

Diesel vs. Gasoline: The Real Annual Maintenance Cost Picture

For light- and medium-duty commercial fleets, diesel's traditional cost advantage doesn't hold up the way it once did. Multiple independent studies now show gasoline outperforming diesel on total cost of ownership for most duty cycles — the decision comes down to annual mileage, not fuel type alone.

ANNUAL MAINTENANCE COST COMPARISON

	GASOLINE	DIESEL
Avg. annual maintenance	\$600 – \$1,000	\$1,200 – \$2,000
Real-world mpg edge (trucks)	baseline	often < 2 mpg
Added consumables / systems	none	DEF, DPF, SCR, turbo
Break-even point favors diesel	under ~15K mi/yr	~30K+ mi/yr

WHAT THE DATA SHOWS

- Only about 15% of diesel vehicles studied showed a lower total cost of ownership than their closest gasoline counterpart — and in the pickup segment, that dropped to under 1%. *(Vincentric U.S. Diesel Analysis)*
- Diesel maintenance runs higher due to routine service frequency, pricier hard parts (starters, alternators, water pumps), and SCR/turbo systems gas engines don't have. *(Government Fleet / Work Truck Online)*
- GM diesel trucks were the exception, not the rule: a diesel Silverado 2500 saved ~\$3,673 and a Sierra 2500 saved ~\$2,720 over 3 years vs. gas — while a comparable Ram diesel saved only \$67 and an F-250 diesel cost \$1,395 more. *(University of Michigan Transportation Research Institute)*
- DEF alone adds roughly \$300–\$500 per truck, per year — before any DPF or SCR service is factored in. *(Fleet maintenance industry data)*

THE BREAK-EVEN RULE OF THUMB

GASOLINE WINS	TOSS-UP	DIESEL WINS
Under 15,000 mi/yr	15,000–25,000 mi/yr	30,000+ mi/yr, heavy towing

Annual mileage — not fuel type alone — is the real driver of which engine wins on total cost.

Under ~15,000 miles/year: gasoline wins. 15,000–25,000 miles/year: essentially a toss-up. Above ~30,000 miles/year with heavy towing: diesel's fuel efficiency starts to outweigh its maintenance premium.

HOW A TRAC LEASE REINFORCES THIS

- No mileage caps or wear-and-tear penalties — unlike a closed-end lease, so a heavy-mileage/diesel-favored duty cycle doesn't get hit with overage fees at turn-in.
- Flexible cycling lets a fleet turn vehicles over before the steep part of diesel's maintenance curve (DPF, injectors, turbo) typically hits after 100K–150K miles.
- Residual risk-sharing means strong resale performers — GM diesel 2500-series trucks, per the Michigan study above — pay the fleet back directly at turn-in, not just on paper.
- Lower, fully-deductible monthly payments free up budget for preventive maintenance or DEF/DPF service, regardless of which engine is chosen.

Sources: Vincentric U.S. Diesel Analysis · Government Fleet / Work Truck Online (Bobit Business Media) · University of Michigan Transportation Research Institute (Bosch-commissioned study)