Advanced Transmission Technologies

Additional Gears

Adding gears allows your engine to operate at a more efficient speed more often. The more gearing options your vehicle has, the more efficient it can be.

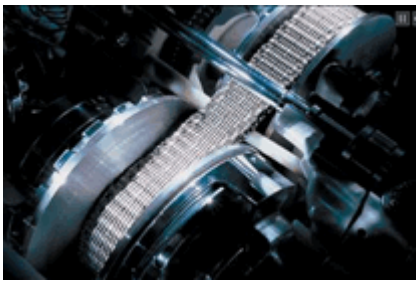
This table shows the effect of additional gears compared to a 4-speed automatic transmission.

No. of Gears	Efficiency Improvement
6	2%
7	2%–3%
8	3%–4%

Potential Efficiency Improvement: 2%–4%[1]

Savings Over Vehicle Lifetime: $300-$600*

Continuously Variable Transmission (CVT)



Most conventional transmissions use a fixed number of metal gears to control the ratio between engine speed and wheel speed.

Instead of gears, CVTs use a pair of variable-diameter pulleys connected by a belt or chain that can produce an infinite number of engine-to-wheel speed ratios. Advantages include

- Seamless acceleration without the jerk or jolt from changing gears
- No frequent downshifting or "gear hunting" on hills
- Better fuel efficiency (benefits stop-and-go driving more than steady-speed highway driving)

For more information, see How CVTs Work.

Potential Efficiency Improvement: 3%–4%[1]

Savings Over Vehicle Lifetime: $400-$600*

Dual Clutch Transmission (DCT)

Dual clutch transmissions (DCTs) combine the efficiency of manual transmissions with the convenience of automatics. Automatic transmissions are less efficient than manuals due to parasitic losses. DCTs operate much like manual transmissions, except that they use two clutches and automatic shifting. They are generally not quite as smooth as regular automatics, but manufacturers are making strides to improve this.

Potential Efficiency Improvement:	3%–4%[1]
Savings Over Vehicle Lifetime:	$400-$600*

* Fuel cost savings are estimated assuming an average vehicle lifetime of 166,000 miles,[3] a fuel price of $2.18, and an average fuel economy of 25.2 MPG.[4] All estimates are rounded to the nearest hundred dollars.

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