

2-Stroke Oil Mixing Chart

The complete reference for all 2-stroke fuel ratios. Find your ratio, then read across for the exact oil amount per gallon or liter.

Complete Ratio Chart

Ratio	Oil per Gallon (US)	Oil per Liter	Common Use
50:1	2.56 fl oz	20 mL	Modern chainsaws, trimmers, newer outboards
40:1	3.2 fl oz	25 mL	Older equipment, heavy-duty chainsaws, boats
32:1	4 fl oz	31.25 mL	High-load equipment, older outboards
30:1	4.27 fl oz	33.3 mL	Some vintage outboard motors
25:1	5.1 fl oz	40 mL	Performance engines, ATVs
20:1	6.4 fl oz	50 mL	High-performance, racing
16:1	8 fl oz	62.5 mL	Heavy-duty racing

How to Use

- For **1 gallon** of fuel, use the "Oil per Gallon" column.
- For **1 liter** of fuel, use the "Oil per Liter" column.
- For other amounts, multiply. Example: 2 gal at 50:1 = $2 \times 2.56 = 5.12$ fl oz.

Pro Tips

- Check your equipment manual for the recommended ratio.
- Use quality 2-stroke oil made for your engine type.
- Measure accurately; shake 30–60 seconds to mix.
- When in doubt, run slightly richer (more oil), not leaner.

Outboard Motor Ratio Chart

Motor Type	Typical Ratio	Oil / Gallon	Oil / Liter
Modern 2-stroke (post-2000)	50:1	2.56 fl oz	20 mL
Older outboards (1990s)	40:1 or 50:1	2.56–3.2 fl oz	20–25 mL
Vintage (1970s–1980s)	30:1 or 32:1	4–4.27 fl oz	31–33 mL
Classic/antique (pre-1970)	20:1 or 25:1	5.1–6.4 fl oz	40–50 mL

Important: Always check your outboard's manual or decal for the manufacturer-recommended ratio (Mercury, Johnson, Evinrude, Yamaha, Suzuki). Use TCW-3 certified marine oil.

Quick Reference: Common Volumes

Fuel Volume	50:1 Oil	40:1 Oil	32:1 Oil
2 gallons	5.12 fl oz	6.4 fl oz	8 fl oz
5 gallons	12.8 fl oz	16 fl oz (1 pt)	20 fl oz
6 gallons	15.36 fl oz	19.2 fl oz	24 fl oz (1.5 pt)
10 gallons	25.6 fl oz	32 fl oz (1 qt)	40 fl oz

Need a custom amount?

Calculate any volume and ratio instantly with the free online calculator.

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