



FUEL SYSTEM

Section 3B - Carburetor

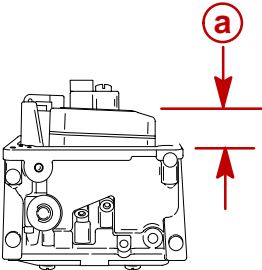
Table of Contents

Specifications	3B-2	Carburetor Removal	
Special Tools	3B-2	USA S/N 0T409000 and Up	3B-12
Notes:	3B-3	Carburetor Removal	
Carburetor (USA S/N 0T408999 and Below, Belgium S/N 0T153499 and Below)	3B-4	Belgium S/N 0P153500 and Up	3B-12
Carburetor (USA S/N 0T409000 and Up, Belgium S/N 0P153500 and Up)	3B-6	Carburetor Disassembly	3B-13
Intake	3B-8	Inspection	3B-16
Carburetor Adjustments	3B-10	Carburetor Assembly	3B-18
Float Level	3B-10	Carburetor Installation	3B-21
Idle Speed	3B-10	Carburetor Installation	
Carburetor Removal	3B-11	USA S/N 0T408999 and Below	3B-21
Carburetor Removal		Carburetor Installation	
USA S/N 0T408999 and Below	3B-11	Belgium S/N 0P153499 and Below	3B-21
Carburetor Removal		Carburetor Installation	
Belgium S/N 0P153499 and Below	3B-11	USA S/N 0T409000 and Up	3B-23
		Carburetor Installation	
		Belgium S/N 0P153500 and Up	3B-23



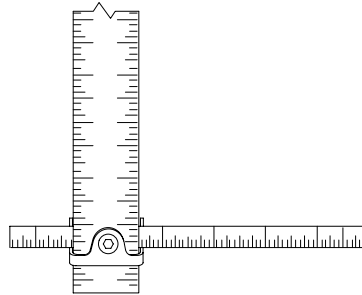


Specifications

<p>CARBURETOR</p>	<p>Idle RPM (Out Of Gear) Idle RPM (In Forward Gear) Wide Open Throttle RPM (WOT) Range Standard Model Main Jet Size Pilot Jet Idle Jet Bodensee Model Main Jet Pilot Jet Idle Jet Float Height (a)</p> 	<p>825 ± 25 RPM 775 ± 25 RPM 5500–6000 #110 #50 #45 #105 #50 #50 0.47-0.63 in. (12.0-16.0 mm)</p>
<p>ENRICHMENT CONTROL SYSTEM Readings taken @ 68°F (20°C).</p>	<p>Auto Enrichener Electrothermal ram projection</p>	<p>15 - 25 Ω 0.3 in. (7 mm) after 5 min. of power</p>

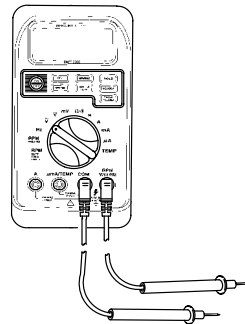
Special Tools

1. Carburetor Scale (P/N 91-36392)



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2. DMT 2000 Digital Tachometer Multi-meter P/N 91-854009A1.

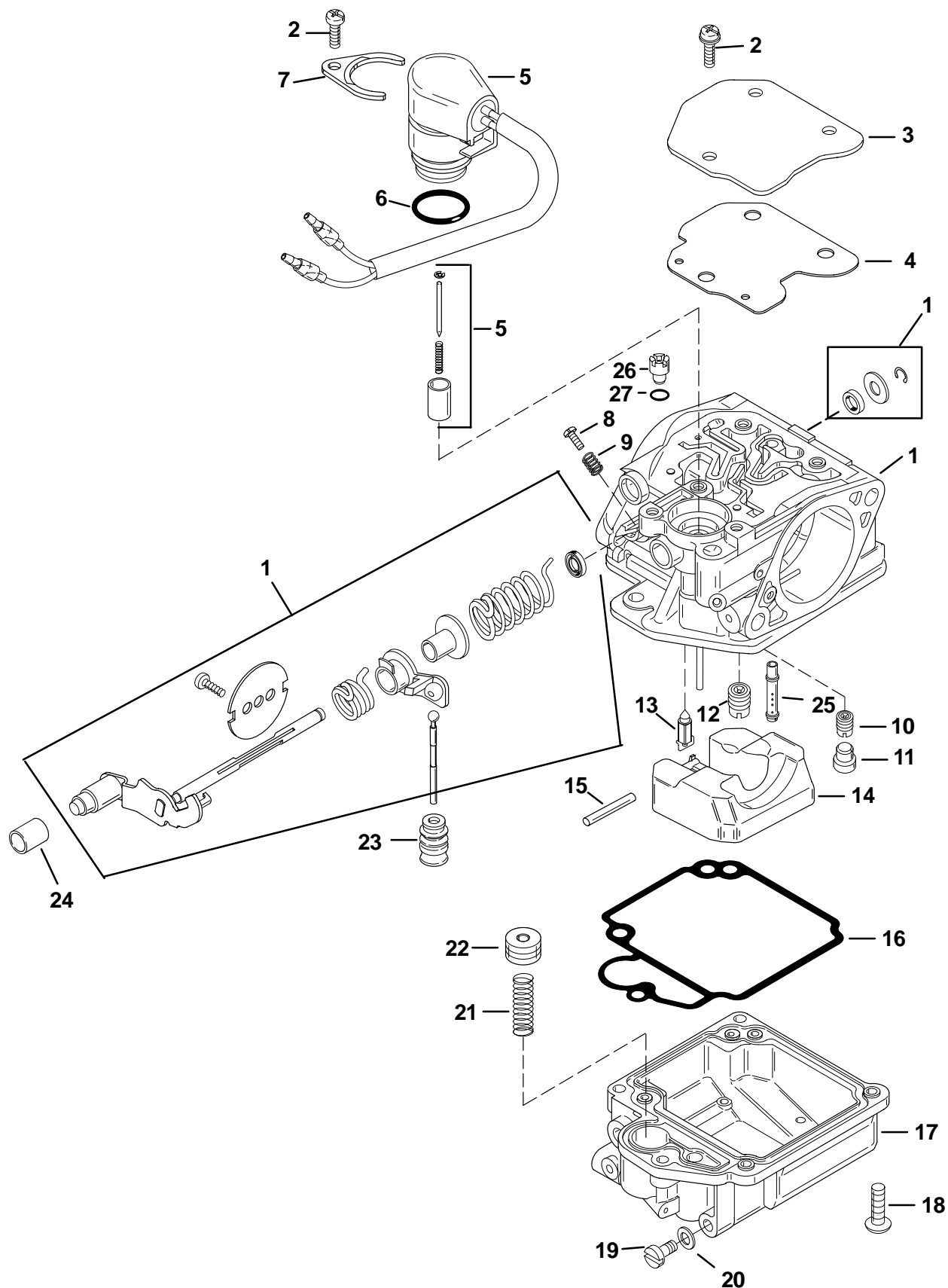




Notes:



CARBURETOR (USA S/N 0T408999 and Below, Belgium S/N 0T153499 and Below)



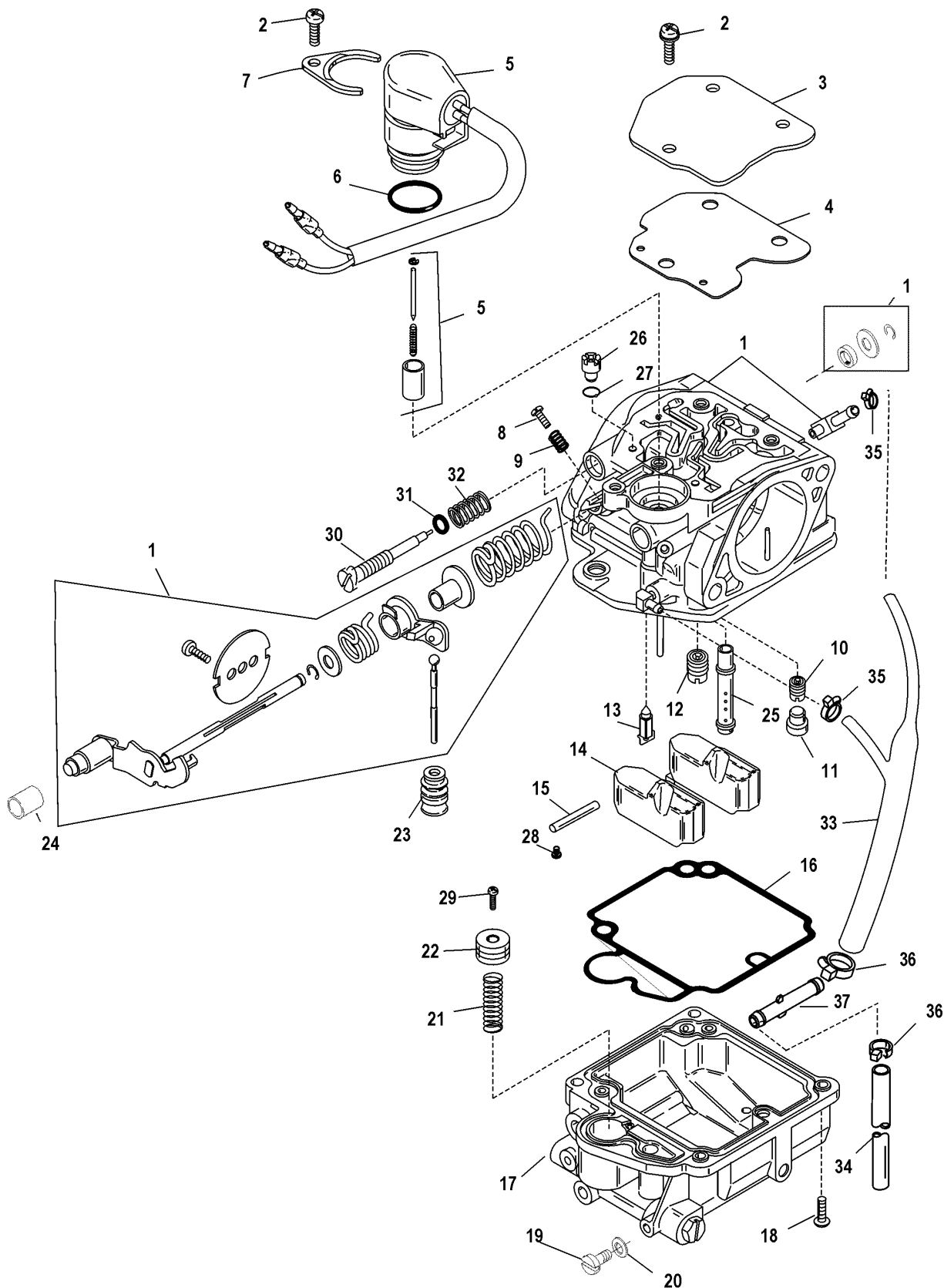


CARBURETOR (USA S/N 0T408999 and Below, Belgium S/N 0T153499 and Below)

REF. NO.	QTY.	DESCRIPTION	TORQUE		
			lb. in.	lb. ft.	N-m
1	1	CARBURETOR			
	1	CARBURETOR (BODENSEE)			
2	4	SCREW			
3	1	PLATE			
4	1	GASKET			
5	1	ENRICHENER			
6	1	O RING			
7	1	PLATE			
8	1	STOP SCREW			
9	1	SPRING			
10	1	JET (SJ)			
11	1	RUBBER PLUG			
12	1	JET (MJ) (110)			
	1	JET (MJ) (105) (BODENSEE)			
13	1	FLOAT VALVE			
14	1	FLOAT			
15	1	FLOAT PIN			
16	1	GASKET			
17	1	FLOAT BOWL			
18	4	SCREW			
19	1	DRAIN SCREW			
20	1	WASHER			
21	1	SPRING			
22	1	PLUNGER			
23	1	RUBBER CAP			
24	1	COLLAR			
25	1	MAIN NOZZLE			
	1	MAIN NOZZLE (BODENSEE)			
26	1	JET (PO)			
27	1	O RING			



CARBURETOR (USA S/N 0T409000 and Up, Belgium S/N 0P153500 and Up)



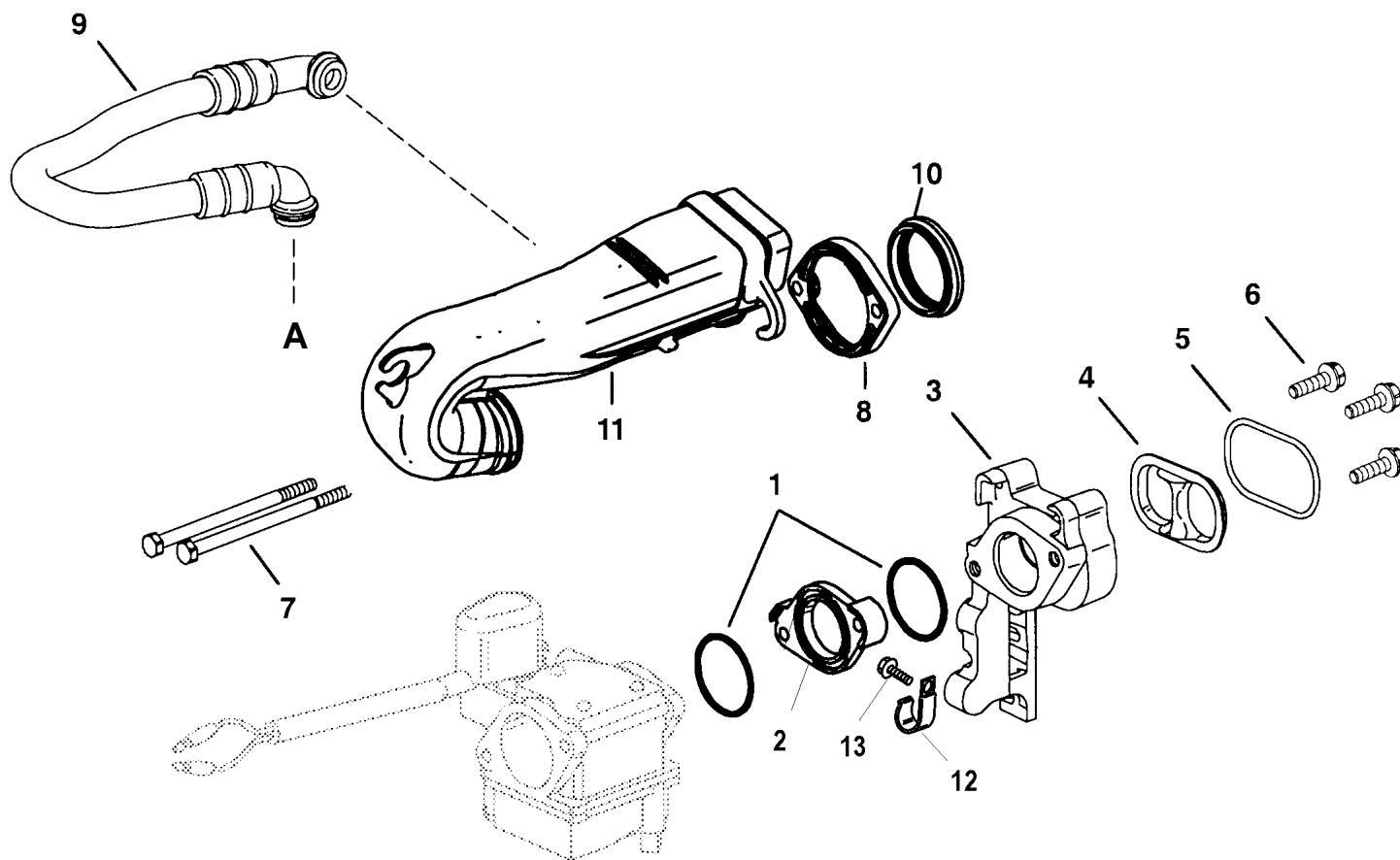


CARBURETOR (USA S/N 0T409000 and Up, Belgium S/N 0P153500 and Up)

REF. NO.	QTY.	DESCRIPTION	TORQUE		
			lb. in.	lb. ft.	N-m
1	1	CARBURETOR			
	1	CARBURETOR (BODENSEE)			
2	4	SCREW			
3	1	PLATE			
4	1	GASKET			
5	1	ENRICHENER			
6	1	O RING			
7	1	PLATE			
8	1	STOP SCREW			
9	1	SPRING			
10	1	JET (SJ)			
11	1	RUBBER PLUG			
12	1	JET (MJ) (110)			
	1	JET (MJ) (105) (BODENSEE)			
13	1	FLOAT VALVE			
14	1	FLOAT			
15	1	FLOAT PIN			
16	1	GASKET			
17	1	FLOAT BOWL			
18	4	SCREW			
19	1	DRAIN SCREW			
20	1	WASHER			
21	1	SPRING			
22	1	PLUNGER			
23	1	RUBBER CAP			
24	1	COLLAR			
25	1	MAIN NOZZLE			
	1	MAIN NOZZLE (BODENSEE)			
26	1	JET (PO)			
27	1	O RING			



INTAKE



A = To Breather Cover

**INTAKE**

REF. NO.	QTY.	DESCRIPTION	TORQUE		
			lb. in.	lb. ft.	N-m
1	2	O RING			
2	1	CARB ISOLATOR			
3	1	DIFFUSER			
4	1	INSERT			
5	1	O RING			
6	3	SCREW (M6 x 25)	75		8.5
7	2	SCREW (M6 x 100)	75		8.5
8		CLAMP			
9	1	HOSE-Breather			
10	1	SEAL			
11	1	AIR INTAKE			
12*	1	CLIP (USA S/N 0T409000, Belgium S/N 0T153500 and Up)			
13*	1	SCREW (USA S/N 0T409000, Belgium S/N 0T153500 and Up)			

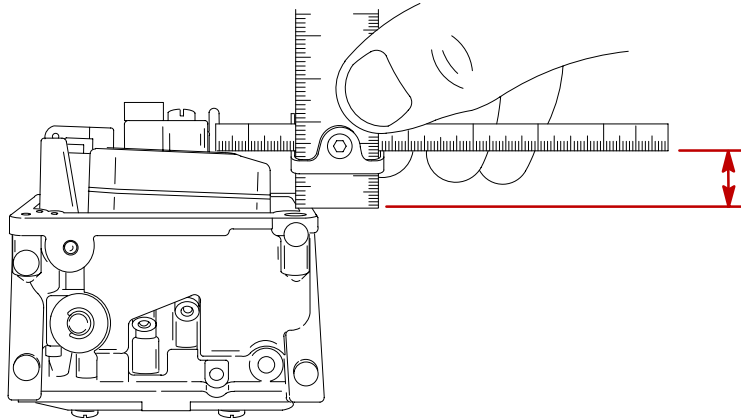
A = TO BREATHER COVER, REF.#28-CYLINDER BLOCK



Carburetor Adjustments

Float Level

1. With carburetor turned upside down and carb scale seated on inner edge, check float level from top of float to float bowl flange as shown.



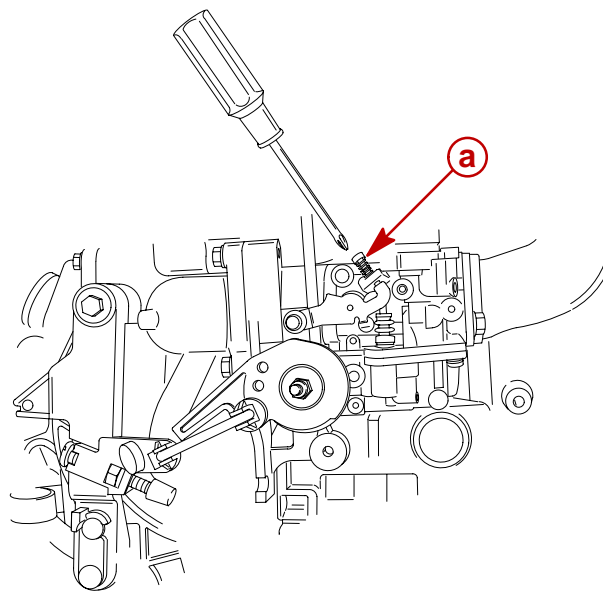
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Float Height
0.47-0.63 in. (12.0-16.0 mm)

Idle Speed

NOTE: Outboard should be completely **warmed up** for the idle speed adjustment. A cold engine will idle at approximately 1200 ± 100 RPM (out of gear).

1. With the outboard in forward gear adjust idle speed screw to obtain the specified idle speed.



a - Idle Speed Screw

Idle Speed (Forward Gear)
775 ± 25 RPM

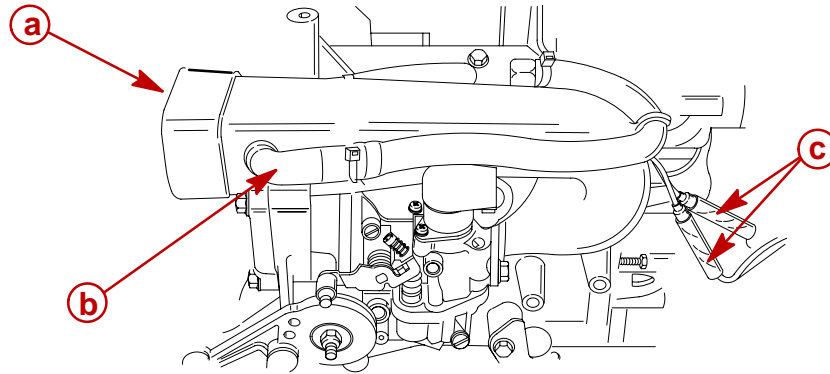


Carburetor Removal

Carburetor Removal USA S/N 0T408999 and Below

Carburetor Removal Belgium S/N 0P153499 and Below

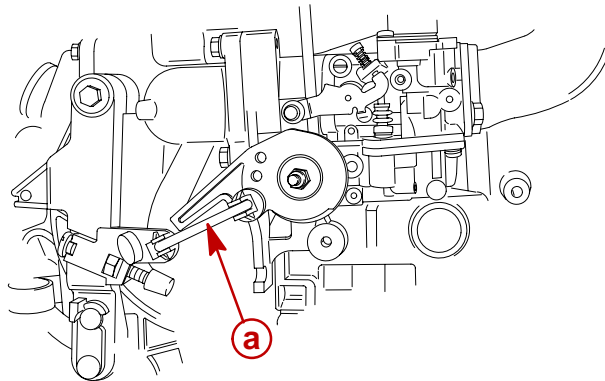
1. Disconnect breather hose from air intake.
2. Disconnect auto enrichener wires (Yellow).



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- a** - Air Intake
- b** - Breather Hose
- c** - Auto Enrichener Wires

3. Cut sta-strap and disconnect fuel pump outlet hose (refer to **"Fuel Pump Removal"** - Section 3A).
4. Disconnect cam link.

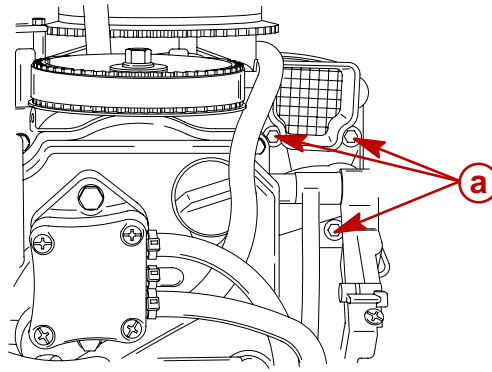


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- a** - Cam Link



- Remove screws securing carburetor assembly to intake manifold.



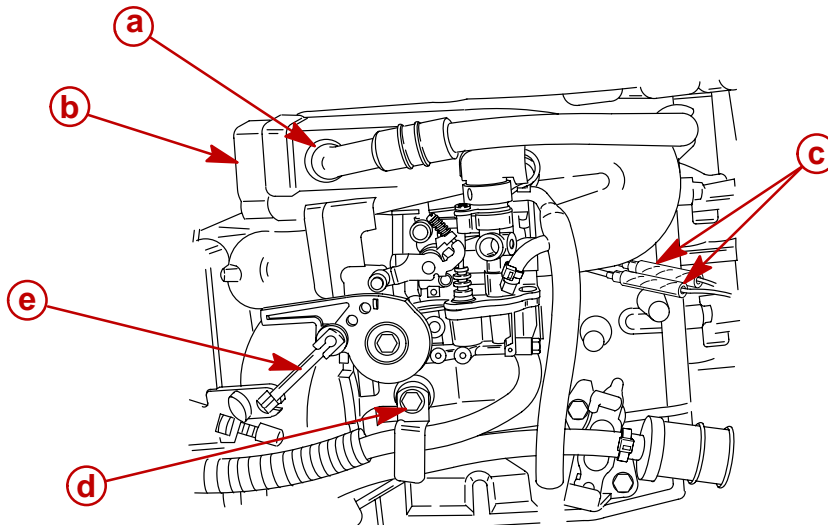
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a - Screws (3)

Carburetor Removal USA S/N 0T409000 and Up

Carburetor Removal Belgium S/N 0P153500 and Up

- Disconnect breather hose from air intake.
- Disconnect auto enrichener wires (Yellow).
- Remove screw securing fuel line clip.
- Disconnect cam link.



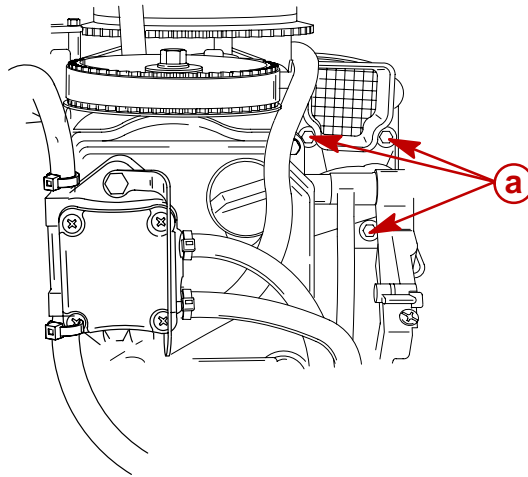
59167

a - Breather Hose
b - Air Intake
c - Auto Enrichener Wires
d - Screw and Clip
e - Cam Link

- Cut sta-strap and disconnect fuel pump outlet hose (refer to "**Fuel Pump Removal**" - **Section 3A**).



6. Remove screws securing carburetor assembly to intake manifold.

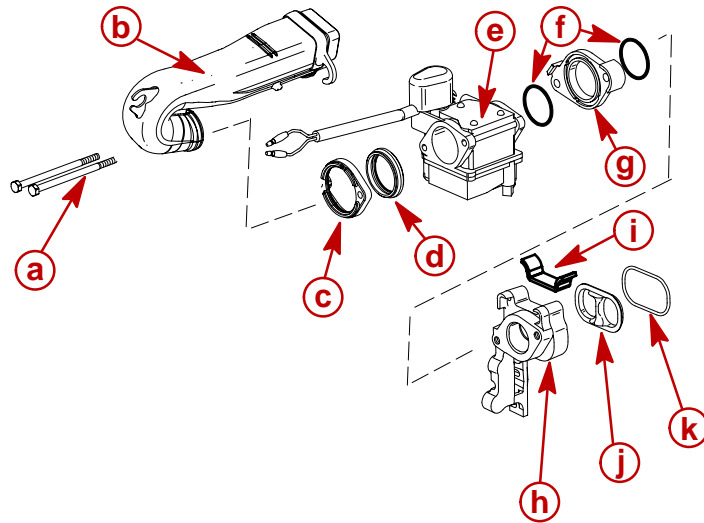


a - Screws (3)

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Carburetor Disassembly

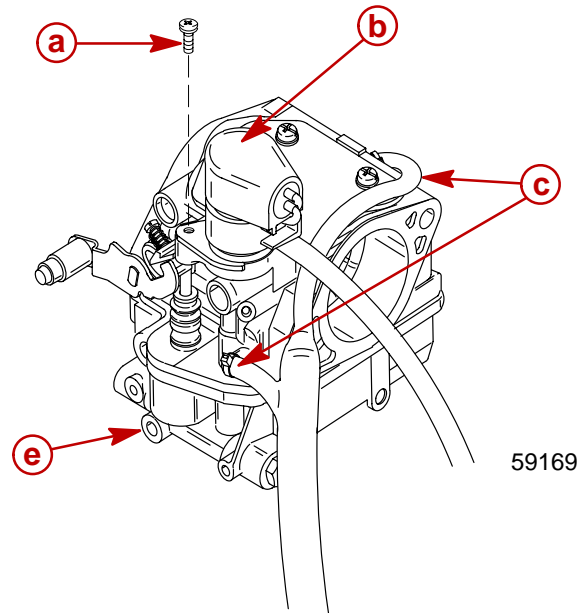
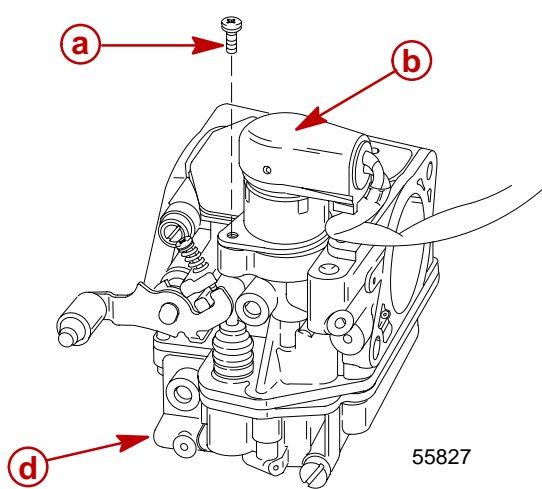
1. Remove screws, air intake, isolator, and diffuser.



- a** - Screws (2)
- b** - Air Intake
- c** - Clamp
- d** - Seal
- e** - Carburetor
- f** - O-Ring
- g** - Isolator
- h** - Diffuser
- i** - Bumper
- j** - Insert
- k** - O-Ring

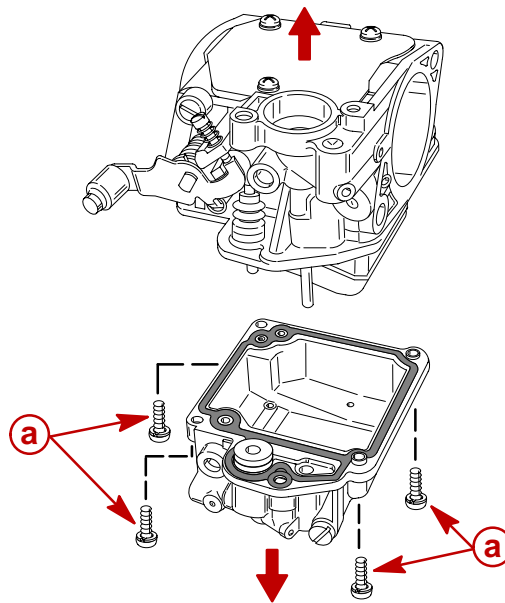


2. Remove auto enrichener.
3. **USA S/N 0T409000 and Up, Belgium S/N 0P153500 and Up:** Cut sta-straps and re-remove carburetor vent hose.



- a** - Screw
- b** - Auto Enrichener
- c** - Carburetor Vent Hose
- d** - **USA S/N 0T408999 and Below, Belgium S/N 0P153499 and Below**
- e** - **USA S/N 0T409000 and Up, Belgium S/N 0P153500 and Up**

4. Remove float bowl.

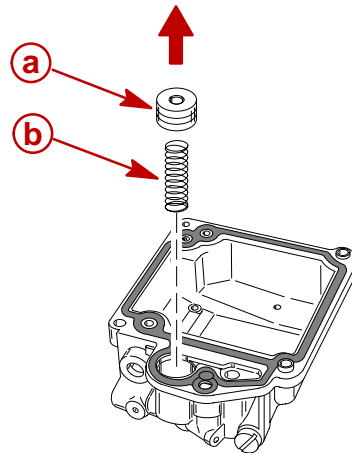


- a** - Screws (4)

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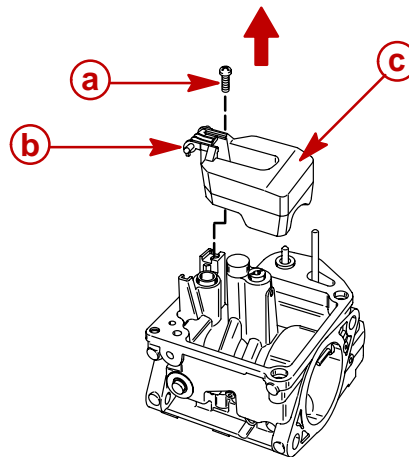
5. Remove plunger and spring.



- a** - Plunger
- b** - Spring

55834

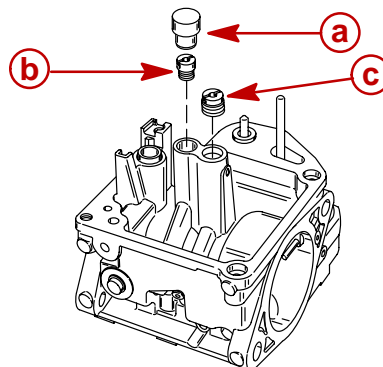
6. Remove float.



- a** - Screw
- b** - Float Pin
- c** - Float

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7. Remove plug, pilot jet, and main jet.

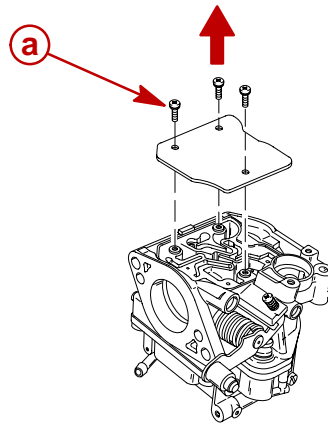


- a** - Plug
- b** - Pilot Jet
- c** - Main Jet

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8. Remove cover.

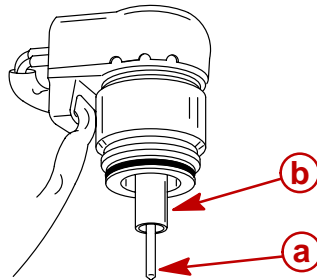


a - Screws (3)

55830

Inspection

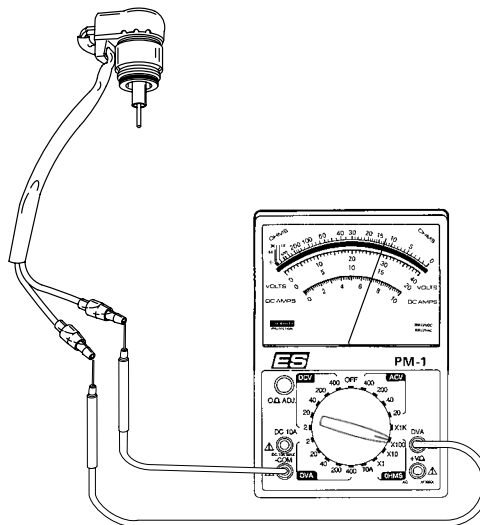
1. Inspect needle and piston valve. Replace if worn or damaged.



a - Needle Valve
b - Piston Valve

55831

2. Measure auto enrichener resistance. Replace if out of specification.



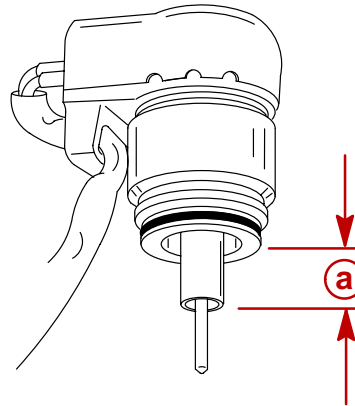
Auto Enrichener Resistance
15-25 Ω @ 68°F (20°C)



3. Perform piston valve height test below.

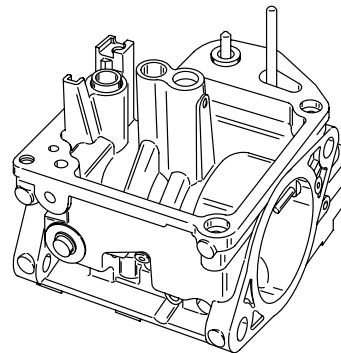
Piston Valve Height Test:

- a. Measure piston valve height
 - b. Connect to 12 V battery
 - c. Wait several minutes
 - d. Measure piston valve height
4. Replace auto enrichener if **no change** was observed.



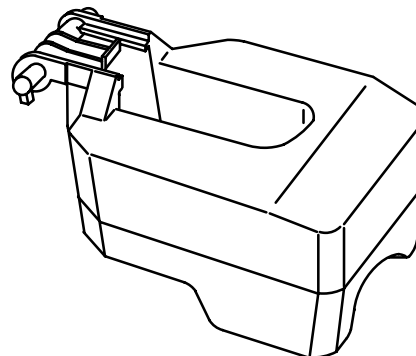
a - Piston Valve Height Measurement

5. Inspect carburetor body, replace if cracked or damaged.



55833

6. Inspect float, replace if cracked or damaged.



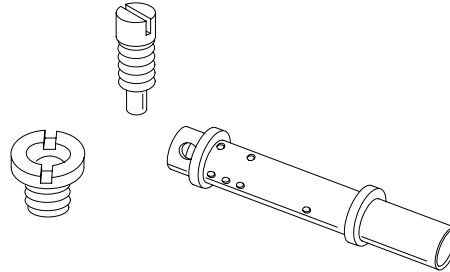
55829



⚠ CAUTION

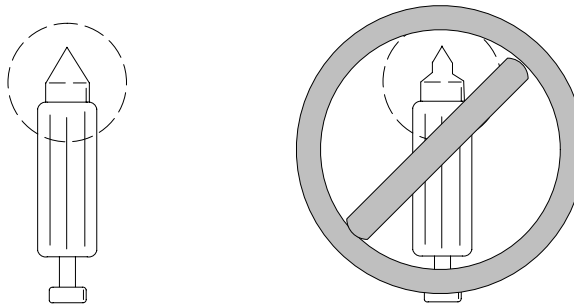
Do not use steel wire for cleaning the jets as this may enlarge the jet diameters and seriously affect performance. Use a petroleum based solvent for cleaning and blow out all passages with compressed air.

7. Inspect main jet, pilot jet and main nozzle. Clean if they are contaminated.



53672

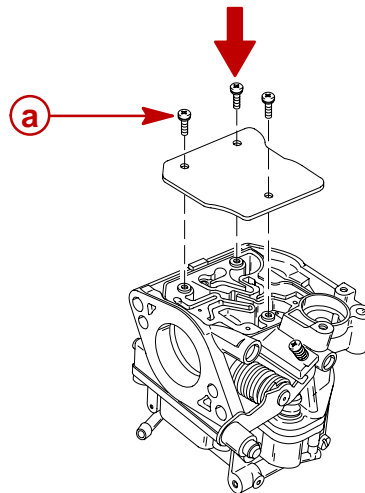
8. Inspect needle valve, replace if end is worn or grooved.



28375

Carburetor Assembly

1. Install cover.

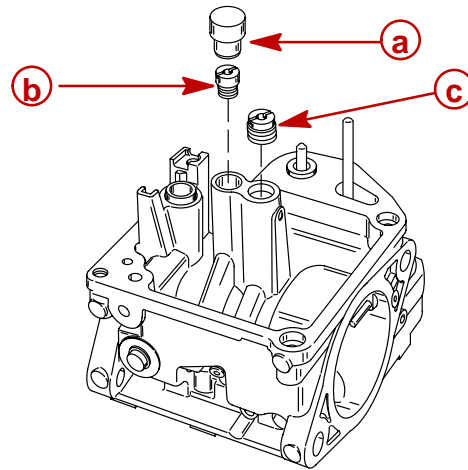


55830

a - Screws (3)



2. Install plug, pilot jet, and main jet.

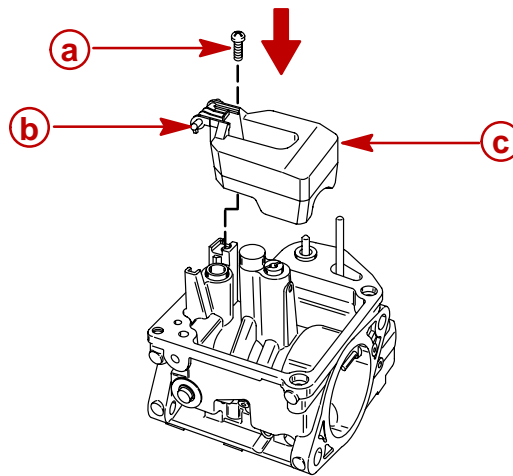


55833

a - Plug
b - Pilot Jet

c - Main Jet

3. Install float.

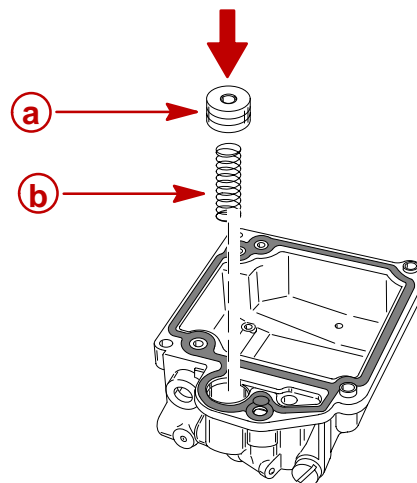


55829

a - Screw
b - Float Pin

c - Float

4. Install plunger and spring.

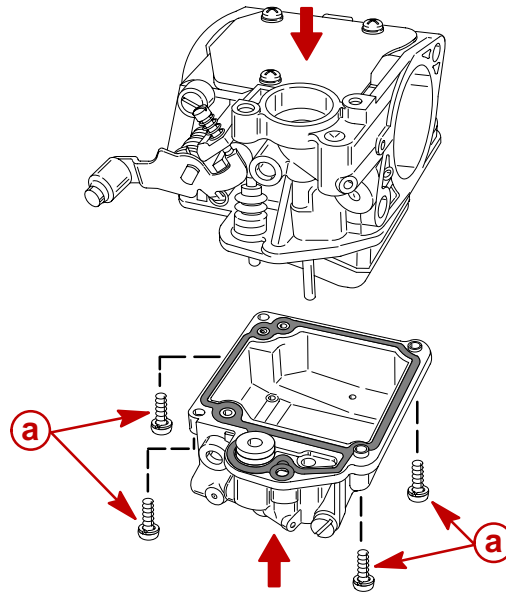


55834

a - Plunger
b - Spring



5. Install float bowl.

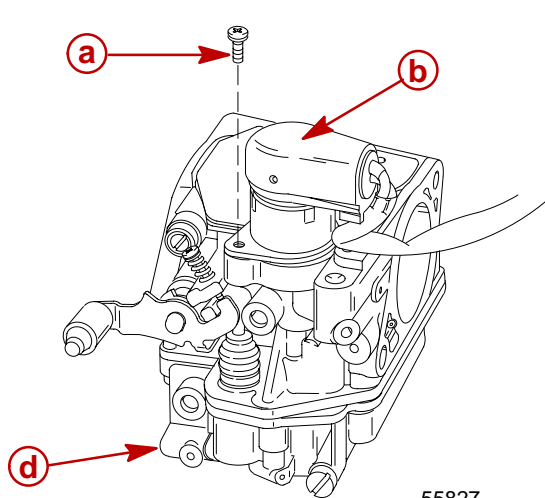


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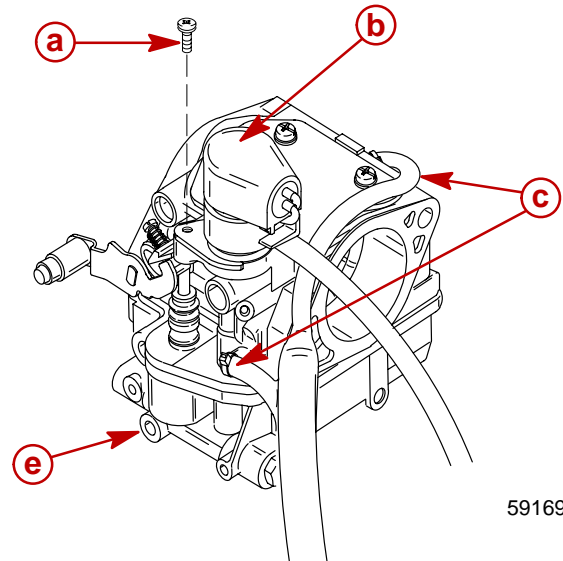
a - Screws (4)

6. Install auto enrichener.

7. **USA S/N 0T409000 and Up, Belgium S/N 0P153500 and Up:** Install carburetor vent hose and secure with sta-straps.



55827

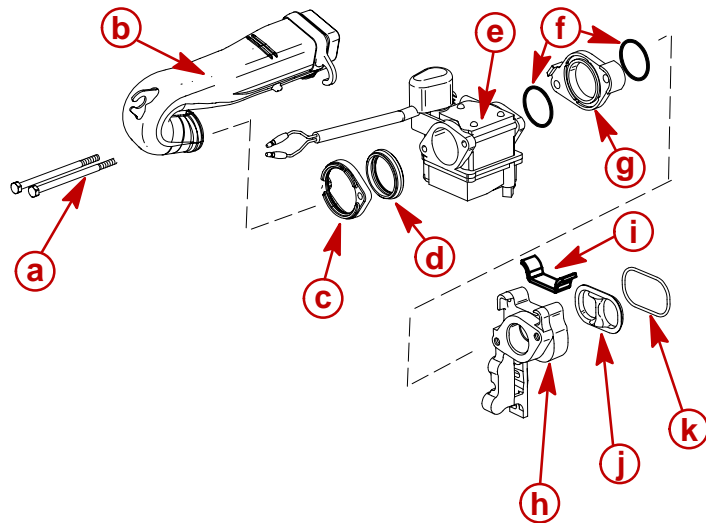


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- a** - Screw
- b** - Auto Enrichener
- c** - Carburetor Vent Hose
- d** - **USA S/N 0T408999 and Below, Belgium S/N 0P153499 and Below**
- e** - **USA S/N 0T409000 and Up, Belgium S/N 0P153500 and Up**



8. Install screws, air intake, isolator, and diffuser.



- a - Screws (2)
- b - Air Intake
- c - Clamp
- d - Seal
- e - Carburetor
- f - O-Ring

- g - Isolator
- h - Diffuser
- i - Bumper
- j - Insert
- k - O-Ring

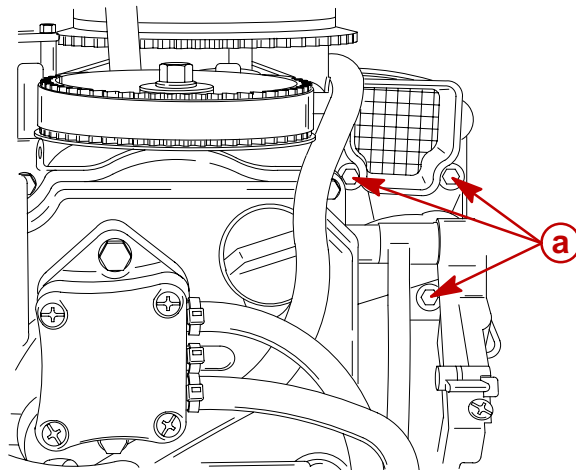
Air Intake Mounting Screw Torque
75 lb. in. (8.5 N-m)

Carburetor Installation

Carburetor Installation USA S/N 0T408999 and Below

Carburetor Installation Belgium S/N 0P153499 and Below

1. Install screws securing carburetor assembly to intake manifold.



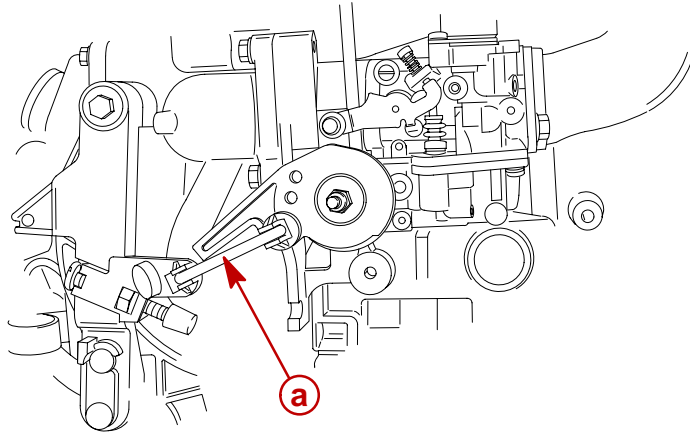
- a - Screws (3)

Carburetor Mounting Screw Torque
75 lb. in. (8.5 N-m)

55780



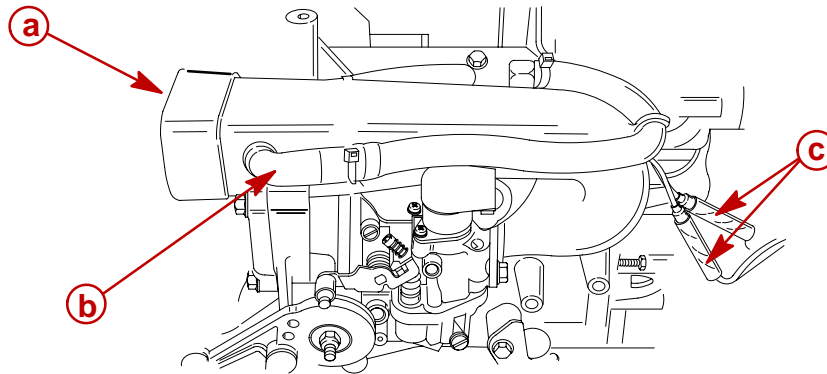
2. Connect cam link.



55736

a - Cam Link

3. Connect auto enrichener wires (Yellow).
4. Connect breather hose into air intake.



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a - Air Intake
b - Breather Hose
c - Auto Enrichener Wires

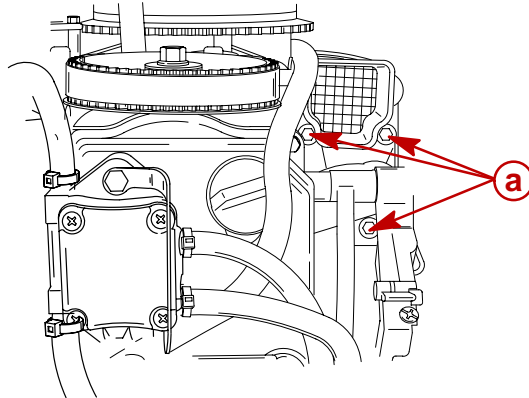
5. Connect fuel pump outlet hose to carburetor bowl. Secure hose with sta-strap (refer to **"Fuel Pump Installation/Removal" - Section 3A**).



Carburetor Installation USA S/N 0T409000 and Up

Carburetor Installation Belgium S/N 0P153500 and Up

1. Install screws securing carburetor assembly to intake manifold.

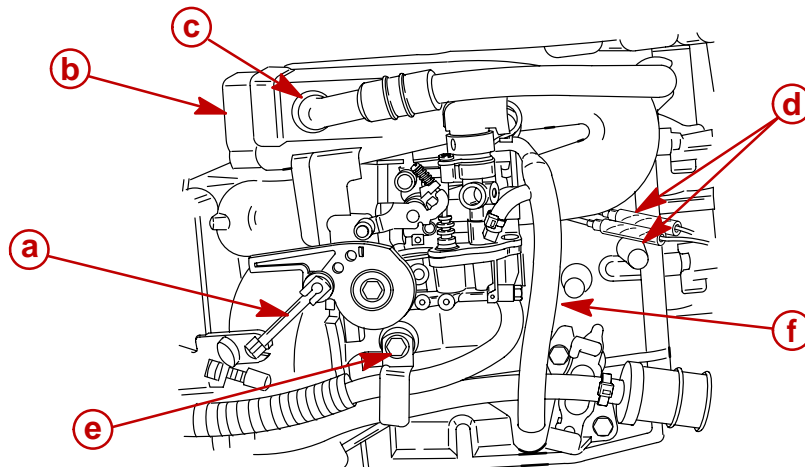


55780

a - Screws (3)

Carburetor Mounting Screw Torque
75 lb. in. (8.5 N·m)

2. Connect cam link.
3. Connect auto enrichener wires (Yellow).
4. Connect breather hose into air intake.
5. Route fuel line through clip.



59167

a - Cam Link
b - Air Intake
c - Breather Hose
d - Auto Enrichener Wires
e - Clip and Screw
f - Carburetor Vent Hose

6. Connect fuel pump outlet hose to carburetor bowl. Secure hose with sta-strap (refer to **"Fuel Pump Installation/Removal" - Section 3A**).
7. Secure clip to diffuser housing.
8. Route carburetor vent hose **over the top** of of the fuel line and through hole in the adaptor plate so the hose extends 1 in. (25 mm) below opening.