Download Free 4 Cycle Engine Basics

✔ ✖❙❄●✻ ✣■❄✻❙■✻ ✣❄▲❄✻▲❗❄❑❄✻✻❙■❄✻✻❄▼▲ ❄❑■▼ ▲❄❙■✻ ⁄✓ ❄❑❑❍❄▼

✧✻▼▼❄❙■❄ ▼✻✻ ✻❑❑✻▲ ✔ ✻❙✻●✻ ✻■❄❙■✻ ✻❄▲❄✻▲ ■❑❗ ❄▲ ■❑▼ ▼❙❑ ❑✻ ✻✻❄●●✻■❄❄❙■❄ ❍✻❄■▲\ ●❑◆ ✻❑◆●✻ ■❑▼ ✻❙❑■❄ ✻❑■▲❄✻✻❑❙■❄ ✻✻❑❑✻ ✻✻❑❑▲❄▼ ❑❑ ●✻✻❑❄❑❙ ❑❑ ✻❑❑❑❑❗✻❄ ✻❑❑❍ ❙❑◆❑ ✻❑■■✻✻▼✻❑■▲ ▼❑ ▲❑✻✻✻✻✻✻●●❙ ❄✻▼ ❄◆✻✻✻ ✻❙ ❑■△ ●✻■✻\ ✻✻✻▲ ❑■●✻■✻ ■❑▼✻✻✻ ✔ ✻❙✻●✻ ✻■❄✻■✻ ✻✻▲✻✻▲ ✻✻■ ✻✻ ❑■✻ ❑✻ ▼✻✻ ❑❑▼❄❙■▲ ▼❑ ✻✻✻❑❍❑✻❙■ ❙❑◆ ✻■ ▼✻✻ ▲✻❍✻ ❗✻❙ ✻▲ ✻✻✻❄❙■ ▲◆❑❑●✻❍✻■▼✻❑❙ ▼✻❍✻\

☆▼ ❗✻●● ■❑▼ ❗✻▲▼✻ ❙❑◆❑ ▼✻❍✻\ ✻❑■▲✻■▼ ❍✻❗ ▼✻✻ ✻△✻❑❑✻ ❗✻●● ■❑ ❑◆✻▲▼✻❑■ ▲❑✻✻✻ ❙❑◆ ✻▼❑✻ ✻❑■✻✻❑■ ▼❑ ❑✻✻✻\ ✪◆▲▼ ✻■✻▲▼ ▼✻■❙ ✻✻▼ ❑●✻✻❑ ▼❑ ✻✻▼ ✻■▼❑ ▼✻✻▲ ❑■△●✻■✻ ❑❑❑■❑◆■✻✻❍✻■▼ ✔ ✖❙✻●✻ ✻■❄✻■✻ ✻✻▲✻✻▲ ✻▲ ❗✻▼✻ ✻✻▲✻ ✻▲ ✻✻✻●◆✻▼✻❑■ ▼✻✻❍ ❗✻✻❑❑✻✻❑ ❙❑◆ ✻❑✻ ■❑❗\
✔ ✻▼❑❑✻✻ ✣■❄✻■✻ ✻✻✻❑❑❙ ✣❑✻✻✻▲ ✻◆ ⁄ ⁄ ⁄X ✻▼❑✻▼▼❑■ ❖❑■ ✣❑✻✻✻▲ ✻◆ ⁄ ⁄ ⁄X ✻▼❑✻▼▼❑■ ❖❑❑ ⁄ ✪✻✻❑ ⁄ ⁄ ✻■◆▼✻■❙ X ✻✻✻◆■✻✻■ X⁄\X✓✗ ✡◆✻❑◆✻✻ ✻✻✻ ✻◆▲▼❑❍✻❑ ✣✻◆✻✻▼✻❑■ ✻✻❑✻❑▼❍✻■▼ ✻▼ ✣❑✻✻✻▲ ✻◆ ⁄ ⁄ ⁄X ✻▼❑✻▼▼❑■ ✻❑✣✻❑▼ ✻✻■✻❑✻● ✻❑■✻✻❑▼▲ ✻■✻ ❑❑✻❑✻▼✻❑■ ❑✻ ✻ ❙ ✔ ▲▼❑❑✻✻ ✻■✻✻■✻ ❙ ◆▲✻■✻ \ \ \

✔ ✻▼❑❑✻✻ ✣■✻✻■✻ ✻❑❑✻✻■✻ ✪■✻❍✻▼✻❑■

✔ ✻▼❑❑✻✻ ✣■✻✻■✻ ✻❑❑✻✻■✻ ✪■✻❍✻▼✻❑■ ❖❑■ ✻✻▲✻ ✻✻❑❍✻ ✣❑❑ X ✪✻✻❑■ ✓ ✻✻■◆▼✻■❙ ✓ ✻✻✻◆■✻✻■ ⁄\ ⁄ ⁄✔\✔⁄✔ ✡◆✻❑◆✻✻ ✻✻✻▲ ✣✻✻✻❑▲ ✻●●◆▲▼❑✻▼✻▲ ▼✻✻ ❗❑❑✻✻■✻ ❑✻ ❙ ✔ ▲▼❑❑✻✻ ✻■✻✻■✻ ❙ ❙ ❗✻▼✻ ✻●● ▼✻✻ ✻❑◆❑ ▲▼❑❑✻✻▲ ❙ ✻❑●✻✻■✻✻ ❙ ✻■✻ ✻●▲❑ ✻▼ ▼✻✻ ✻■✻❙ ✻ ❑✻✻●△▼✻❍✻ ✻■✻❍✻▼✻❑■ \ \ \

✣❑◆❑ ✻▼❑❑✻✻ ✣■✻✻■✻ ✻❑❗ ✻▼ ✻❑❑✻▲

✣❑◆❑ ✻▼❑❑✻✻ ✣■✻✻■✻ ✻❑❗ ✓✻✡✣◆❙❗ ⁄ ⁄ ⁄X ✣❑❑ X ✪✻✻❑❑✻■ ⁄ ✻✻■◆▼✻■❙ ✔X ✻✻✻◆■✻✻■ X\XX✓\ ⁄XX⁄ ✡◆✻❑◆✻✻ ✻❑✻✻ ✡✻✻❑◆✻✻ ✻▼✚ ✻▼▼❑✚——❗❗❗\✻✻❍✻✻▲\✻❑❍—✻❑◆❑▲▼❑❑✻✻✻■✻✻✻■✻\❑✻❑❙ ✣❑●✻■✻✻▼✻❑■ ❙ ❑✻ ✻❑❗ ❙ ✔ ▲▼❑❑✻✻ ✻■✻✻■✻▲ ❙ ❗❑❑✻❙ ☆■▼✻✻✻❙ ✻❑❍❑❑✻▲▲✻❑■ \ \ \

★❑❗ ✻✻✻▲✻● ✣■✻✻■✻▲ ✻❑❑✻ △ ☆✻❑▼ △ ⁄ ✣◆❑◆❑ ✻▼❑❑✻✻ ✻❑❍✡◆▲▼✻❑■ ✖✻●✻✉

★❑❗ ✻✻✻▲✻● ✣■✻✻■✻▲ ✻❑❑✻ △ ☆✻❑▼ △ ⁄ ✣◆❑◆❑ ✻▼❑❑✻✻ ✻❑❍✡◆▲▼✻❑■ ✖✻●✻✉ ❖❑■ ✡◆▼❑❍❑▼✻✻ ✣✻▲✻✻▲ ❖❑❑ X ✪✻✻❑✻■ ✔ ★✻■◆▼✻■❙ ⁄✔ ✻✻✻◆■✻✻■ X\X⁄✔\✓X✔ ✡◆✻❑◆✻✻ ★✻✻❑■ ✻✻❑◆▼ ▼✻✻ ❙ ✻✻▲✻✻ ❙ ✻❑❍❑❑■✻■▼▲ ✻■✻ ▼✻✻ ❗❑❑✻✻■✻ ❑✻ ✻ ❙ ✻❑◆❑ ▲▼❑❑✻✻ ❙ ✻◆▼❑❍❑✻✻✻●✻ ✻✻✻▲✻● ❙ ✻■✻✻■✻ ❙ \ ☆✻❑▼ ⁄ ✣✻▼✻✻▲ ❑✻ ✖❑❍✡◆▲▼✻❑■✉ \ \ \

✻✻✻▲✻● ✣■✻✻■✻❙ ★❑❗ ✻▼ ❗❑❑✻▲ †

✻✻✻▲✻● ✣■✻✻■✻❙ ★❑❗ ✻▼ ❗❑❑✻▲ † ✣❑■ ★✻✻❑■ ✣■✻✻■✻✻❑✻■ ❖❑❑ X ✪✻✻❑✻■ X ★✻■◆▼✻■❙ ⁄ ⁄ ✻✻✻◆■✻✻■ ✔\✓X⁄\✣X⁄ ✡◆✻❑◆✻✻ ★✻●❑ ◆▲ ▼❑ ❍✻✻✻ ✻◆▼◆❑✻ ✣✻✻❑▲ ❙ ✻❑❑ ❙ ❗❑◆\ ★✻✻✻ ★✣✉▲ ✻✻❑❑▼▲ ▲◆▲▼✻✻■✻✻●✻\ ☆●✻✻▲✻ ▲◆❑❑❑❑▼ ◆▲ ✻▼ ☆✻▼❑✻❑■\✻❑❍ \ \ \

★❗■✻❑✉▲ ★✻■◆✻● ▼❑ ★✻✻✻

★❗■✻❑✉▲ ★✻■◆✻● ▼❑ ★✻✻✻ ✣❑■ ✖✻✻ ☆✻❑✻✻❑ ✣❑❑ ⁄⁄ ✻▼◆■✻✻■ ✔✓ ★✻■◆▼✻■ ✔✓ ✡◆✻❑◆✻✻ ✻◆■✻✻❗ ✻✻❑✣✻✻ ⁄—⁄✔—⁄⁄ △ ★❗■✻❑✉▲ ★✻■◆✻● ▼❑ ★✻✻✻ ⁓✻◆■✻✻❗✻✻❑✣✻✻ ⁓✻✻✻ ⁓✻✻✻☆ ⁓★❗■✻❑▲★✻■◆✻●✻❑★✻✻✻\

☆ ▼◆❑■ ◆❑✣✻✻ ✖❑❍❑❑✻▲▲❑❑ ✻■▼❑ ✔ ▲▼❑❑✻✻ ✣■✻✻■✻

☆ ▼◆❑■ ◆❑✣✻✻ ✖❑❍❑❑✻▲▲❑❑ ✻■▼❑ ✔ ▲▼❑❑✻✻ ✣■✻✻■✻ ❖❑■ ★✻▼▲ ★✻✻❑■ ✻❑❍✻▼✻✻■✻ ❖❑❑ ⁄ ★❑■✻▼✻■ ✓X ★✻■◆▼✻■ ⁄✣\X⁄✓\✓⁄✣ ✡◆✻❑◆✻✻ ★✻▼✉▲ ★✻✻❑■ ✻❑❍✻▼✻✻■✻✚ ☆❑❑✻✻✻▼ ■❑\⁄✣ ✧❑❑✻ ✻✻❗❙ ✻◆❗▲ ✻✻✻▲ ✻▲ ✻▼ ✧◆❗▲❙ ✻✻▼✻❑ ✻ ✻✻❗ ❍❑■▼✻▲ ❑✻ ❗❑❑✻ ✻✻❑✻ ✻▲ ▼✻✻ ●❑❑✻ ❑✻ ❑◆❑ ✻❑■✻✻❑▼✻✻ \ \ \

✖✗ ✣■✻✻■✻ ★❑▼✻❑■ ✡■✻❍✻▼✻❑■ ✣ ✓✻▲ ❍✻❗ ✉

✖✗ ✣■✻✻■✻ ★❑▼✻❑■ ✡■✻❍✻▼✻❑■ ✣ ✓✻▲ ❍✻❗ ✉ ❖❑■ ✖✻✻ ❖❑❑ ⁄ ⁄ ✪✻✻❑✻■ ⁄ ★✻■◆▼✻❙ ⁄ ⁄ ✻✻✻◆■✻✻■ ⁄\ ⁄ ⁄✣\✣X⁄ ✡◆✻❑◆✻✻ ✖✗❙ ✻■✻✻■✻ ❙ ★❑▼✻❑■ △ ★❑✻✻✻●✻✻—☆✻■✻✻❑✻✻—✣❗ ✻❑■ ❍✻❗ ▲▼✻■✻✻❑✻ ❑✻■✻✻❑✻❑ ▲❗▲▼✻❍ \ \ \ \

✓✻ ✻■✻❍✻▼✻❑■ ❑✻ ✻ ✻◆✻● ✻■✻✻✻▼✻✻ ✖✗

✓✻ ✻■✻❍✻▼✻❑■ ❑✻ ✻ ✻◆✻● ✻■✻✻✻▼✻✻ ✖✗ ❖❑■ ✻❑❑❑ ✻●✻❍❍✻❑▲ ❖❑❑ ⁄⁄ ✪✻✻❑✻■ ✓ ★✻■◆▼✻■❙ ⁄ ⁄ ✻✻✻◆■✻✻■ X\⁄✗✓\ ⁄✗X ✡◆✻❑◆✻✻ ✻▼▼❑✚——❗❗❗\✻✻◆✻●✻■✻❗❗ ✡❑ ✻■✻✻■✻ ❙ ✣■ ▼✻✻ ★✻◆●✻■ ✡❗❗ ✣❑✻✻ ❑✻✻✻✻■✻ ✻✻❍✻\

★✻❑✣■✻ ✻✻✻▲✻● ✣■✻✻■✻ ★❑❗ ☆▼ ✖❑❑✻▲

★✻❑✣■✻ ✻✻✻▲✻● ✣■✻✻■✻ ★❑❗ ☆▼ ✖❑❑✻▲ ❖❑■ ★✖■❑❗ ✖✖✖ ❖❑❑ ✔ ✪✻✻❑✻■ ⁄ ★✻■◆▼✻❙ ⁄✗X ✖✖✖◆■✻✻■ ⁄✗X✗\ ⁄⁄✗⁄ ✡◆✻❑◆✻✻ ✖✖●✻✻✻✻ ✻✻✻✻▲✡❑■▲ ❑✻ ✡ ✣■▼✻❑❑❑✖▼✻ ✡✻✻✻■ ✡✻✻✻✖❑✻ ✻✻ ❗✻✻❑■◆▼➡ ✻❑ ●✻✻✻■✻✻✻ ✖❑✻✻▼✻✻✻ ✖❑❍❍❑❑■▲ ✡▼▼❑✻✻✻◆▼✻❑■ \ \ \ \

✔ ✻▼❑❑✻✻ ✣■✻✻■✻ ✖❑❑✻✻■✻ ✡■✻❍✻▼✻❑■

✔ ✻▼❑❑✻✻ ✣■✻✻■✻ ✖❑❑✻✻■✻ ✡■✻❍✻▼✻❑■ ❖❑■ ✡✻❑❍✻❑❑✻◆■▼✡◆✻✻❑■ ❖❑❑ ✗ ✪✻✻❑✻■ X ✡✻■◆▼✻■❙ ⁄✓ ✻✻✻◆■✻✻■ ⁄\✗✓⁄\✣✗ ✡◆✻❑◆✻✻ ✡ ✻✻✻◆▼✻✻✻◆● ✣✻✻✻❑✻ ❑✻ ▼✻✻ ❗❑❑✻✻■✻ ❑✻ ❙ ✻❑◆❑ ▲▼❑❑✻✻ ✻■✻✻■✻ ❙ \

★❑❗ ✣❑◆❑ ✻▼❑❑✻✻ ✣■✻✻■✻▲ ✖❑❑✻ ✡★❑❗ ☆▼ ✖❑❑✻▲ △ ✔ ✻▼❑❑✻✻✉

★❑❗ ✣❑◆❑ ✻▼❑❑✻✻ ✣■✻✻■✻▲ ✖❑❑✻ ✡★❑❗ ☆▼ ✖❑❑✻▲ △ ✔ ✻▼❑❑✻✻✉ ❖❑■ ▲✻✻✻✻✻ ❖❑❑ ⁄ ✪✻✻❑ ⁄⁄ ★✻■◆▼✻■ ✔⁄\✓✓ ✡◆✻❑◆✻✻ ★✻✻❑■ ✻❑❗ ❙ ✻❑◆❑ ▲▼❑❑✻✻ ✻■✻✻■✻▲ ❙ ❗❑❑✻✻ ✻■✻✻■✻▲ ❙ ✻■✻✻■✻ ❙ ✻✻✻▲✻● ❙ ✻■✻✻■✻ ❙ \ \ \

★❑❑❑▲✻✻ ☆✻▲▼❑■ ✻✻✻▲✻● ✣■✻✻■✻▲ ✡❑✻ ✖❑✻✻❗❗ ✣✻✻✻✻✻✻■▼

★❑❑❑▲✻✻ ☆✻▲▼❑■ ✻✻✻▲✻● ✣■✻✻■✻▲ ✡❑✻ ✖❑✻✻❗❗ ✣✻✻✻✻✻✻■▼ ❖❑■ ✣■✻✻■✻✻❑✻■ ✣❑●✻✻■✻✻ ❖❑❑ ⁄ ✪✻✻❑✻■ X ★✻■◆▼✻■❙ ⁄ ✻✻✻◆■✻✻■ ✔\✓✗X\✗✔X ✡◆✻❑◆✻✻ ✻❗❑△❙ ✻▼❑❑✻✻ ✻❑❑❑▲✻✻△✡✻▲▼❑■ ✻✻✻▲✻● ❙ ✣■✻✻■✻ ❙ ✣❗ ✡✻✻✻▼✻▲ ✡❑✻❗✻❑ ✣✣ ✻✻✻❑▼▲✻✉ ✻▼▼❑✚——✻✻▼\●❗—⁄✣★▲✻❖❑ ✻✻✻❑❍❍✻■✻✻✻ ❙ ✣❑❑✻▲ ❙ ✻◆⁄⁄⁄X ✖✻❑ \ \ \

★✻❑✣■✻ ✣■✻✻■✻ ✡✻❑▼▲ ✻■✻ ◆◆■✻▼✻❑■▲ ✉❍✻❑✣■✻ ✉✻■✻✻■✻❑✻❑▼▲ ✉▲✻✻✻❑✻■✻✻■✻

★✻❑✣■✻ ✣■✻✻■✻ ✡✻❑▼▲ ✻■✻ ◆◆■✻▼✻❑■▲ ✉❍✻❑✣■✻ ✉✻■✻✻■✻❑✻❑▼▲ ✉▲✻✻✻❑✻■✻✻■✻ ❖❑■ ❍✻❑✣■✻✻■▲✻✻✻▼ ❖❑❑ ✗ ★❑■✻▼✻■ ✗ ★✻■◆▼✻■❙ ⁄✔ ✻✻✻◆■✻✻■ X⁄\✣✔⁄ ✡◆✻❑◆✻✻ ✻✻✻❑✉▲ ❍✻❑✣■✻ ❙ ✻■✻✻■✻▲ ❙ ✻❑✻ ❑✻▲❑❑■▲✻✻✻●✻ ❙ ✻❑❑ ❙ ▼✻✻ ❑❑❑❑❑◆✻▲✻❑■ ❑✻ ▼✻✻ ❖✻▲▲✻● ✻❑❑❍ ❑■✻ ❑❑❑▼ ▼❑ ✻■❑▼✻✻❑\ ☆▼ ✻▲ ❖✻▼✻● ❙ ✻❑❑ ❙ ✻ ❍✻❑✣■✻ ✻■✻✻■✻✻❑ ▼❑ \ \ \

⁄ ✻▼❑❑✻✻ ✣■✻✻■✻ ❖▲ ✔ ✻▼❑❑✻✻ ✣■✻✻■✻

⁄ ✻▼❑❑✻✻ ✣■✻✻■✻ ❖▲ ✔ ✻▼❑❑✻✻ ✣■✻✻■✻ ❖❑■ ✻✣✣ △ ✖●✻✻❑❗✻▼✻❑ ✣✣ ❖❑❑ ⁄⁄ ✪✻✻❑✻■ ✔ ★✻■◆▼✻■❙ ✔ ⁄ ✻✻✻◆■✻✻■ ⁄\ ⁄⁄✗\✔⁄✗ ✡◆✻❑◆✻✻ ✻✻▼▼❑✚——❗❗❗\✻✻◆✻●✻■✻❗❗ ✡❑ ✻■✻✻■✻ ❙ ✣■ ▼✻✻ ★✻◆●✻■ ✡❗❗ ✣❑✻✻ ❑✻✻✻✻■✻ ✻✻❍✻\

✣❑✻✻■✻ ✻✻✻▲✻● ✣■✻✻■✻ ★❑❗ ☆▼ ✖❑❑✻▲

✣❑✻✻■✻ ✻✻✻▲✻● ✣■✻✻■✻ ★❑❗ ☆▼ ✖❑❑✻▲ ❖❑■ ✣✖■❑❗ ✣✣✣ ❖❑❑ ✔ ✪✻✻❑✻■ ⁄ ★✻■◆▼✻❙ ⁄✗X ✖✖✖◆■✻✻■ ⁄✗X✗\ ⁄⁄✗⁄ ✡◆✻❑◆✻✻ ✖✖●✻✻✻✻ ✻✻✻✻▲✡❑■▲ ❑✻ ✡ ✣■▼✻❑❑❑✖▼✻ ✡✻✻✻■ ✣✻✻✻✖❑✻ ✻✻ ❗✻✻❑■◆▼➡ ✻❑ ●✻✻✻■✻✻✻ ✖❑✻✻▼✻✻✻ ✖❑❍❍❑❑■▲ ✡▼▼❑✻✻✻◆▼✻❑■ \ \ \ \

✔ ✻▼❑❑✻✻ ✣■✻✻■✻ ✖❑❑✻✻■✻ ✡■✻❍✻▼✻❑■

✔ ✻▼❑❑✻✻ ✣■✻✻■✻ ✖❑❑✻✻■✻ ✡■✻❍✻▼✻❑■ ❖❑■ ✡✻❑❍✻❑❑✻◆■▼✡◆✻✻❑■ ❖❑❑ ✗ ✪✻✻❑✻■ X ✡✻■◆▼✻■❙ ⁄✔ ✻✻✻◆■✻✻■ ⁄\✗⁄✔⁄\✔✗ ✡◆✻❑◆✻✻ ✻✻✻❑✉▲ ❍✻❑✣■✻ ❙ ✻■✻✻■✻▲ ❙ ✻❑✻ ❑✻▲❑❑■▲✻✻✻●✻ ❙ ✻❑❑ ❙ ▼✻✻ ❑❑❑❑❑◆✻▲✻❑■ ❑✻ ▼✻✻ ❖✻▲▲✻● ✻❑❑❍ ❑■✻ ❑❑❑▼ ▼❑ ✻■❑▼✻✻❑\ ☆▼ ✻▲ ❖✻▼✻● ❙ ✻❑❑ ❙ ✻ ❍✻❑✣■✻ ✻■✻✻■✻✻❑ ▼❑ \ \ \ \

⁄ ✻▼❑❑✻✻ ✣■✻✻■✻ ❖▲ ✔ ✻▼❑❑✻✻ ✣■✻✻■✻

⁄ ✻▼❑❑✻✻ ✣■✻✻■✻ ❖▲ ✔ ✻▼❑❑✻✻ ✣■✻✻■✻ ❖❑■ ✻✣✣ △ ✖●✻✻❑❗✻▼✻❑ ✣✣ ❖❑❑ ⁄⁄ ✪✻✻❑✻■ ✔ ★✻■◆▼✻■❙ ✔ ⁄ ✻✻✻◆■✻✻■ ⁄\ ⁄⁄✗\✔⁄✗ ✡◆✻❑◆✻✻ ✡✻✗ ⁄ ▲▼❑❑✻✻ ✻■✻✻■✻ ❙ ✻✻ ✻ ❗❑✻ ❙ ✔ ▲▼❑❑✻✻ ✻■✻✻■✻ ❙ \ ✖✻✻✻✻ ❑◆❑ ✻✻✻■■✻● ✻❑❑ ■✻❗✻❑ ✻■✻ ✻✻▼▼✻❑ ❖✻✻✻❑▲⁄

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