

AZTEC's SAFER Strategy for Log Truck Transport

Greig Larcombe

Transportation Researcher



AZTEC's SAFER Foden log truck

Introduction

In July 1998, AZTEC Forestry Transport Developments put a new Foden 8 wheeler shorts unit and Patchell 4 axle shorts trailer on the road. The unit, which is owned by PL & EM Phillips (shareholders in AZTEC), has been designed to be a flagship for the company's motto "Quality, Safety and Service". To achieve these three elements, the company has applied a strategy called S.A.F.E.R :

S - Safety

A - Attitude

F - Forward thinking

E - Economy

R - Road friendly transport design

These five aspects relate to the unit, as well as the company culture and attitude that makes up *AZTEC Forestry Transport Developments*. The SAFER concept collates a range of ideas and technology to develop a log transport vehicle for the future. Not all of these ideas are new or outrageously radical, but when combined into the one package, produce an impressive transport solution.

 **Liro**
Forestry Solutions

Private Bag 3020, Rotorua, New Zealand

Telephone: +64 7 348 7168 Facsimile: +64 7 346 2886

Email: shane.mcmahon@forestresearch.co.nz

- **Signage** – There is no aggressive signage on the vehicle. The 0800 number comments board has an added message that reads "Thank you for passing. Have a safe day", with an added smiley face. This has been designed to be public friendly, and provide a non-aggressive message to other road users.
- **Paint design** – The paint design on the vehicle could be classed as visually friendly with the earthy colours of green and gold.

Forward Thinking

AZTEC Forestry Transport Developments has designed this unit to take transport into the year 2000 and beyond. The unit is built to take advantage of future opportunities. Such things as the possibility of RUC discounts, and increased weights for units equipped with road friendly suspension systems. This encouraged the use of air suspension in the design of the truck and trailer. Other features, such as a trunked type radio system, give the unit the ability to conduct data transfer as well as voice messages.

Economy

The Foden truck is fitted with a **4553406 Electronic engine** that is significantly more fuel efficient than the older Foden engines. The engine also has an extended oil change interval of 20,000 km that is 4000 km more than normal. With eight axles, the Road User Charges (RUC) are cheaper, running with 44 tonne tickets. The lightweight design of the unit has produced a vehicle that is capable of carting a payload of 30 tonne.

Road Friendly Transport Design

To run in parallel with the forward thinking attribute, the unit has been designed with road friendly air suspension systems. There has been numerous literature produced which indicate that air suspension systems are significantly more road friendly than spring leaf suspension systems.

The other two features that make the vehicle friendly to the road are the eight axles and Central Tyre Inflation (CTI) system.

The eight axles give greater distribution of load, and the CTI system reduces the impact the load has on the road. The CTI system is fitted to the truck driver wheels and throughout the trailer. The system was designed and built by Tidd Ross Todd (TRT) Hamilton and is called the Air Traction System.