

MITSUBISHI MONTERO STURDY & SAFE PERFORMER

The Montero SUV that Mitsubishi sells in India is a strong and steady vehicle with imposing looks. Sold in various other markets under different monikers, such as Shogun and Pajero, the current Montero is the fourth-generation of the product. First showcased as a prototype at the Tokyo Motor Show in 1973, we drove the latest variant to gauge how the featured technologies match up to performance on road.



It was in 2006 that the Montero had received its last significant revamp, prior to the latest changes in the 2012 variant. Introduced at the Paris Motor Show in 2006, the fourth generation Montero came with fresh exterior and interior styling. New safety features were introduced to ensure the vehicle retained its character of being one of the most capable 4x4s globally. The 2012 edition features new coloured front bumper, chrome radiator grille, finish on power window panel and stitch design on leather seats. In this feature, we look at the Montero's safety, transmission and powertrain aspects:

SAFETY

An array of active and passive safety technologies does safety duty in the Montero, including a dual-stage SRS airbag system. In this system, the onboard computer measures the force of impact and accordingly adjusts airbag deployment speed. In addition, there are side and curtain SRS airbags that protect passengers from all possible angles in the event of a collision.

The multi-mode ABS in the Montero is a four-sensor, four-channel system that is matched to each Super-Select 4WD II driving mode, ensuring that braking is skid-free regardless of surface conditions. The EBD system, meanwhile, modulates each braking channel independently. This mechanism helps provide additional force to the rear wheels, when the vehicle is carrying passengers or cargo.

Beyond these features, the rigid monocoque body or the RISE (Reinforced Impact Safety Evolution) body design uses the front and rear crumple zones to

absorb and diffuse collision damage before it can reach the cabin interior. While the strength of the built-in ladder frame has gone up by about three times, Mitsubishi engineers have ensured there is no further addition to the SUV's body weight. In the process, the ladder frame provides even better resistance to torsional and flexural stresses, and ensures better handling over difficult road conditions.

An interesting and thoughtful safety feature is the positioning of the fuel tank, which is placed ahead of the rear axle. Should the vehicle meet with an accident, this feature would help prevent leakage. The Montero also features an Active Stability & Traction Control (ASTC) system that analyses the forces acting on the vehicle to anticipate control loss and take preventive measures, say for instance, additional braking.

TRANSMISSION

The five-speed automatic transmission on the Montero does not feature power and economy modes, but the Innovative Vehicle Electronic Control System (INVECS) – Mitsubishi's self-learning automatic transmissions – monitors the driving style, and adjusts the upshift and downshifts accordingly.

The current generation Montero feature the second version of INVECS, called INVECS II, and is based on Porsche's Tiptronic semi-automatic transmission technology. In the INVECS II system, Adaptive Shift Control studies acceleration and brake timing and learns to anticipate driver actions, while the Optimum Shift Control analyses conditions

and driving style, compares them to its database of shift patterns to balance power, control and efficiency.

We found that even in the sports mode position, gear shifts were smooth and instant, be it on the highway or on the hilly terrains of Himachal Pradesh. In the drive (D) mode, INVECS II ensures downshifting when the vehicle drives downhill, and holds on to the same gear positions when the vehicle drives up.

DRIVE SYSTEM & ENGINE

Mitsubishi's experience in various motor sport events is reflected in its All Wheel Control (AWC) system, which brings out the best performance in all four tyres. The Super-Select 4WD II system, used in the Montero, offers shift on-the-fly driving modes, and includes the following:

1. **Full-time 4WD (4H)** is composed of a Viscous Coupling Unit (VCU) and centre differential. This system can handle a wide variety of roads. Based on road conditions, power to the front and rear wheels is controlled, and neutral turning performance is achieved during high-speed cornering and slippery road conditions.
2. **4HLc:** This is a direct drive high-range 4WD that locks the centre differential to go the distance on sandy areas, deeply snowed streets, and rough roads.
3. **4LLc:** This is a direct drive low-range 4WD that covers rocky stretches and muddy areas and is effective in getting out of tight spots.
4. **2H:** The rear-wheel drive (2WD) disconnects drive from the front axle, and brings fuel economy and noise under control.

The Super-Select 4WD II system is mated to a 3.2 l 16-valve DOHC common rail DI-D engine, with an inter-cooled turbocharger. It produces peak power of 199 hp @ 3,800 rpm and maximum torque is rated at 441Nm. The electronic Direct Injection Diesel (DI-D) engine delivers optimum torque in the low and mid rev ranges.



The 3.2 l diesel engine is turbocharged



The INVECS II system does a good job in the hills



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