

# The Articulated Bus

November 1982

## Why is the TTC testing articulated buses?

Articulated buses carry up to one-and-a-half times as many people with one driver compared to a conventional bus and may prove to be ideal for heavily-travelled routes, including limited stop-express services.

## Condensed Specifications

TTC 8500-8511      Model GMC-TA60-102N      Delivery in 1982

**Dimensions**      Length – 60' (18.3 m)  
                            Width – 102" (2.6 m)  
                            Height – (maximum) – 121.5" (3.1 m)  
                            Wheelbase – 1st to middle axle – 235" (597 cm)  
  Middle to last axle – 281.7" (716 cm)  
                            Turning circle – 43'9" (13.3 m)  
                            Weight – 33,260 lbs (15,087 kg)

**Power Train**      Engine – Detroit Diesel Allison 8V-71N  
                            Horsepower – 255 HP @ 2,000 RPM  
                            Displacement – 568 cu in (9,308 cc)  
                            Transmission – Detroit Diesel Allison  
  V735 Automatic  
                            Fuel Tank – 125 Imperial gallons (568 litres)

**Interior**            55 seats  
                            Heating – 114,000 BTU (28,500 kcal) main system  
  41,000 BTU (10,000 kcal) front and  
  defroster system  
  80,000 BTU (20,000 kcal) booster unit  
                            Ventilation – 4 roof hatches for ventilation and  
  emergency  
  9 fully opening windows

**Manufacturer**      Diesel Division  
                            General Motors of Canada Limited  
                            P.O. Box 5160  
                            LONDON, Ontario  
                            N6A 4N5



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Welcome aboard one of the new articulated buses being tested by the TTC as part of a demonstration program sponsored by the Province of Ontario. It is planned to test these high-capacity, "bendable" buses in regular daily service over the next three years.

## What is an articulated bus?

An articulated bus is composed of two vehicle sections connected by a turntable. The front portion is essentially a standard bus without a motor. The second section of the bus contains the motor and the driving axle. The bus travels on the street in exactly the same way as any other bus and when turning corners, the driver steers the vehicle in the same way as any other bus. The front section travels around the corner, pushed by the motorized section which follows in the same path as the front section. The turning radius of the articulated bus is comparable to the standard TTC bus.

Articulated buses have been used in Europe for

**Toronto Transit  
Commission**





*The "New Look" articulated bus as delivered to the TTC in November 1982.*

a number of years but their introduction to North America is relatively recent. While most other types of articulated buses "pull" the trailing section, the buses being tested by the TTC are the first to employ a "pusher-type" design.

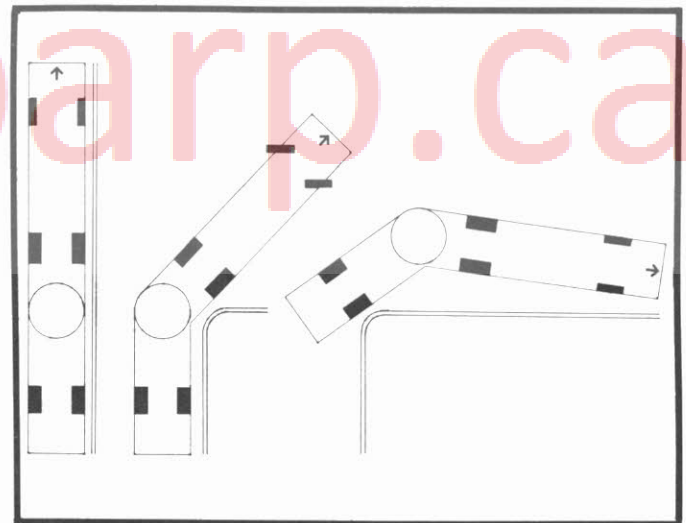
### **What articulated bus is the TTC testing?**

The TTC is testing the "New Look" articulated bus built by the Diesel Division of General Motors of Canada Limited in London, Ontario. For over 20 years, they have been supplying the TTC and other cities with standard 40-foot (12.2 m) "New Look" transit buses. Many of the same components and design features that have been proven for years in these vehicles have been incorporated in the articulated bus.

The length of the bus is 60 feet (18.3 m), the width is 102 inches (2.6 m) and the overall height is 121.5 inches (3.1 m). There are three sets of doors for fast boarding and exiting. The front door is wider than that on the current standard TTC bus. The bus seats 55 passengers and is powered by a standard 8-cylinder diesel engine.

### **What are some of the design and safety features of the bus?**

The articulated bus introduces a unique "pusher-type" turntable arrangement for safe, reliable handling. The design of the bus limits angular motion



*Illustration of an articulated bus "bending" around a corner. The front section is pushed around the corner by the rear section.*

between the front and rear sections of the bus to less than 7 degrees at normal speeds in a straight direction; less than 2 degrees at highway speeds. Automatic control systems take corrective action should the vehicle exceed these limits.