An offshore crane mounted on a fixed structure typically operates for 150-300 hours per year, and a crane used to support drilling operations typically accumulates 3,000-5,000 hours per year. The fixed displacement gear type hydraulic system works well for many years on fixed platform applications given the low cumulative hours.

However, because of the cumulative hours as well as the number of hours run consecutively during a drilling cycle, the fixed displacement gear type hydraulic system provides limited service life and performance on a drilling support crane.

Seatrax recommends a variable displacement hydraulic system for any crane that will run through drilling cycles.

Variable displacement (medium flow) advantages over fixed displacement include:

- Provides 50%+ faster operational speeds
- Provides 400%+ greater hydraulic component life
- Improved controllability for the operator
- Quieter operation. (Approximately 72 dba vs. 85-90 dba in the cab w/open wingdeck)
- Combine the advantages above to translate to greater safety
Machinery Configurations—Fixed vs. Variable Hydraulic Systems:

- Variable volume, axial piston pumps vs. fixed gear pumps
- Bent-axis piston motors vs. fixed gear motors
- High-pressure control valves, brake valves, etc.
- High resolution pilot (joystick control) circuit
- High-pressure fluid conductors and end fittings vs. low pressure
- Oversized pump drive gear box to accommodate larger pumps
- Hard-piped flooded suction arrangement w/butterfly shut-offs
- High speed hoist transmissions compatible w/high speed hydraulic system/high hook drops
- Piston equipment does not contaminate the oil during operation