

## **Rig 101 Specification 525 Super Single**

### **1. Hoisting Equipment:**

Drawworks:	Rig Tech RT- 400B
Rated:	750 HP
Drum Grooving:	1-1/8"
Max. Capacity:	476,336 lbs
Max. Single line pull:	70,715 lbs
	SN: RT- B – 001 - 2005
Powered by:	(1) each of (2) 540 HP, Caterpillar C-15 Engines
Auxiliary Brake:	Eaton
	Model: 424WCB2
Drawworks Drum Clutch:	Eaton
Model:	Airflex 32VC100
Compound:	Rig Tech-Dual Engine Input/Single Drive Output
Model:	RTCOMP-2
Compound Clutch:	(2) each
Make:	Eaton
Model:	Airflex 16VC100
Part #:	142821HN
Right Angle Drive:	Rig Tech
Model:	R.A.G.B.2:1
Drive Lines:	Spicer (2) each-42"installed
Model:	Spline
Right Angle Lube Pump:	Precision
Transmission:	(2) (1) each engine/five forward/no reverse
Manufacturer:	Allison
Model:	CIT-6061-4
Part #:	29522621-FA
Weight Indicator:	Wagner Type "FS" or Equivalent

Drilling Line Spooler: Electric  
Size: 1-1/8" x 2000' capacity

Deadline Anchor: Hercules  
Type: Hercules model 118T  
Mount: Drawworks trailer unit

## **2. Mast:**

Make IDS  
Model: 4R-72-500  
Height: 71'-6"  
Rated: 500,000# hook load capacity

Crown: IDS  
Model: 4R-72-500  
Sheaves: (7) each 30" sheaves  
(1) each 24" crossover sheave

Raising System: (2) two each triple stage hydraulic cylinders  
Make: Parker  
Model: Triple Stage/Double Acting

Standpipe: 4" x 5000 psi

## **3. Substructure:**

Make: IDS  
Model: HR12-1.0  
Height: 12' 2"  
Clear Height: 11'  
Capacity: 800,000 lbs

## **Pipe Delivery Boom:**

Make: IDS  
Model: C30-L15  
Clamp Force: 30,000 ft/lbs  
Lift Capacity: 15,000 lbs

#### **4. Hydraulic Power Unit: (Top Drive)**

Power: (1) each 540/630HP, C-15/C-18, Caterpillar Engine  
Hyd. Pump: HPU TD PKG  
Make: Sauer Danfoss  
Model: 90R250 MA5A38B80

#### **5. Traveling Equipment:**

##### **Split Traveling Block:**

Make: M.D Cowan  
Model: Banjo 4-S-500  
Max Hook Load: 250 ton  
Number Sheaves: 4  
Sheave Diameter: 30"  
Grooved For: 1-1/8"  
Max. Lines: 8

#### **6. Rotary Equipment:**

Top Drive: Power Swivel  
Manufacturer: Venturetech Group  
Model: XK-250  
Max Static Load: 250 tons  
Max Torque: 23,000 ft-lbs  
Max Speed: 140 rpm  
Pressure Rating: 5,000 psi  
Integrated brake:  
Integrated pinned traveling block:

##### **Hydraulic Torque Wrench: (Iron Roughneck)**

Make: U.S. Tools  
Model: HT-75  
Max Make Up: 75,000 ft-lbs  
Max Break Out: 100,000 ft lbs  
Connection Range: 3 3/8" to 8 1/2"

#### **7. Power Generation:**

Engines:	(2) each C-15 Caterpillar Engines
Manufacturer:	Caterpillar
Model:	C-15
HP:	540
Generators:	(2) each
Model:	LCG

#### **8. Mud Pumps:**

Manufacturer:	Gardner Denver
Model:	PZ -9
Quantity:	(2) two each
HP:	1000
Piston Stroke:	9"
Working Pressure:	5000 psi
Max. Liner Size:	7"
Min. Liner Size:	4"
Drive:	Mechanical drive w / torque converters
Power:	(2) two each Cat 3508, 900 HP engines

#### **Torque Converters:**

	(2) each
Make:	NOI
Model:	C-300-80

#### **Pump Accessories:**

Liner Washer Pumps:	(2) each
Make:	Gardner Denver or Equivalent
Pulsation Dampeners:	(2) each
Make:	IEI
Model:	5M-20
Charging Pumps:	(2) each, 5x6x11
Make:	MCM or Equivalent

Model: Series 250

Shear Relief Valves: (2) each  
Make: OTECO or Equivalent  
Model: Plunger Type

#### 9. Mud System:

Manufacturer: M.D. Cowan  
Active Mud Tanks: (2) each with curved bottoms  
Total Volume: 640 bbl (active system)  
80 bbl Separate (Trip Tank)

#### Shaker Skid:

(2) each Shakers  
Make: Derrick  
Model: FLC 504  
Rated: 400 GPM (per shaker)

#### Trip Tank/Choke Skid:

Trip Tank Pump: (2) each, 2x3x11  
Make: MCM or Equivalent  
Model: 250 Series  
Gas Buster: 30"X30' internally baffled  
Choke Manifold: American Oilfield Products or Equivalent

#### Mud Accessories:

Mud Mixing Agitators: (5) each, (2) process, (3) suction  
Make: Teco Motor or Equivalent  
Model: Pitboss

Mud Mixing Hopper:  
Make: Vortex Ventures  
Model: VVEU6SD

Mud Transfer Pumps: (4) each (2) per tank, 5x6x11  
Make: MCM or Equivalent

Model: Series 250

**10. BOP Equipment:**

Accumulator US Oil Tools  
Model: T-80-5  
No. Bottles: (10) each  
No. Stations: (5) five  
Primary Pump: Electric triplex  
Model: WWE2018256T  
Pressure: 3000 psi  
Motor HP: 20 HP:  
RPM: 1770  
Secondary Pump: Air  
Quantity: (2) each  
Includes: Remote control station mounted in rig floor doghouse

**BOP:**

**Annular Preventer:**

Manufacturer: Townsend  
Model: Type 90 annular BOP  
Size: 11"  
Pressure Rating: 5000 psi  
Top: Studded  
Bottom: Flanged

**Double Ram Preventers:**

Manufacturer: Townsend  
Model: Type 82 Ram  
Size: 11"  
Pressure Rating: 5,000 psi  
Top Flange: 5,000 psi  
Bottom Flange: 5,000 psi  
Side Outlets: (2) two each, 4-1/16" x 5,000 psi

**Choke Manifold:**

Manufacturer: American Oilfield Products

Pressure Rating: 5,000 psi  
Valves: Gate  
Quantity: (2) each, 4-1/16"  
(5) each, 2-1/16"  
(2) each, 2-1/16" 5M manual choke

**Wing Choke Valves:**

Manufacturer: American Oilfield Products or Equivalent  
Model: Type WG  
(1) each 3 1/8"x 5M  
**HCR Valve:** (1) 3 1/8"Cameron Hydraulic control valve or Equivalent

**Wing Kill Valves:**

Manufacturer: American Oilfield Products or Equivalent  
Model: Type WG  
(2) each 2 1/16"x 5M (1) 2 1/16 check valve

**11. Auxiliary Buildings and Equipment:**

**Fuel Tank:**

Cylindrical 40'x 8'  
Manufacturer: Permian Tank MFG  
Capacity: 265 bbls  
Fuel Pumps: (2) each  
Manufacturer: Myers or Equivalent  
Drive: Electric  
Filter System: Racor or Equivalent  
Fuel system mounted on end of fuel tank within a containment system

**Water Tank System:**

Cylindrical, 40'x12'  
Capacity: 500 bbls  
Water Pumps: (2) each, 2x3x11  
Manufacturer: (1) Mission Magnum/(1)Baker or Equivalent  
Model: Series 178

Drive: Electric

**Lubster Skid:** 30'x7', (5) each oil totes

**Brake Cooling System:**

Manufacturer: Eaton  
Model: BSP BWC 5101  
Pumps: (2) each, 3x2x13  
Manufacturer: Baker SPD or Equivalent  
Model: 9998816A800Z

Drive Motor: (2) each, 20 HP  
Manufacturer: Marathon or Equivalent  
Model: DA256TTGN1026AE

Brake cooler is mounted on the Lubster Skid

**Doghouse Skid:**

49'x8'  
Utilization: Drillers Cabin (raises)(Hydraulically pinned)  
Half used for crew change house  
Houses closing unit

**Drawworks Trailer:**

Hoisting system mounted to trailer unit.  
Rig hydraulic power system (self contained)  
Drill Line Spool  
Fifth wheel connection  
Drawworks Trailer Ramp (access to boat)  
Trailer in Drilling Position: Mounted to 10'x50' trailer pad (Boat)

**TD HPU/Parts House/Air Compressor:**



Top Drive HPU  
(1) 540/630 HP, C-15/C-18 Cat Engine

Compressor: Sullivan Palatek  
Model: 25D  
Part #: 651-0015

**12. Miscellaneous:**

**Air Slips:** Cavins, Spider air operated slips  
Model: TF 100-S  
Bowl Opening: API standard 10-1/8" diameter  
Tubular Range: 2-3/8" to 8-5/8" OD  
Rating: 700,000 lbs

**Junk Bin:** Misc. Parts Storage