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The opening pages of

Coyote Conversion: Ford Mustang 1965-1970

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Coyote Conversion Guide — Mustang 1965–1970

Model Year 2026

Recipient cars	Mustang coupe/fastback/convertible (1965–70)
Donor engines	Coyote Gen 1–3 donor-first · crate + control pack · Gen 4 verify-first
Highlights	Tower decision graded permanent; PATS/control-pack chapter; worksheets
Price	\$29.95 — PDF download at checkout

Every specification in this guide was checked against factory literature, marque references, period road tests, and documented survivor cars. Where sources disagree or the record is silent, this guide says so rather than guessing.

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Inside This Guide

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Chapter 1 — The Decision: Donor, Crate, or Control Pack (Read This First)

Every Coyote swap into a 1965–70 Mustang is decided by three purchases made in the wrong order by most first-timers: the engine, the front suspension, and the electronics. Buy the engine first without the other two and you own a wide dual-overhead-cam V8 that fits a narrow shock-tower bay only after structural decisions you have not priced yet, and a computer that — from a donor car — will not run outside its original car without specialist help. This chapter puts the whole bill on the table first.

Which Coyote. Ford published the Mustang GT generations as: Gen 1 (2011–14) at 412 hp / 390 lb-ft, rising to 420 hp for 2013–14; Gen 2 (2015–17) at 435 hp / 400 lb-ft; Gen 3 (2018 and later) at 460 hp / 420 lb-ft, adding combined direct and port injection. Newer Gen 4 engines raise the numbers again and narrow the swap-parts record this guide stands on, so the build chapters pin Gen 1 through Gen 3 and treat Gen 4 as verify-before-you-buy. Those are Ford's published ratings, not this guide's promises — a salvage engine makes what its condition makes. One warning printed early because it costs people real money: an F-150 Coyote is not a Mustang Coyote deal in disguise. The truck engines are rated and tuned lower, their intake and accessory packaging differ, and Ford Performance control packs explicitly exclude them.

- **Donor-first (this guide's default):** a Mustang GT salvage engine of a known generation, audited in Chapter 2 (compression, accessory completeness, harness and PCM status). Cheapest entry; the electronics decision below is where the donor path spends its savings back if you let it.
- **Crate:** a new Ford Performance Coyote with a matched control pack. Known quantity, real money, warranty on the engine. The tower work, suspension, fuel, cooling, and transmission bills below are identical either way — the crate buys certainty about the engine, not an easier car.
- **The electronics are a decision, not an accessory:** Ford Performance control pack (generation- and transmission-specific), specialist-reflashed donor PCM with the anti-theft (PATS) system defeated, or aftermarket standalone. Chapter 5 prices and grades all three. Skipping this decision until the engine is in the car is how Coyote swaps become garage art.



The line items first-timers miss (planning ranges, not promises — prices move): the shock-tower decision and the front-suspension system it implies (the single biggest line after the engine); mounts and the swap oil pan matched to that suspension; accessory-drive relocation for the alternator and A/C compressor; headers chosen for your suspension, not your engine; the control pack or its alternatives; a return-style EFI fuel system end to end (a second, higher-pressure story on Gen 3); electric fans and the radiator package; transmission and its tunnel answer (Chapter 3); driveshaft measurement; gauge solutions. Restoring the car first? The RestoreEssentials restoration guides for 1964½/1965 through 1970 Mustang are the companion volumes — restore it with those, convert it with this one. And one honesty note this guide will not soften: if your car is a rare or numbers-matching example, Chapter 3's permanent modifications are a reason to convert a different car. The guide says so in the chapter where it matters.

Note. If you only have \$X: spend it in this order — (1) the front-suspension/tower decision made once, correctly, (2) the control pack or its proven alternative, (3) the fuel system done once at specification, (4) cooling, (5) cosmetics. A Coyote that starts, cools, and steers beats a polished engine bay that does none of the three.

Chapter 2 — What You Start With: The 1965–70 Mustang Baseline

Inspect the recipient car before the donor engine gets purchased. Pass/fail criteria, not vibes:

- **Towers and rails:** the front shock towers and frame rails are structure on a unibody, and they are also the rust-prone metal of this era. Tower rust bubbles, rail section loss, or prior collision repair in the front clip = structural repair first (the restoration guides and body shops own that work), because Chapter 3 will ask this metal to change jobs. A car whose towers are rotten is a candidate for the full front-clip suspension path; a car whose towers are perfect is a candidate for thinking twice (next bullet).
- **The car's identity:** a common coupe is the honest recipient. A documented K-code, a Shelby, a numbers-matching big-block car — tower deletion erases value that a restoration preserves. This guide names that plainly and points at the restoration guide. Nobody gets to be surprised by it later.
- **Steering and brakes as found:** note the existing steering (manual or power box) and brake system honestly. The front-suspension decision replaces most of the steering story; the brakes must be planned to the new engine's weight and speed, and Chapter 13 enforces a stopping standard before road speed.
- **Tunnel:** measure what you have (Worksheet B). The tunnel was drawn around Toploader and C4-era cases; the six-speed chapter (Chapter 3) is decided by your measurement, not by enthusiasm.
- **Ride height:** record it as the car will be driven. Driveshaft length and pinion angle are measured at final height (Worksheet A).
- **The donor audit** (family discipline): generation confirmed in writing (Chapter 1's table against the donor's year and source car), compression or a running demonstration, and a signed accessory inventory — alternator, compressor, starter, throttle body and pedal, intake hardware, PCM status. Mustang GT vs F-150 provenance is verified here, not discovered at the parts counter.

Chapter 3 — Fitment: The Wide Engine in the Narrow Bay

The one-sentence version: a dual-overhead-cam 5.0 does not fit between 1965–70 shock towers as they stand, and every honest path through that fact is a permanent-modification decision made on paper first. Two schools, both documented in the swap record:

- **School 1 — towers out.** An aftermarket front suspension and crossmember (Mustang II-style or modern strut/coilover clips, bolt-in or weld-in) removes the towers entirely, bringing rack-and-pinion steering, modern