#### For Immediate Release

 Michelin Challenge Bibendum 2003 -Isuzu Wins 2 Gold Medals
 with the World First-ever \* DI Diesel-cycle, CNG-Powered Elf Light-duty Truck



Tokyo, September 26, 2003 -

The world first- ever, direct-injection, diesel-cycle, mono-fuel, CNGpowered ELF light duty truck from Isuzu Motors Limited made its successful competition at the Michelin Challenge Bibendum 2003, capturing 2 Gold Awards and 1 Silver Award. The prototype DI-CNG ELF was developed in collaboration with Westport Innovations, Inc. of Canada.

With the DI-CNG ELF truck, Isuzu achieved successful marriage between superb technological advantage of direct-injection diesel engine and CNG technology, realizing excellent fuel economy and low pollution at the same time. Winning gold medals in the efficiency and emissions categories and silver medal in the noise category speaks for itself how environmentally positive Isuzu's DI-CNG ELF truck is.

## Compressed-Natural Gas Technology and its Future Potential -

Conventional CNG-powered engines employ Otto-cycle, widely used in the gasoline-powered engines. The use of CNG as fuel makes it possible to achieve virtually zero PM emission, while NOx emission can be reduced as much as 95% as compared to the 1998 Emission Standards. When it comes to the thermal efficiency, however, the CNG-powered engines are on par with gasoline-powered and slightly less efficient than conventional diesel engines. Unlike the Otto-cycle type, the direct-injection, diesel-cycle CNG engine as installed in Isuzu ELF truck realizes greater fuel efficiency and CO2 emission reduction on top of better thermal efficiency, without compromising cleanliness of emissions.

By utilizing a 4.5-liter, in-line four engine as the base engine, Isuzu developed variable turbo-charger, EGR, oxidizing catalytic converter and urea SCR catalyst for NOx. Electronically controlled common rail injection system and hot-surface ignition system has been developed through a joint development cooperation between Isuzu and Westport Innovations, Inc. of Canada. All these advanced environmentally positive technologies combined, Isuzu's DI CNG-powered ELF realizes ultra efficient, super clean emission performance that achieves the Japanese ULEV standards.

# Specifications:

1. Displacement:	4.5-liter
2. Engine configuration:	In-line, 4-cylinder
3. Power:	100kw (134hp) /2,200rpm
4. Torque:	500Nm (369lb-ft) /1,000rpm
5. Load capacity:	2.0 ton (4,500lbs)
6. GVWR:	6.0 ton (14,076lbs)
7. Fuel storage system:	2-bottle CNG cylinder
8. Storage pressure:	250bar
9. Maximum speed:	130km/h
10. Operational range:	300km

\* Source: Isuzu Motors Limited, a/o Sept. 2003

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Supplement Information:

>> Isuzu and the CNG-powered ELF Truck

- To cope with the global environmental issues, e.g., depletion of fossil fuels and conservation of global environment, Isuzu made an early start in grappling with the development and dissemination of low-pollution, environmentally positive vehicles that utilize alternative energy.
- One of the key engineering focus have been the use of natural gas. In 1993, Isuzu obtained accrediting for the CNG-powered ELF from then-Transport Minister, and began on-highway test marketing of the vehicle. General sales and distribution of the CNG-powered ELF trucks started in 1996. Later, in 1998, the ELF CNG assembly operation was integrated at Isuzu Fujisawa Plant in Japan.
- In recent years, there is a marked increase of demand for low emission, environmentally
  positive vehicles. Local governments, carriers and trucking companies are increasing the
  CNG-powered vehicles in their fleet. This is largely because of aggravating environmental
  conditions as seen in the degradation of air quality in metropolitan areas.
- Against this backdrop, the superb quality and performance of ELF CNG trucks have earned unrivaled customer support, resulting in a strong sales growth and significant increase in vehicle registration year after year. In June 2003, cumulative registration count hit the 5,000-unit mark, allowing Isuzu to command 68% of the market (the ELF class).

 Isuzu will make incremental efforts in the development and dissemination of clean diesel and low pollution, environmentally positive vehicles that run on alternative fuel, and promote conservation of global environment.

Units <u>Ye</u> ar	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003*
Isuzu	8	5	12	32	134	376	359	743	1544	1655	166
Industry	14	31	44	72	205	526	581	1059	2124	2431	241
Isuzu Share (%)	57.1	16.1	27.3	44.4	65.4	71.5	61.8	70.2	72.7	68.1	68.9

ELF CNG truck registration and market share

\* (Apr - Jun) 3-month actual for 2003

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## About Westport Innovations Inc.

Westport Innovations Inc. is the leading developer of clean natural gas, propane and hydrogen engine technologies. It develops, manufacturers and sells a wide range of engines for commercial transportation applications such as trucks and buses through its joint venture, Cummins Westport Inc. Technology development alliances are in place with a number of other leading engine manufacturers, including Isuzu, MAN, Ford and BMW.

## About Challenge Bibendum 2003

Challenge Bibendum, considered one of the premier global events for advanced technology vehicles, was established by the Michelin Group as an objective way to bring together and test the best available technologies for environmentally positive vehicles. The annual event features vehicles from major manufacturers on three continents and brings together all partners in the automotive world: vehicle manufacturers, designers, energy suppliers, technical leaders, policy makers, universities and government organizations. The 2003 Challenge Bibendum was held in Sonoma and San Francisco, Calif., Sept. 23-25. More than 100 passenger and commercial vehicles participated. In addition to Isuzu, participants include Audi, BMW, DaimlerChrysler, Ford, General Motors, Hyundai, Nissan, Toyota, Volkswagen and Volvo. A true competition, Challenge Bibendum is one of the few events to compare different advanced technologies head-to-head. The event is open to all energy sources from electric cars to hybrid fuel cells to hydrogen powered buses. Advanced technology vehicles are rated on emissions, acceleration, braking, handling, noise and energy efficiency during the annual competition. Complete information is available at www.challengebibendum.com