



## Product

## Custom Gear Drives

## Application

## Long Island and Metro-North Railroad Cars

## Highlights

- Complete custom assemblies were delivered
- Precision ground and hardened high-quality gearing
- Welded steel cases for enhanced weight reduction

A major fleet upgrade was undertaken by The Metropolitan Transportation Authority of New York in 2002. From 2003 through 2008, a large quantity of new M7 electric rail cars were delivered as replacements for aging fleets on the Long Island Rail Road and the Metro-North Railroad.

Two slightly different versions of the new car design were developed to meet the different electrical and signaling systems on the two railroads. One of the major improvements in the new design was the enhanced AC traction motors that allowed for much faster acceleration from a standing stop than the older cars.

Due to their extensive experience with mass transit propulsion drive gearboxes, Nuttall Gear was selected to produce the complex gearboxes, which were custom-engineered by the traction drive OEM for the new cars. Each car required four gearboxes which were mounted to the axles and driven by electric motors. The Nuttall gearboxes featured precision ground and hardened, high-quality gearing and welded steel cases (vs. castings) for weight reduction.

Nuttall delivered complete gearbox units including the gearbox, coupling, suspension (anti-rotational device), ground brush assemblies and grounding connections.

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