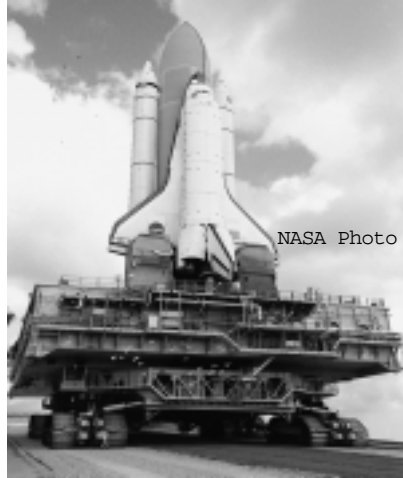

ADTs Keep Shuttle Level Before Launch

With all that goes into launching the Shuttle, it's easy to forget about the many preparations that proceed the actual flight. One of the more critical steps in this process is moving the spacecraft into place. This challenging task is accomplished using a massive Crawler/Transporter. Resting on top are the Mobile Launching Platform and the Shuttle, which are slowly carried from the Vehicle Assembly Building to the Launch Pad.

Working with a prime contractor to NASA, several of our Model 0605 ADTs will be incorporated into the Transporter's leveling and steering systems. They are replacing rotary potentiometers, which did not satisfy the specified accuracy requirements and wore out too quickly. The ADTs will be used for angular position feedback on servovalves located throughout the Crawler. Some of these servovalves are linked to pump drives that control the steering function for each of the four double-tracked bogies. Others servovalves control the jacking, equalizing and leveling of the Launching Platform



as the Transporter negotiates a 5% ramp leading up to the Launch Pad. So precise are these systems that the tip of the orbiter is kept vertical within 10 minutes of an arc, or about the diameter of a basketball during the 5 hour journey.

Here are some other interesting facts about the Crawler/Transporter:

Weight: 2,721 metric tons (6 million lbs)

Length: 35 meters (114 ft.)

Width: 40 meters (131 ft.)

Height: 6-8 meters (20-26 ft.) adjustable

Top Deck: 27 meters (90 ft.) on a side (4)

Tracks (8): 3 meters (10 ft.) H x 12 meters (41 ft.) L with (57) 1-ton shoes per track

Power Source: (16) traction motors powered by (4) 1,000 kw generators,

driven by (2) 2,750 hp diesel engines

Maximum Speed: 1.6 km (one mile) per hour loaded,

3.2 km (two miles) per hour unloaded

Diesel Fuel Usage: 568 liters (150 gallons) per mile