

Symtech White Paper:

Practical Strategies to Reduce Fuel Consumption and Improve ROI

Executive Summary

Fuel consumption is influenced by a combination of human behaviour, vehicle condition, operational planning, and environmental factors. Understanding *why* fuel usage increases is critical to effectively reducing it. This paper expands key fuel-saving strategies, explaining the underlying causes of inefficiency and how telematics enables measurable, sustained improvements with strong ROI.

1. Driver Behaviour Optimisation

Why Fuel Consumption Increases:

Aggressive driving behaviours - such as rapid acceleration, harsh braking, and speeding—force the engine to work harder and burn more fuel. Frequent speed changes reduce engine efficiency, while excessive idling burns fuel without producing any useful output. Even small inefficiencies repeated across a fleet compound into significant waste.

How to Improve:

Train drivers to:

- Accelerate and brake smoothly
- Maintain consistent speeds
- Reduce idle time

Telematics Impact:

Telematics identifies exactly which drivers are causing excess fuel burn through behaviour metrics. Instead of guessing, managers can coach specific drivers, leading to faster and more sustained reductions.

Symtech Insight: 20 years of experience has proven that drivers claiming to be the best are often not. Technology has no 'favourites'.

ROI Example:

10% reduction on \$300,000 fuel spend = **\$30,000 annual savings**

2. Telematics-Driven Fuel Management (Core Enabler)

Why Fuel Consumption Increases:

Without visibility, inefficiencies go unnoticed—fuel waste from idling, poor routing, or misuse accumulates silently. Lack of accountability leads to inconsistent driving habits and operational drift.

How to Improve:

- Monitor fuel usage in real time
- Track driver and vehicle performance
- Identify anomalies and inefficiencies

How Telematics Reduces Consumption:

Telematics creates transparency. When drivers know behaviour is measured, habits improve. Managers can detect trends (e.g. high fuel burn on certain routes or vehicles) and act quickly, preventing ongoing losses.

ROI Example:

8% reduction on \$1.5M fuel spend = **\$120,000 savings (ROI <6 months)**

Symtech Insight: Telematics act as a deterrent as much as a measuring apparatus. Simply implementing a system almost always drives behavioral change.

3. Preventative Maintenance

Why Fuel Consumption Increases:

Engines operating with worn components, clogged filters, or incorrect tyre pressure require more energy (fuel) to perform the same work. For example:

- Underinflated tyres increase rolling resistance
- Dirty air filters restrict airflow, reducing combustion efficiency
- Poorly tuned engines burn fuel inefficiently

How to Improve:

- Regular servicing
- Correct tyre pressure
- Timely replacement of worn parts

Telematics Impact:

Usage-based maintenance alerts ensure vehicles are serviced when needed—not too early, not too late—keeping them in optimal fuel-efficient condition.

Prestart checks will identify excessive fuel consumption conditions allowing for servicing or preventative maintenance before the issue becomes a significant problem.

ROI Example:

3% savings on \$400,000 = **\$12,000 annual savings**

Symtech Insight: Inclusion of type pressure in a weekly prestart check will ensure they are not neglected for extended periods. It takes a driver 10 mins but could add significant saving across the fleet.

4. Route Optimisation

Why Fuel Consumption Increases:

Unplanned or inefficient routes increase distance travelled, time spent in traffic, and stop-start driving—all of which raise fuel consumption. Congestion forces frequent braking and acceleration, one of the least efficient driving patterns.

How to Improve:

- Plan efficient routes
- Avoid peak traffic
- Minimise empty trips

Telematics Impact:

Real-time GPS data allows dynamic rerouting and post-trip analysis, helping eliminate inefficient patterns over time.

ROI Example:

10% distance reduction on \$900,000 = **\$90,000 savings**

Symtech Insight: Never presume the shortest route is the fastest. Do periodic tests of frequented routes to establish if different routes should be taken between, say, 3pm-6pm. Starting and stopping consumes more fuel than constant speed.

5. Vehicle Selection and Utilisation

Why Fuel Consumption Increases:

Using oversized or underutilised vehicles wastes fuel because larger engines consume more energy regardless of load. Similarly, older vehicles lack modern fuel efficiency technologies, leading to higher consumption.

How to Improve:

- Match vehicle size to task
- Upgrade to fuel-efficient models
- Eliminate underutilised assets

Telematics Impact:

Data reveals which vehicles are overused, underused, or inefficient, enabling smarter fleet decisions.

ROI Example:

15% efficiency gain on \$700,000 = **\$105,000 savings**

Symtech Insight: Before replacing a vehicle, compare total cost of ownership across your fleet. A cheaper purchase price may equate to higher maintenance and fuel burn costs. And be sure to understand when the cost to keep it exceeds the value it derives.

6. Idling Reduction

Why Fuel Consumption Increases:

Idling burns fuel while the vehicle is stationary, delivering zero productivity. In many fleets, idling can account for 5–15% of total fuel usage due to habits like leaving engines running during stops or waiting periods.

How to Improve:

- Enforce idling limits
- Educate drivers
- Use automatic engine shut-off policies

Telematics Impact:

Idling time is precisely tracked, with alerts and reports that make enforcement simple and measurable.

ROI Example:

5% reduction on \$500,000 = **\$25,000 savings**

Symtech Insight: A 3-minute allowable idling time will allow for traffic lights and Give Way signs. Everything beyond that should be monitored for relevance. Idling is a constant significant profit drain.

7. Load and Aerodynamics

Why Fuel Consumption Increases:

Heavier vehicles require more energy to move, increasing fuel burn. Poor aerodynamics increase drag, especially at higher speeds, forcing the engine to work harder to maintain velocity.

Key Factors:

- Excess weight increases rolling resistance
- Poor load distribution reduces efficiency
- Air resistance rises exponentially with speed

How to Improve:

- Reduce unnecessary weight
- Optimise loads
- Use aerodynamic enhancements

Telematics Impact:

Operational data helps correlate fuel use with load types, routes, and speeds, enabling more refined optimisation.

ROI Example:

5% savings on \$600,000 = **\$30,000 savings**

Symtech Insight: Choose your route to eliminate big hills that produce slow progress at high revs, when logical. A slightly longer route with less high revving will offset a slightly later arrival and will increase profitability.

Conclusion

Fuel inefficiencies are often the result of small, compounding factors—driver habits, poor visibility, suboptimal maintenance, and operational inefficiencies. Understanding *why* fuel consumption increases allows organisations to target the root causes rather than symptoms.

Telematics stands out as the unifying solution, enabling:

- Visibility into all fuel-related factors
- Accountability across drivers and operations
- Continuous optimisation through data

Organisations that adopt a data-driven fuel management strategy typically achieve **10–15% reductions in fuel consumption**, with rapid ROI and long-term operational gains.

[Follow this link](#) to understand the Specifications of the Symtech Fuel Management and Servicing model, and to learn more about how M5 and the Guardian app can help drive fuel costs and vehicle wear and tear down.