



# Gasoline Alternatives for .40 – .60 Size Aircraft

## Current 10–20cc Offerings



- ▶ OS (2 stroke)
  - GT15, GT22
- ▶ Evolution (2 stroke)
  - 10GX, 15GX, 20GX
- ▶ DLE (2 stroke)
  - DL20
- ▶ Saito (4 stroke)
  - FG11, FG14, FG21

# Advantages



- ▶ Fuel economy: 70% less consumption than glow
- ▶ Cost savings: \$1.30 versus \$8.75 / litre
- ▶ Cleanup: Little or no oil residue
- ▶ No glow driver
- ▶ Typically longer engine life

Less fuel consumption = smaller tanks

# Disadvantages



- ▶ Additional battery and switch
- ▶ Room for ignition module
- ▶ Multiple oil/gas mixtures
- ▶ Sensitive to air bubbles and dirt
- ▶ Requires gas fuel tubing and tank stopper

Battery and switch – cost and space to install (smaller tank can provide additional room)

Ignition module – space and location to prevent interference

Oil ratios vary from manufacturer as shown in chart

Finer needle valves so easier to clog

Silicone won't work with gas. Need tygon, neoprene or viton (included with evolution)

# Carburetors



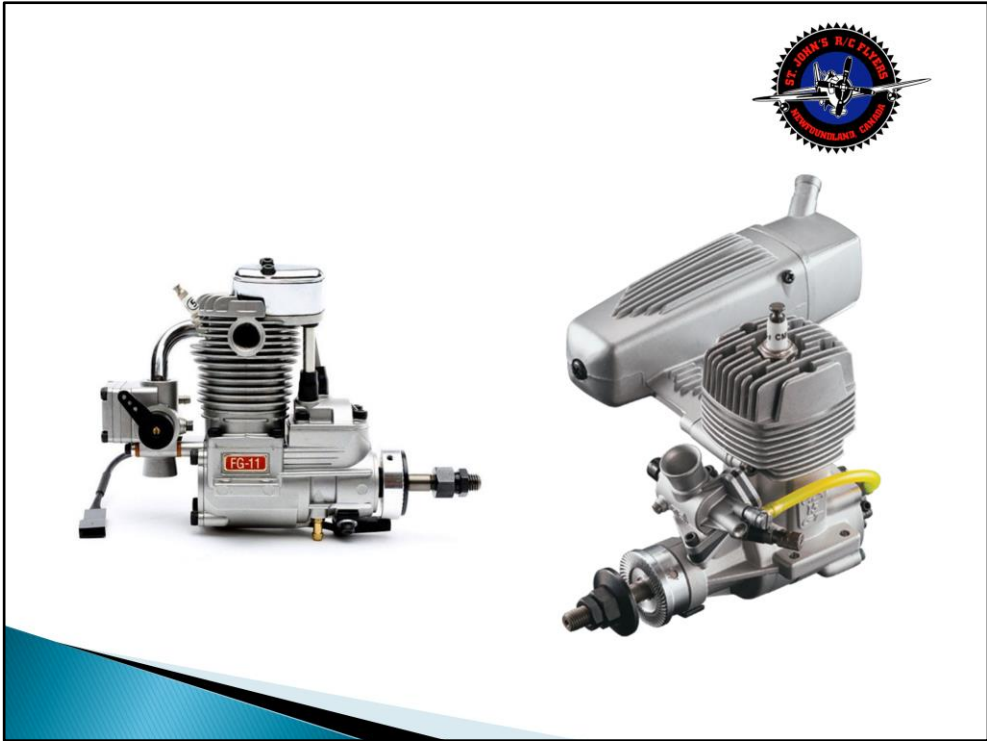
- ▶ Saito – custom carb
- ▶ OS – custom carb
- ▶ Evolution – modified glow
- ▶ DL – standard walbro

Gasoline requires a much finer atomization of the droplets than glow fuel does. Amount of fuel flowing is up to 60% less fuel so maintaining a constant flow and pressure becomes even more critical.

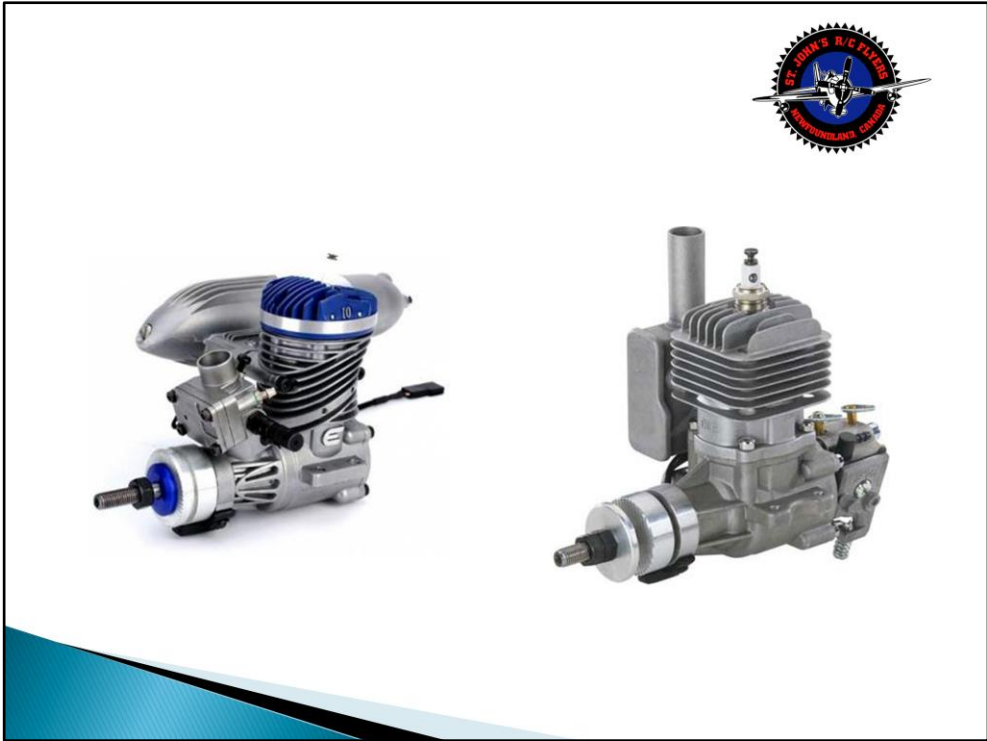
Saito - It is not a glow carburetor. It is not a Walbro carburetor. Carb is pumped to maintain constant fuel flow but still requires tank to be located in the optimum location.

OS – custom carb on 15, walbro on 22

Evolution – modified glow carb with a crank case driven regulator.



Saito on left, OS on right



Evolution on left, DLE on right



MAKE/MODEL	DISPLACEMENT	PRICE	RPM	HP	TOTAL WEIGHT	PROP RANGE	OIL
OS 46 ax	7.5 cc	\$167.99	2,000-17,000	1.63 hp @ 16,000 rpm	17.1 oz (486 g)	10.5x6 to 12x7	glo
OS 65 ax	10.5 cc	\$235.99	2,500-16,000	1.73 hp @ 16,000 rpm	17.5 oz (497 g)	12x6 to 14x6	glo
Evolution 10gx *	10 cc	\$223.99	2,300-18,000	1.68 hp @ 16,400 rpm	18.5 oz (524 g)	10 x 6-13 x 8	20:1
Saito FG-11	11 cc	\$429.99	2,000-9,500	not available	25.4 (720 g)	12x8 to 13.x8	20:1
Saito FA-82	13.4 cc	\$335.00	2,000-12,000	1.5 @ 9,500	17.6 oz (500 g)	12x8 to 15x4	glo
Saito FG-14 4S ***	13.5 cc	\$315.99	1,700-9,500	1.5 @ 9,000 rpm	25.8 oz (731 g)	13 x 8 to 14 x 8	20:01
OS 95 ax	16 cc	\$313.99	2,000-16,000	2.86 hp @ 15,000 rpm	26.3 oz (745 g)	14x8 to 16x8	glo
Evolution 15GX *	15 cc	\$279.99	1,600-13,000	2.1 hp @ 12,000 rpm	31.1 oz (883 g)	13 x 7 to 15 x 6	20:1
OS GT15 **	15 cc	\$389.99	2,000-11,000	2.37 hp @ 15,000 rpm	28.5 oz (809 g)	12x10 to 15x10	50:1
OS 120 ax	20 cc	\$313.99	1,800-9,500	3.1 hp @ 9,000 rpm	29.9 oz (896 g)	15x10 to 16x10	glo
Evolution 20GX *	20 cc	\$313.99	1,800-10,000	not available	33.6 oz (958 g)	15 x 6 to 17 x 8	20:1
DLE 20 ****	20 cc	\$269.99	1,750-9,000	2.5 hp @ 9,000 rpm	28.9 oz (820 g)	14x10 to 17x6	32-50:1
OS GT22 **	22 cc	\$459.99	1,800-9,000	2.66 hp @ 9,000 rpm	31.5 oz (894 g)	16x8 to 17x8	50:1
* includes fuel tubing and filter, ignition is 4.8 - 8.4 v nicad, nimh or lipo							
** ignition is 4.8 - 7.6v nicad, nimh or lipo							
*** ignition is 6 v nicad or nimh (recommended)							
**** ignition is 4.8 - 7.4 nicad, nimh, lipo							