Case Study: Heavy Duty Performance, Tokyo Monorail

The Tokyo Monorail reflects the best in the manufacturing and engineering of monorail cars, including the introduction of the technology required for greater passenger capacity and service of a higher quality, along with a reduction in maintenance costs and energy consumption.

SYSTEM OUTLINE

TRACK	Double Track (including an underground section and station beneath the airport runway to avoid aircraft operation disruption)
LINE LENGTH	17.8km
NO. OF STATION	11
NO. OF FLEET	21 trains (126 cars)
TRAIN FORMATION	6 - car per train
LINE VOLTAGE	DC750V
MAX SERVICE SPEED	80km/h
SERVICE DAYS PER YEAR	365 days
PUNCTUALITY	Averages a below 10 second delay in scheduled diagram
ANNUAL PASSENGERS	45,388,710 passengers (2014)
AVERAGE DAILY NUMBER	124,353 passengers (2014)
TOTAL NUMBER SINCE 1964	1,876,931,204 passengers (2014)
VEHICLE RUNNING PERFORMANCE	
AVERAGE DAILY DISTANCE (WEEKDAY)	56,029.8 car • km
AVERAGE DAILY DISTANCE (WEEKEND)	53,312.4 car • km

The lead trailers, which include the driving cab of the six-car train, are without a traction motor to reduce the overall weight of the train. The car-body is fabricated using Friction Stir Welded Aluminium alloy panels which offer exceptional strength alongside a lightweight design.

Passenger accommodation consists of a mixture of 4-seat facing bays and longitudinal bench seating, and includes luggage racks next to the doorways. LED lighting is used throughout for a welcoming and clean interior, whilst passenger information is provided by 17-inch wide LCD displays above the doorways. Passenger information is provided in four languages: Japanese, English, Chinese, and Korean.

Providing an essential link between downtown Tokyo and Tokyo Haneda Airport, since 1964 the system has experienced no incidents or accidents involving passenger injury, no fire accidents nor any incidents to cause the train to become disabled between stations.