



Value of I-Shift

Value of I-Shift

Four major fleet costs:

- Fuel
- Drivers
- Accidents
- Vehicle maintenance



Value of I-Shift

The Volvo I-Shift has the potential to show significant savings in all four areas which can generate a return on the initial investment costs.

Improving Driver Productivity

- Fuel Savings of up to 1.56% over an unproductive driver
 - \$1,045 per truck, per year (\$3.75/gal, 7.0 mpg, 125,000 miles)
- Driver training expenses ~ average \$7,000/new driver
 - 20% savings by one less week of training = \$1,400

Maintenance Costs Improvements

- Reduced maintenance costs - improved clutch wear and ext. service intervals
 - \$1,750 parts savings of two clutch, oil, and filter replacements in four years
 - \$880 labor savings if applicable (4.4 hrs x 2 x \$100/hr)
- Improved safety and uptime

\$8,210 tangible savings opportunity over four years

	Good Driver (or I-Shift)	Average Driver	Unproductive Driver	Very Bad Driver
Fuel Consumption	100.00%	100.65%	101.56%	102.92%
Cycle Time	100.00%	100.00%	100.00%	100.00%
Average Engine RPM	1426	1444	1473	1513
Average RPM Upshift	1638	1773	1860	1892
Average RPM Downshift	1263	1374	1390	1394
Total Gear Shifts (Flat/RH/Hilly)	Better than Average	Normal	High	Very High
Percent Spent in Top Gear	>85%	>80%	>70%	<70%

Value of I-Shift

Benefit – reduced accident rates which leads to lower costs

Safety

- Driver is able to keep eyes on the road and is not distracted by trying to find the correct gear
- Driver is able to keep both hands on the steering wheel
- Driver is less fatigued and more alert
- Automated downshifts when descending grades
- Quick Automated upshifts when climbing steep grades
- Hill Start Assist eliminates vehicle rollback
- Brake mode of transmission that integrates with I-VEB

By using the Volvo Safety Calculator, the value of safety can be quickly calculated if the driver was to avoid just one accident per year.



Value of I-Shift

Benefit – driver retention and lower costs of training new drivers

Driver Comfort and Satisfaction

- Easier to train new drivers with automated I-Shift transmission
- No clutch pedal – two pedal system
- Driver is less fatigued during shift and more alert
- Ease of low speed operation and backing with Idle Driving mode
- Full integration of Volvo drivetrain allows premium features and performance

High turnover rates for drivers and a shrinking driver pool, driver retention has become a significant issue for some fleets. I-Shift can be a big asset to help fleets retain good drivers and reduce the time required to train new drivers.



Value of I-Shift

Benefit – lower operational costs

Fuel Efficiency

- Potential for better fuel economy (esp. new drivers) due to optimized shifting at lower engine rpm
- Skip shifts to accelerate to cruise speed faster
- I-Shift helps drivers quickly learn the most efficient way to operate the vehicle and can help save the fleet valuable dollars. Drivers realize they can't out-shift the intelligence of the transmission and to leave the shifter alone and let I-Shift choose the correct gear.

Environmental Benefit – lower emissions, reduced carbon footprint

- Potential for lower Greenhouse Gases (GHG) due to improved fuel economy
- The award winning XE packages, which of course includes the I-Shift transmission, has the potential to lower greenhouse gases through improved fuel economy by down-speeding the engine several hundred rpm at cruising speed..



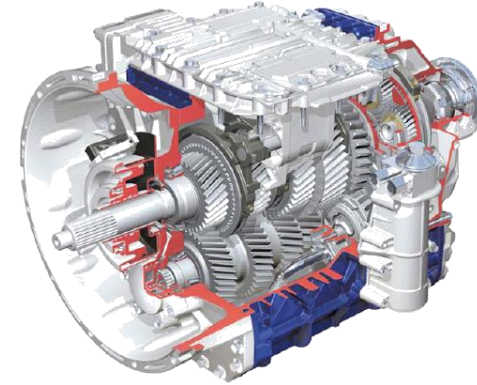
Value of I-Shift

Benefit – longer component life and lower maintenance costs for life of vehicle

Maintenance

- Longer clutch life due to smoother engagement and optimum shifts
- Driveline longevity due to less stress on driveline components
- Hill Start Assist reduces driveline stresses by eliminating vehicle rollback
- Clutch actuator does not require any maintenance
- Extended 500K mile oil lube intervals for linehaul (\leq 80K lbs.)
- Sight glass for easy oil level check
- Longer foundation brake life due to engine brake integration

The I-Shift can improve the life of other driveline components by reducing stresses that can be introduced by an underperforming driver shifting at high engine rpms and rough clutch engagements.



Value of I-Shift

Benefit – ideally matched transmission operation to customer's duty cycle

Customizable

- Multiple software packages to meet customer's exact needs
 - Basic Shifter (Fleet and Fuel Economy)
 - Premium Shifter (Heavy Haul, Vocational, Owner Operator)
 - Economy and Performance Modes
- Ability to change transmission characteristics with only a software change (within shifter family)
- Features can be turned on or off as desired by vehicle owner



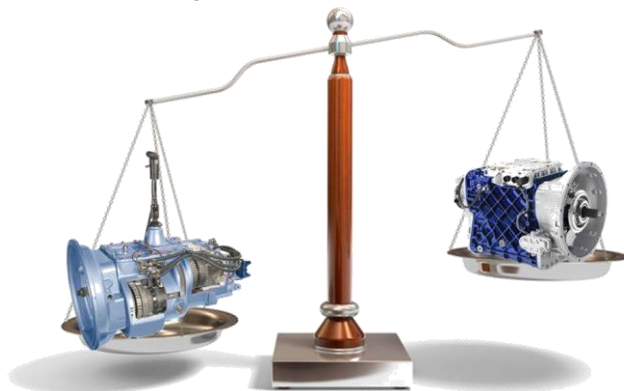
Value of I-Shift

Benefit – improved fuel economy and ability to maximize payloads

Weight

- I-Shift is a lightweight AMT
- Saves 100+ lbs. over 13/18 speed

Model	I-Shift 12 Speed for D11/D13	I-Shift 12 Speed for D16	13/18 Speed
Weight (lbs.)	597	612	714/716



Weight always plays a key point in fuel efficiency. The lighter you can spec a truck, the more payload the customer can haul.

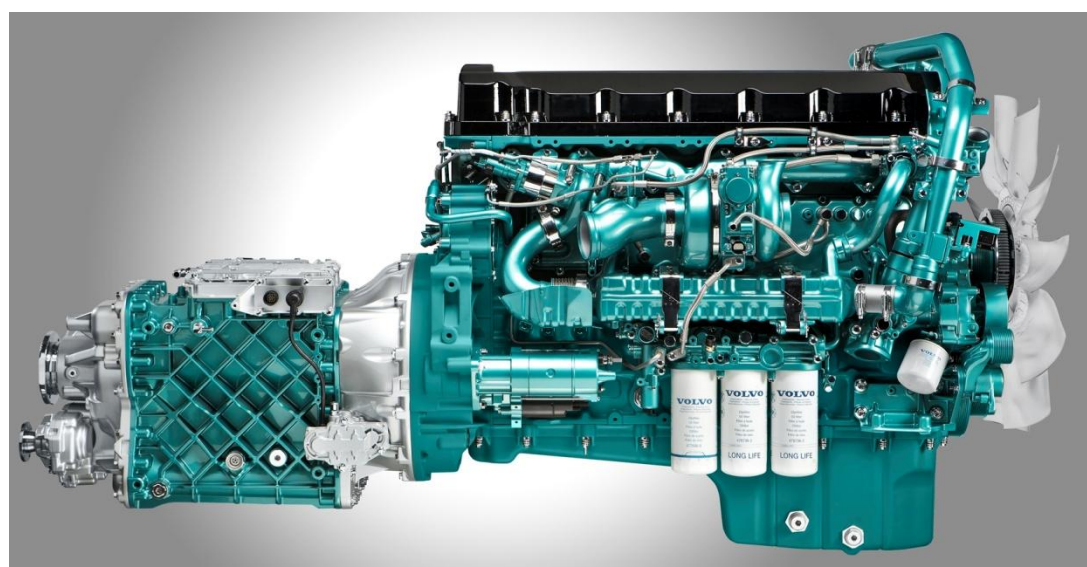
The I-Shift transmission aluminum case is approximately 100lbs lighter than the comparable 13 or 18 speed manuals and up to 200lbs lighter than other AMTs currently in the market.

Value of I-Shift

Benefit – higher residual values

Upgradeability

- Unlimited engine hp upgrades within engine displacement family at resale with no clutch or transmission changes
- Only a software change



If a customer has the desire to upgrade the horsepower and torque of the engine during the vehicle life, whether a change in operations or for residual value, no hardware changes are required with either the engine or the transmission and clutch. The engine rating will never exceed the capacity of the I-Shift it is paired with.



Volvo Trucks
Driving Success

