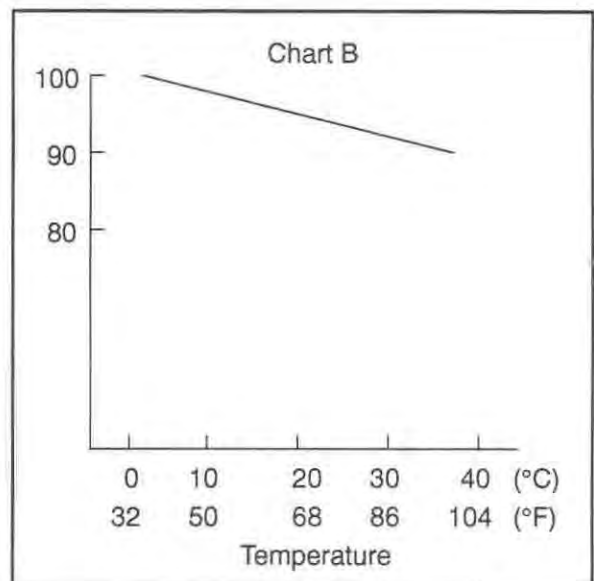
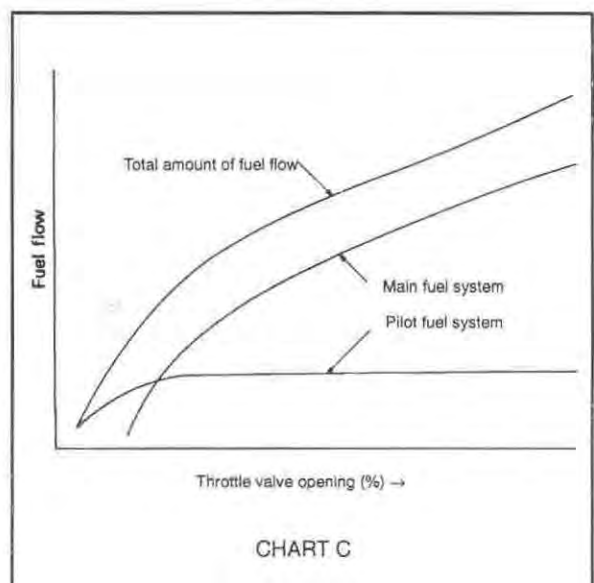


Chart B shows the relationship between a rise in temperature and the amount of air drawn into the cylinders. In this case, the atmospheric pressure (elevation) and the humidity are considered unchanged and the amount of air going into the cylinders at 32° F (0° C) is taken as 100.



On Mikuni VM carburetors the pilot system and the main system are of independent construction. The fuel flow in these two systems is shown in Chart C.



FUEL SYSTEM/CARBURETION

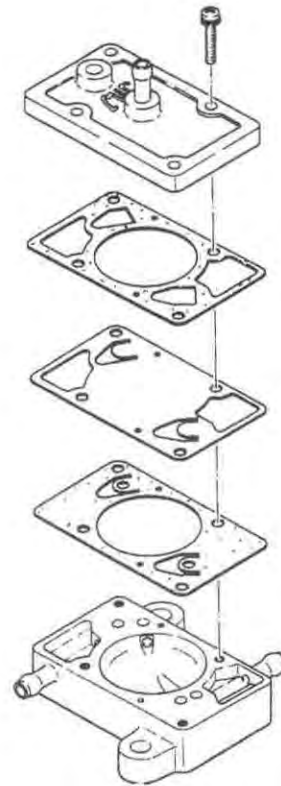
Fuel Pump - Operation

The fuel pumps on all Polaris engines are basically the same. The differences are in the size and location of the pumps. Pumps may be mounted to the engine or to the chassis.

In the two cycle engine, the pressure in the crankcase changes with the up and down stroke of the piston. The amplitudes of pressure vary according to the RPM and degree of throttle opening. Whether idling or at full throttle, the pressure built up in the crankcase has enough amplitude to operate the pump.

When the piston is on the upstroke, crankcase pressure in that cylinder becomes less positive. The diaphragm in the fuel pump moves toward the engine, causing a negative pressure or suction in the pump chamber. This causes the inlet valve from the fuel supply to open and permits fuel to enter the chamber. This same suction causes the outlet valve (to the carburetor) to close so that fuel cannot return from the carburetor.

When the piston begins its downward stroke, the pressure from the crankcase becomes positive, causing the fuel pump diaphragm to move in the opposite direction and reversing the pressure in the fuel pump chamber. This causes the inlet valve in the pump to close and the outlet valve to open, filling the float bowl in the carburetor. When the float level in the carburetor reaches its standard level, the needle valve will close, preventing more fuel from entering the carburetor, even though the fuel pump continues to try to provide the carburetor with fuel.



Maintenance

The impulse operated diaphragm fuel pump does not require any specific scheduled maintenance. However, the following procedures should be observed.

Operation:

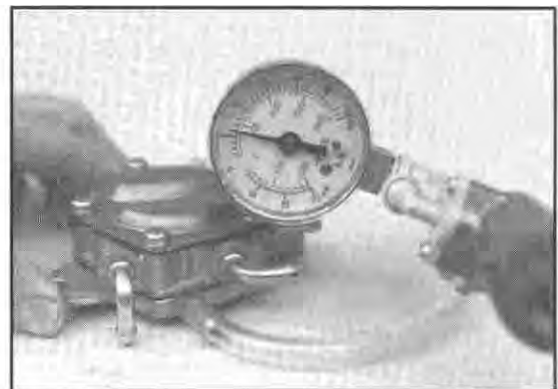
- The pump may be checked for operation by removing the fuel supply line from the carburetor and placing it into a container. With the engine idling at approximately 2000 RPM, a steady flow of fuel should be visible.

Cleaning:

- The pump and impulse line must be disassembled and cleaned of foreign material in the event of piston or other internal engine part failures which produce fragments.

Inspection:

- Disconnect impulse line from pump. Connect Mity Vac™ to impulse fitting (or line) and apply 4-6 PSI pressure. Diaphragm should hold pressure indefinitely.
- The diaphragms and check valves must be carefully examined for cracks, holes, or other damage. If in doubt as to the condition of any internal parts, replace all diaphragms, check valves, and gaskets.



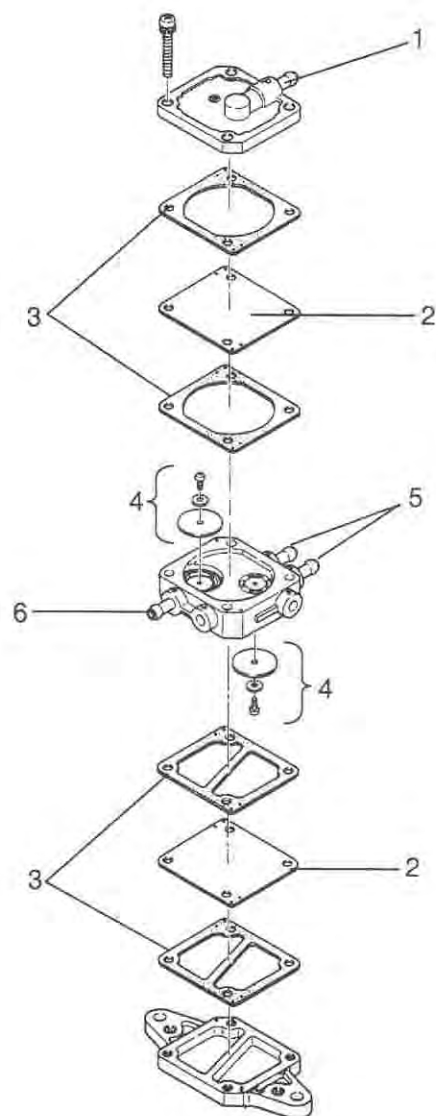
FUEL SYSTEM/CARBURETION

Exploded View Fuel Pump

Taio Giken

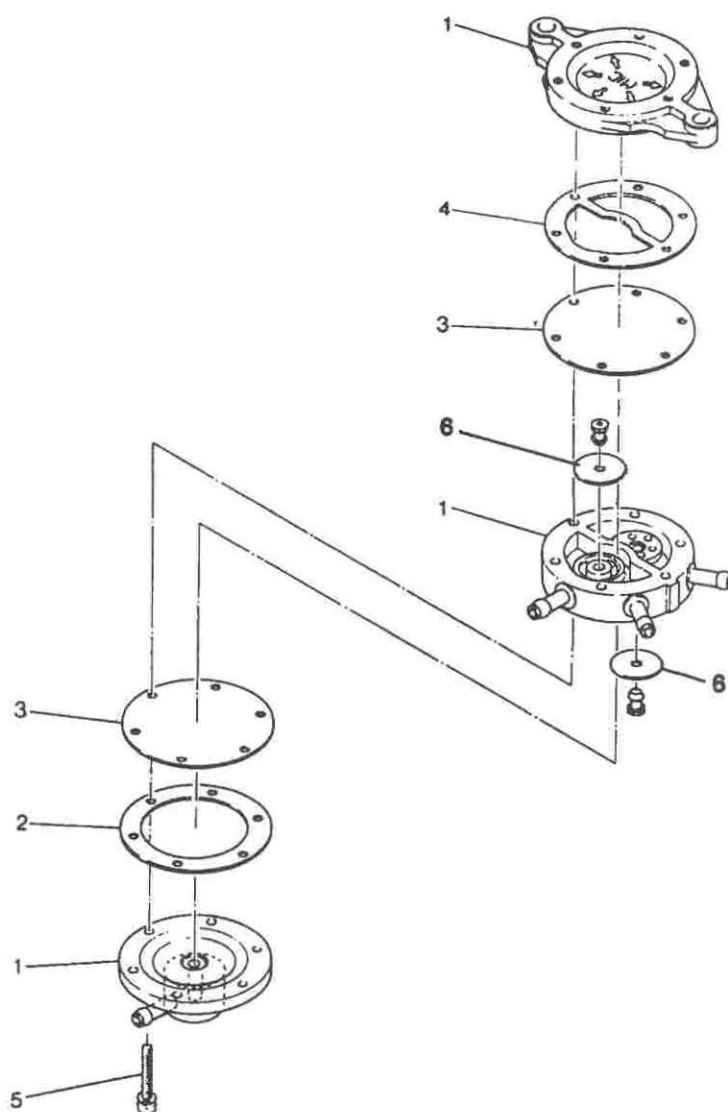
Description of Parts

1. Vacuum (from crankcase)
2. Diaphragm
3. Gaskets
4. Check Valves
5. Fuel Outlets (to carbs)
6. Fuel Inlet (from tank)



FUEL SYSTEM/CARBURETION

Exploded View - Twin Cylinder (Typical) Fuel Pump

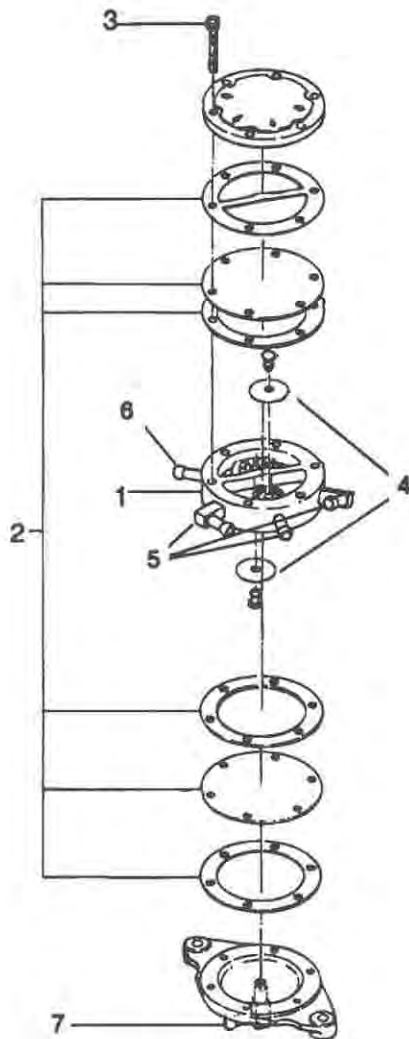


Parts Description

- 1. Pump Body Assembly
- 2. Lower Gasket
- 3. Diaphragm
- 4. Upper Gasket
- 5. Screw (6 used)
- 6. Check Valve

FUEL SYSTEM/CARBURETION

Exploded View - 3 Cylinder Fuel Pump



Parts Description

1. Pump Valve Body
 2. Diaphragms and Gaskets
 3. Screw (6 used)
 4. Check Valves
- NOTE: Be sure of proper order and position of gaskets and diaphragms upon reassembly.
5. Fuel Outlet (3 to carbs)
 6. Fuel Inlet (from tank)
 7. Vacuum/Pressure (from crank-case)

FUEL SYSTEM/CARBURETION

Water Trap Service

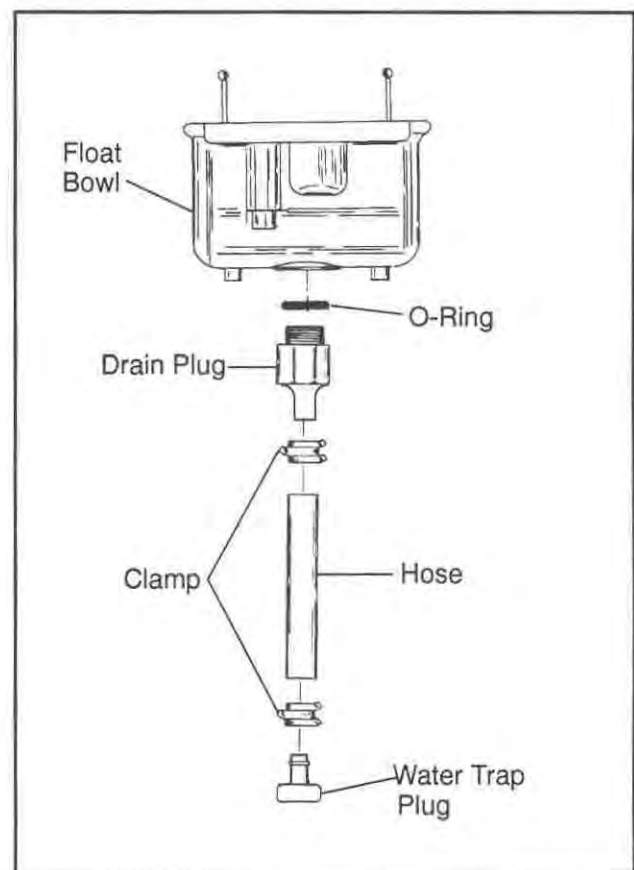
⚠ WARNING

Fuel spillage will occur during this installation. *Gasoline is extremely flammable and explosive under certain conditions.*

- ⚠** Do not smoke or allow open flames or sparks in or near the area where refueling is performed or where gasoline is stored.
- ⚠** Do not weld or operate a torch near the fuel system. Remove fuel tank before any chassis welding is performed.
- ⚠** If you get gasoline in your eyes or if you swallow gasoline, see your doctor immediately.
- ⚠** If you spill gasoline on your skin or clothing, immediately wash it off with soap and water and change clothing.
- ⚠** Never start the engine or let it run in an enclosed area. Gasoline powered engine exhaust fumes are poisonous and can cause loss of consciousness and death in a short time.

1. Turn fuel valve off.
2. Remove air silencer.
3. Position a shop cloth or container below drain plug and water trap plug.
4. Remove drain plug and sealing O-Ring, or slide clamp upward and remove water trap plug.
5. Drain water/fuel. Clean trap with electrical contact cleaner and dry with compressed air.
6. Lightly grease O-ring and install water trap assembly into bottom of float bowl, or reinstall trap plug in hose and position. Tighten securely.
7. Turn fuel on, start engine and check for possible fuel leaks.
8. Reinstall air box.

The water traps should be periodically inspected and drained. Draining frequency will depend upon fuel supply, riding conditions, and fuel handling precautions.



FUEL SYSTEM/CARBURETION

Troubleshooting

Fuel system diagnosis should follow a specific path, first examining the fuel tank, then the filters, fuel lines, vent lines, fuel pump, impulse hose, air box, exhaust system and finally the carburetors.

The following troubleshooting information assumes that the general mechanical condition of the engine (pistons, rings, bearings, etc.) is good.

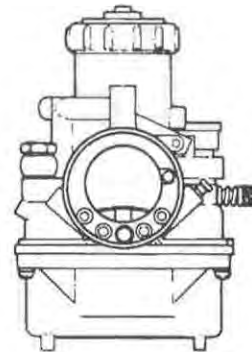
When the fuel/air mixture is diagnosed as improper due to spark plug readings, clean the carburetor and blow its passages clear with compressed air. Use the spark plug firing end condition as a guide for further determination of whether the mixture is too rich or too lean.

Use the throttle lever to determine at what degree of throttle valve opening the problem exists.

CONDITION	SYMPTOMS
Mixture Too Rich	-Black spark plug tip; plug fouling -Heavy exhaust smoke -Engine runs worse after warm up -Engine "loads up"
Mixture Too Lean	-Spark plug electrodes white -Fluctuation in engine speed -Power loss -Engine overheats -Cylinder scoring / Holing pistons -Backfiring - detonation -Throttle diagnostic opening check points
Poor Fuel Mileage	-Incorrect ignition timing -Improper track tension (too tight) -Incorrect carburetor jetting -Fuel leaks (lines, fittings, fuel pump) -Needle and seat leaks -Plugged exhaust -Carburetor vent line problems -Clutching incorrect for conditions / worn belt

Troubleshooting Tips, 0-1/4 Throttle:

- Pilot air screw misadjusted
- Pilot jet of wrong size, loose, or obstructed
- Obstruction of pilot jet
- Incorrect throttle synchronization
- Choke plunger not seating (rich)
- Carburetor mounting air leak (lean)
- Crankshaft seal air leak (lean)
- Fuel pump diaphragm damaged (rich)
- Float level incorrect
- Air bleed obstructed

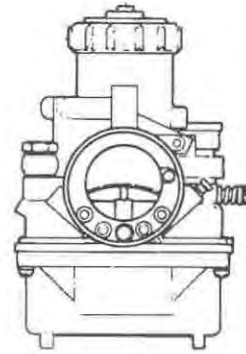


FUEL SYSTEM/CARBURETION

Troubleshooting

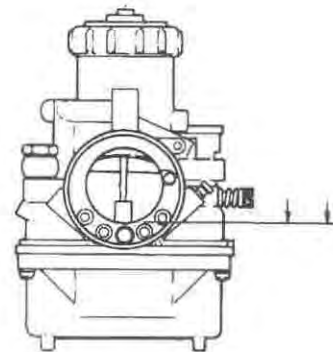
Troubleshooting Tips, 1/4-3/8 Throttle:

- Obstruction in main jet or needle jet
- Jet needle worn or out of adjustment
- Pilot system malfunction
- Incorrect throttle valve cutaway
- Incorrect throttle synchronization



Troubleshooting Tips, 3/8-3/4 Throttle:

- Main jet incorrect size or clogged (lean)
- Needle jet damaged or loose
- Needle jet/jet needle worn (rich)
- Incorrect throttle synchronization



Troubleshooting Tips, Full Throttle:

- Main jet size (rich or lean)
- Fuel filter blocked (lean)
- Fuel vent lines or check valves plugged
- Exhaust system plugged
- Air box restricted
- Fuel pump weak
- Exhaust leaking into engine compartment (rich)
- Water in float bowl (lean)
- Incorrect throttle synchronization

