



VOLVO I-SHIFT

OVERDRIVE, FOR VOLVO D16

ATO3112D

Having the right ratio for the right speed at the right time is what transmission technology is all about. And it's what makes Volvo I-Shift the most advanced — and most fuel efficient — automated manual transmission on the road today.



shown with 11R22.5 tires; 3.21:1 rear axle

SPECIFICATIONS

ATO3112D	2-pedal Automated Manual Transmission with Overdrive
Designed to be Mated to	Volvo D16
Number of Forward Speeds	Twelve
Ratios, Forward Gears	
1	11.73:1
2	9.21:1
3	7.09:1
4	5.57:1
5	4.35:1
6	3.41:1
7	2.70:1
8	2.12:1
9	1.63:1
10	1.28:1
11	1.00:1
12	0.78:1
Overall Ratio	15.04:1

SPECIFICATIONS

Ratios, Reverse Gears	
R1	13.73:1
R2	10.78:1
R3	3.16:1
R4	2.48:1
Maximum input Torque, Lb-Ft (N-m)	2350 (3180)
Maximum Gross Combination Weight, Lbs. (Tonnes)	143,000 (65) - Higher with application approval
Dry weight, Lbs. (kg)	597 (271)
Clutch	Volvo 17" Single Plate Organic with Single Mass Flywheel
Oil Capacity, Qts (L)	16 (15)
Oil Drain Interval, miles (km)	500,000 (800,000) On-Highway, <=80k GCW
Gear Selector Positions	R - Reverse, N - Neutral, D - Drive, M - Manual
Driving Modes	E - Economy, P - Performance, B - Maximum Braking, L - Limp Home
Power Take-Offs Available Clutch Dependent	Transmission Mounted Shaft (SAE 13-1400), Pump (Parker / DIN 5462)
Clutch Independent	Engine Mounted Shaft (SAE 13-1400), Pump (Parker / DIN 5462)





ATO3112D

FEATURE	BENEFIT
High Level of Intelligence - (Continuously monitors numerous parameters to predict most optimum operation over next seconds and chooses ratios appropriately)	Saves fuel and improves performance
Eco-Roll® lets the engine drop to idle speed on slight downhill grades unless Eco-Roll® disabled by driver	Lowers parasitic consumption by up to 30 HP when enabled to save fuel
Integrated with I-VEB through Engine Brake Control Stalk	Outstanding, predictable performance ("Downhill Cruise")
Idle Governor Driving Mode allows driving slowly (for example, stalled traffic or backing) without cycling clutch	Provides driver comfort and excellent low speed operation while prolonging clutch life
Programmable Kick-Down switch provides optimum acceleration	Maximizes driver input into truck performance
Programmable Economy and Performance modes available	Offers a "Dual Personality" transmission with optimized shift points for fuel economy or performance

FEATURE	BENEFIT
Informative Driver Display gives driver extra information	More satisfying driving experience yields better driver retention
Adaptable for vocational and heavy haul applications	Optional Performance Plus (P+) mode includes functions that adapt gearshifts to off-road conditions and offer extra torque when starting from a standstill
Pumped lubrication rather than splash lubrication	Provides lubrication to where it's needed, even at low speeds for longer life
Two shifters and multiple software feature packages available	Allows custom-tailoring to the customer's wants and needs
Upgradeability throughout engine's displacement ratings	Allows re-programming to any engine rating for maximum resale value
Ultra smooth clutch and launch control	Easy for driver to fully master the vehicle speed in any low speed situation, for example when backing up to a trailer or a loading dock

I-Shift Feature Packages

Features	Family 1		Family 2	
	Fuel Economy	Performance	Comprehensive	Gentle-Shift
Ergonomic seat mounted shifter	X	X	X	X
Basic Shifter type without manual controls	X			
Premium Shifter type with manual controls		X	X	X
Manual gear shifting in Drive mode		X	X	X
Manual gear shifting in Manual mode	Hold only	X	X	X
Manual selection of start gear		X	X	X
Idle Governor driving mode	X	X	X	X
Manual selection of idle driving gears		X	X	X
Economy mode	X	X	X	X
Performance / Performance Plus (P+) mode		X ^{A, D}	X ^A	X ^A
Kick-Down	X ^B	X ^B	X ^B	X ^B
Eco-Roll®	X ^C		X ^C	X ^C
Engine Brake Performance mode	X	X	X	X
Auto Neutral when parking brake applied	X	X	X	X
Auto Neutral at key-off if gear engaged	X	X	X	X
Hill Start Assist	Optional	Optional	Optional	Optional
STD PTO features	X	X	X	X
Enhanced PTO features	Optional	Optional	Optional	Optional

Functionality of features programmable per customer preference:

- A 1. Available
- 2. Available with auto return to Economy
- 3. Available with Performance Bonus Reward
- 4. Not available
- B 1. Available
- 2. Available in Economy mode only
- 3. Available with Performance Bonus Reward
- 4. Not available
- C 1. Available
- 2. Not available
- D 1. The P+ mode includes various functions that adapt gearshifts and gear selection to poor or hilly driving conditions

Feature upgradeability	Unlimited within family and between families with gear shifter change
Engine Torque upgradeability	Unlimited by clutch, transmission and prop shaft

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