

Scorpio Fuel Smart

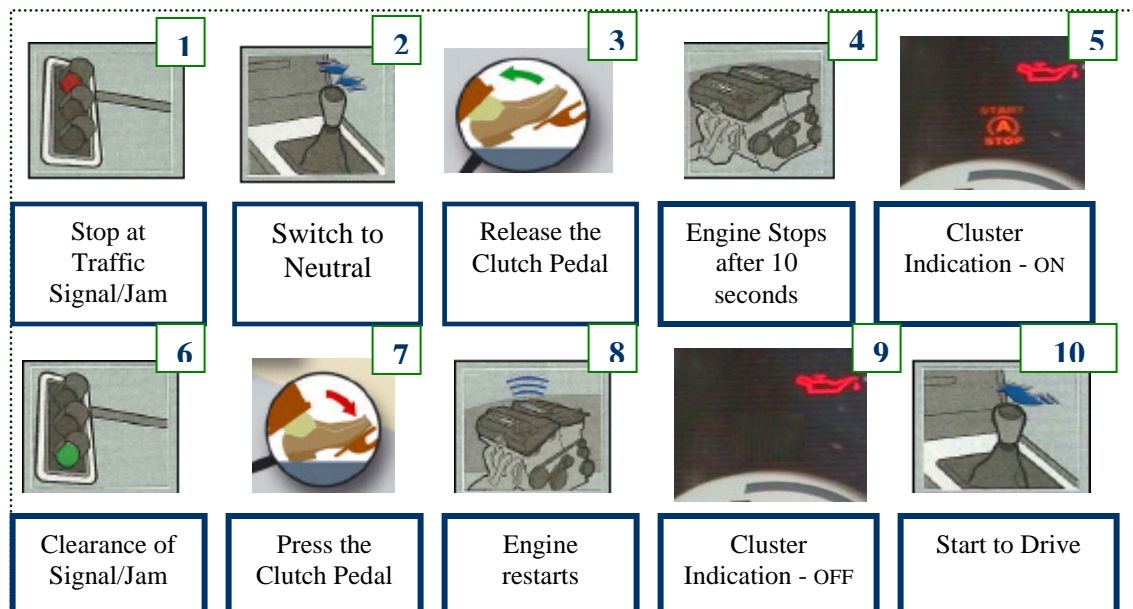
1. What is a Start Stop system? What are its advantages?

The Start Stop system is based on a simple principle of not burning the fuel when it is not required. The system automatically detects occasions during your drive when the vehicle is idle & stops the engine thus conserving fuel. Thus it aids in attaining better fuel efficiency & reducing running costs. Under Standard Testing Conditions 5% improvement has been realized. However, the mileage improvement will depend upon many parameters such as prevailing traffic, driving pattern etc.

2. How does the STOP START system work?

The following steps illustrate how the system functions

- Vehicle has come to halt due to traffic signal/jam, is in neutral gear.
- The engine will shut down automatically after 10 seconds. Just before stopping, the indicator in the cluster will blink indicating the engine is going to stop shortly.
- The indicator will glow on your instrument cluster indicating the engine has stopped due to stop start device.
- Once the Signal turns green, press the clutch pedal & engine starts immediately.
- The indicator on the cluster goes off indicating that engine has started again & you are ready to drive on with the vehicle.



3. What are the other advantages of the system?

- Since the engine is switched off during traffic signals/jams, considerable amount of CO₂ release to the atmosphere is avoided. This reduces global warming and thus provides us with a cleaner atmosphere to live.

4. Why is the system installed for DI engine vehicles and not the higher-end vehicles? (M&M INPUTS)

To start with, we are introducing the FuelSmart system on DI engine-powered Scorpios & Boleros. We will launch this across other engines in 6 to 9 months.

5. What is the cost involved in developing the system?

A few lakhs

6. Would the system be available in the aftermarket eventually?

This would depend on customer requests. It would be quite cumbersome, complex and expensive for customers to retrofit the FuelSmart system.

7. This is not an M&M patented technology nor is it indigenous. Comment.

M&M has applied for a patent on the methodology used by us.

8. Other manufacturers have not brought in this system yet. Why has M&M done so?

We are leaders in pioneering innovation in the Indian automobile industry, such as:

- Voice Messaging System
- USB/SD Card integrated Infotainment System
- Tyre Pressure Monitoring System
- Cruise Control
- Smart Rain & Light Sensors

We recognize the current trends on uncertain fuel prices and global warming and its impact on the environment. We would like to offer our customers a system that mitigates this impact.

9. What is to be done if I don't want the system to stop my engine at traffic signals/Jams?

The system can be turned to 'OFF' mode by operating a mode selection switch present in the right side of dash board.

10. What trials has this technology undergone?

We have carried out durability trials over 150,000kms between Scorpio & Bolero, both in the city and on the highway.

We have test marketed this technology among several customers across a few states. The almost unanimous response on using the Mahindra FuelSmart system was that they would recommend it to others.

11. Is it possible to start the engine by depressing the clutch pedal for the first time?

No, the engine could be cranked only through ignition key for the first time. If the engine is stopped automatically by the system (or) stalled, then only it is possible to start the engine through clutch pedal.

12. When does the system will get activated after the engine is started for the first time?

The system will get activated after the completion of engine temperature dependent warm up period which may vary from one minute to 15 minutes. This is to ensure better performance of engine in terms of fuel economy and durability.

13. Are there any Safety Precautions to be followed?

Yes, during service operations (or) before opening of the bonnet, the stop start system has to be kept in 'OFF' mode

14. Will A/C function, if the engine is switched off?

No, A/C will not work. However blower will be in operation when ignition is ON.

15. What will happen if I keep the clutch continuously pressed at traffic signals/jams?

The system will not stop the engine if the clutch is continuously pressed since it indicates the driver's intention of moving immediately. Besides it is not advisable to operate with depressed clutch as its life is reduced.

16. What will be the effect of frequent number of starts on Battery and Starter Motor?

Specially designed Starter Motor and Battery are used to withstand the increased number of starts.

17. Will engine be switched off when battery charge is low?

If the battery charge drops below a certain threshold level, the system will not stop the engine so as to preserve the battery from further draining.

18. With the Start Stop system, is it possible to operate the engine through normal ignition key?

Normal operation through ignition key is always possible

19. Will the vehicle start (or) stop in gear?

The system automatically detects when the vehicle is in gear & does not start or stop to ensure safety. It will do so only when the vehicle is in neutral & is idling for a certain duration.

20. Will the system stop my engine in moving traffic?

No, the engine will be stopped only when the vehicle speed is zero continuously for ten seconds

21. Does the audio system get switched off when the engine shuts down?

No, audio will not be switched off and you can continue to enjoy the music.

22. Is it possible to retrofit the system in my existing vehicle?

No, such provision is not available currently

23. Under normal operating condition when the engine is on, does it re-crank whenever the clutch pedal is pressed?

No, when the engine is running, starter motor will not re-crank it.

24. What happens when any component involved the system fails?

The system has built in diagnostic module which will understand the failure and immediately go to by-pass mode. The bypass mode ensures that your vehicle functions normally & the engine can be turned ON and OFF by ignition key as usual without impacting any other function.