



TDS-11-1400 Top Drive Upgrade

TDS 11 The World's Most Popular Top Drive

The TDS-11-1400 upgrade kit is the latest evolution of NOV's industry-leading TDS-11SA Top Drive. Designed in response to increasing demands for higher torque and power in land drilling operations, this upgrade delivers a substantial performance boost—transforming existing TDS-11SA units to a 1400 HP system. The upgrade kit builds upon the renowned durability and dependability of the TDS-11SA, helping drilling contractors extend the life of their assets and unlock longer laterals with greater efficiency.

The TDS-11-1400 Upgrade Kit is engineered for operators seeking cost-effective performance enhancement without needing a full rig overhaul. Backed by validated engineering and field-tested components, it positions customers to stay competitive in today's evolving market.

Key Specifications

Parameter	TDS-11-1400 Upgrade
Horsepower Rating	2 × 700 HP motors (1400 HP total)*
Maximum Continuous Torque	66,100 ft-lb @ 110 RPM
Maximum Makeup Torque	71,000 ft-lbs
Maximum Breakout Torque	Up to 85,000 ft-lb with upgraded arrestor
Hoisting Capacity	500 ton API-8C (unchanged from base model)
Motor Type	AC Induction (intermittent high-performance validated)
Pipe Handler Compatibility	Enhanced PH-75 with torque up to 85,000 ft-lb
Operational Temperature	-20°C to +40°C

*Motors are not included in this upgrade kit – third party supply is available for US Market only

Features and Benefits

- Upgrade from 800 HP or 1200HP to 1400 HP using dual 700 HP motors*
- High torque capability for longer lateral wells and heavier drill pipe
- Greater drilling flexibility for a wider range of well designs
- New high-capacity torque arrestor rated up to 85,000 ft-lb break out—reduces mechanical wear and increases system life
- Validated high-torque gearbox supports up to 1400 HP input
- Retrofit kit includes larger link tilt cylinders, high-capacity torque arrestor, and VFD service loop modifications tailored to your configuration
- Leverages existing infrastructure, reducing capital spend and downtime
- Tailored for top-tier land drilling contractors
- Developed to meet growing demand for higher torque top drives, while preserving familiar NOV system architecture

Drilling Motor Type	AC Induction Motors
Horsepower Rating	2 x 700 HP
TDS Working Height	19'6" (21'-8" with 120" bail) 5,944 mm (6,604 mm)
Weight	28,000 lb (12,700 kg)
Transmission	
Gear Ratio	10.56:1
Lube	Force-fed, filtered, air-cooled
Drilling Parameters	
Maximum Speed	228 RPM
Maximum Continuous Torque	66,100 ft-lb (89,620 N-m)
Speed at Maximum Continuous Torque	110 RPM
Maximum Breakout Torque	85,000 ft-lb (115,245 N-m)
Maximum Makeup Torque	71,000 ft-lb (96,263 N-m)
Static Lock Brake	50,000 ft-lb (67,790 N-m)
Rating Capacities	
Hoisting and Rotating	500 ton (453,592 kg)
Water Course	3 in (76.2 mm)
Washpipe Packing	7,500 psi (517 bar)
Pipe Handler	PH-85-11
Torque Capacity	85,000 ft-lb (115,245 N-m)
Connection OD	4 in – 8½ in (101.6 mm – 215.9 mm)
IBOP Pressure Rating	15,000 psi (1,034 bar)
Upper IBOP	6% in API Reg. RH Box (remote operated)
Lower IBOP	6% in API Reg. RH Pin/Box (manual)
Rotation/Orientation	360°/Unlimited
Other	
Cooling System	Local Blower
Hydraulic Power	Onboard
Temperature Range	-40°C to +40°C (-40°F to +104°F)*
Casing Running Tool Ready	Optional
Elevator Links	250, 350 and 500 ton API
Footprint	73.8 in x 57 in (1,875 mm x 1,448 mm)

Performance Curve

TDS-11SA Top Drive Performance at 40° Ambient

