

# TRACK-TYPE TRACTOR

## I. GENERAL:

This standard is intended to provide specifications for the procurement of Caterpillar Model D10T Track-Type Tractors that meets the specific area operational requirements for the St. Johns River Power Park coal yard site. This Track-Type Tractor shall be utilized for moving coal to meet operational fuel requirements for two 630 Net Megawatt Units.

## II. DESCRIPTIONS FOR CATERPILLAR MODEL D10T TRACK-TYPE TRACTOR

The following shall be provided:

### II.1. ENGINE

The Cat C27 engine shall meet or exceed all EPA Tier 3/EU Stage IIIa emission specifications for the U.S through 2010.

- II.1.1. Engine Model:..... Cat C27 ACERT
- II.1.2. Gross Power:..... 646 hp
- II.1.3. Net Power:..... 580hp
- II.1.4. Bore:..... 5.4in
- II.1.5. Stroke: ..... 6.0in
- II.1.6. Displacement: ..... 1,647.5in<sup>3</sup>

### II.2. TRANSMISSION

- II.2.1. Forward 1:..... 2.5 mph
- II.2.2. Forward 2:..... 4.5 mph
- II.2.3. Forward 3:..... 7.9 mph
- II.2.4. Reverse 1: ..... 3.2 mph
- II.2.5. Reverse 2: ..... 5.6 mph
- II.2.6. Reverse 3: ..... 9.8 mph
- II.2.7. Forward 1 – Drawbar Pull (1000):..... 225 lbf
- II.2.8. Forward 2 – Drawbar Pull (1000):..... 125 lbf
- II.2.9. Forward 2 – Drawbar Pull (1000):..... 69 lbf

## III. SERVICE REFILL CAPACITIES

- III.1. Fuel Tank: ..... 318 gal
- III.2. Cooling System:..... 34.9 gal
- III.3. Engine Crankcase:..... 18 gal
- III.4. Power Train:..... 51 gal
- III.5. Final Drives (each):..... 6 gal
- III.6. Roller Frames (each): ..... 23.8 gal

- III.7. Pivot Shaft Compartment: ..... 8 gal
- III.8. Hydraulic Tank: ..... 38 gal

**IV. STEERING AND BRAKES**

Hydraulically applied multiple-disc clutches. Diameter, 15.4 in

**V. UNDERCARRIAGE**

- V.1. Shoe Type: ..... Extreme Service
- V.2. Width of Shoe: ..... 24 in
- V.3. Shoes per side: ..... 44
- V.4. Grouser Height: ..... 3.7 in
- V.5. Pitch: ..... 10.2 in
- V.6. Ground Clearance: ..... 24 in
- V.7. Track Gauge: ..... 100 in
- V.8. Length of track on Ground: ..... 12.75 ft
- V.9. Ground Contact Area: ..... 7,326 in<sup>2</sup>
- V.10. Track Rollers per Side ..... 8
- V.11. Number of Carrier Rollers: ..... 1 per side (optional)

**VI. TRACK ROLLER FRAME**

- VI.1. Oscillation: ..... 13.8 in

**VII. HYDRAULIC CONTROLS**

- VII.1. Pump Type: ..... Gear Driven
- VII.2. Lift Cylinder Flow: ..... 107 gal/min
- VII.3. Tilt Cylinder Flow: ..... 30 gal/min
- VII.4. Bulldozer Relief Valve Setting: ..... 2,725 psi
- VII.5. Tilt Cylinder Relief Valve Setting: ..... 2,950 psi
- VII.6. Ripper (Lift) Relief Valve Setting: ..... 2,950 psi
- VII.7. Ripper (Pitch) Relief Valve Setting: ... 2,950 psi
- VII.8. Tank Capacity: ..... 38 gal

Pump output measured at 1800 rpm and 6895 kPa (1000 psi)

Electro-hydraulic pilot valve assists operations of ripper and dozer controls. Hydraulic system includes for valves for use with blade and ripper.

Complete system consists of pump, tank with filter, oil cooler, valves, lines, linkage and control levers.

**VIII. BLADE**

- VIII.1. Type:..... Coal U ARB
- VIII.2. Capacity (SAE J1265):..... 28.7 yd3
- VIII.3. Width (over end bits):..... 17.25 ft
- VIII.4. Height:..... 6.9 ft
- VIII.5. Digging Depth: ..... 26.5 in
- VIII.6. Ground Clearance:..... 58.9 in
- VIII.7. Maximum Tilt:..... 42.3 in
- VIII.8. Weight:\* ..... 23,775 lb  
(without hydraulic controls)
- VIII.9. Total Operating Weight:\*\* ..... 147,625 lb  
(with blade)

\* Includes blade tilt cylinder

\* Add 15,200 lbs for Coal U ABR blade and 19,061 lbs for the Counter Weight

\*\* Total Operating Weight: Includes hydraulic controls, blade tilt cylinder, coolant, lubricants 100% fuel, ROPS, FOPS cab, Blade, 26" ES shoes, and operator.

**IX. STANDARD EQUIPMENT**

The following standard equipment shall be provided for the D10T Track-Type Tractor:

- IX.1. ELECTRICAL
  - IX.1.1. Alternator, 95 Amp
  - IX.1.2. Back up alarm
  - IX.1.3. Batteries, 12-volt (2), 190 amp-hour
  - IX.1.4. Converter, 12-volt, 10-amp
  - IX.1.5. Diagnostic connector
  - IX.1.6. Horn, forward warning
  - IX.1.7. Light, engine compartment
  - IX.1.8. Lighting system, Halogen (2 forward, 2 rear)
  - IX.1.9. Starting Receptacle
- IX.2. OPERATOR ENVIRONMENT
  - IX.2.1. Advisor-electronic monitoring system
  - IX.2.2. Armrest, adjustable
  - IX.2.3. Cab, FOPS
  - IX.2.4. Controls, electronic implement with lockout
  - IX.2.5. Decelerator pedal
  - IX.2.6. Finger Tip Control (FTC) steering
  - IX.2.7. Engine Speed control, electronic
  - IX.2.8. Hydraulic system, electronically controlled for bulldozer and ripper control
  - IX.2.9. Mirror, rearview

- IX.2.10. Radio-ready cab
- IX.2.11. Seat, adjustable contour suspension (gray fabric)
- IX.2.12. Seatbelt, retractable (3 in)
- IX.2.13. Steps, heavy-duty and Handles
- IX.2.14. Wipers, intermittent
- IX.3. UNDERCARRIAGE
  - IX.3.1. 24 inch extreme service grouser with sealed and lubricated PPR track (44 section)
  - IX.3.2. Rollers and idlers, lifetime lubricated
  - IX.3.3. Sprocket rim segments, replaceable
  - IX.3.4. Suspension-type undercarriage, eight-roller tubular track roller frame
  - IX.3.5. Track adjusters, hydraulic
  - IX.3.6. Track guides
  - IX.3.7. Two-piece master links
- IX.4. POWER TRAIN
  - IX.4.1. C27 with ACERT Technology
  - IX.4.2. 24-volt electric start
  - IX.4.3. Advanced Modular Cooling System (AMCOS)
  - IX.4.4. After cooler, remote air-to-air
  - IX.4.5. Air filters, dual with pre-cleaner
  - IX.4.6. Extended life Coolant
  - IX.4.7. Directional shift management
  - IX.4.8. Ether starting aid, automatic
  - IX.4.9. Fan, suction with hydraulic demand drive
  - IX.4.10. Fuel priming pump, electric
  - IX.4.11. Grid, radiator core protection
  - IX.4.12. Mufflers, dual, with rain cap
  - IX.4.13. Parking brake
  - IX.4.14. Pre-screener
  - IX.4.15. Separator, water/fuel
  - IX.4.16. Thermal shields
  - IX.4.17. Torque converter
  - IX.4.18. Transmission, powershift, ECPC, (3F/3R)
  - IX.4.19. Four planet, double-reduction planetary final drives
- IX.5. OTHER
  - IX.5.1. Air conditional box, corrosive resistant
  - IX.5.2. Auto-blade assist and AutoCarry ready
  - IX.5.3. CD TOM parts book
  - IX.5.4. Ecology drains: engine oil, coolant, hydraulic oil, torque divider, fuel tank, power train case and transmission
  - IX.5.5. Engine enclosures

- IX.5.6. Guards
  - IX.5.6.1. Bottom, hinged extreme service
  - IX.5.6.2. Crankcase, hinged extreme service
  - IX.5.6.3. Pivot shaft and seals
  - IX.5.6.4. Radiator, with towing device
- IX.5.7. Implement gear pump compatible for Arctic conditions
- IX.5.8. Product Link ready
- IX.5.9. S●O●S<sup>SM</sup> SAMPLING PORTS
- IX.5.10. Under-hood standard service lamp
- IX.5.11. Vandalism, protection (8 caplocks)

**X. OPTIONAL EQUIPMENT**

The following equipment shall be provided as an option for the D10T Track-Type Tractor:

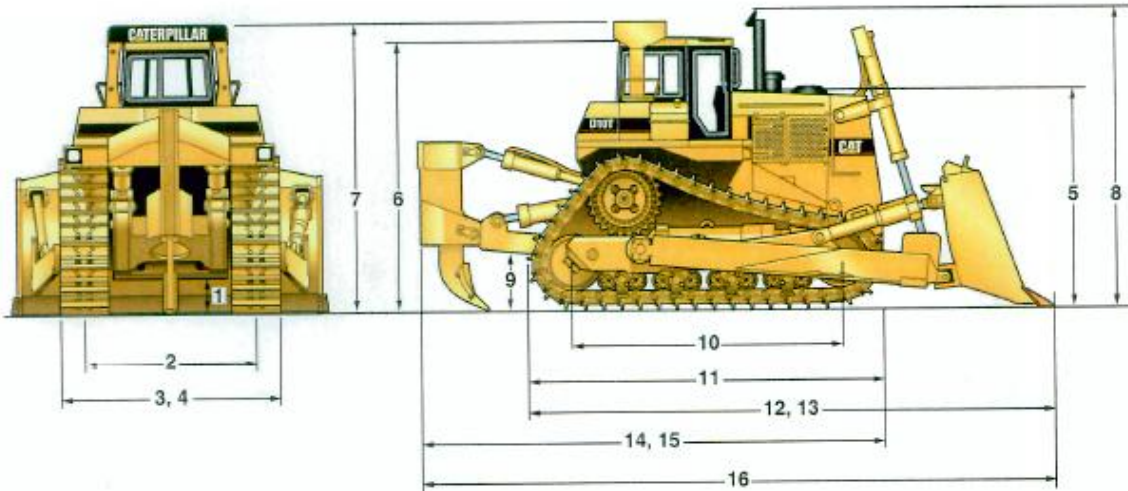
- X.1. ELECTRICAL
  - X.1.1. Converter, 24-volt to 12-volt additional 15-amp converter
  - X.1.2. Lights, supplemental:
    - X.1.2.1. 6 Halogen
    - X.1.2.2. 10 Halogen with 2 spot light locations
    - X.1.2.3. 10 Halogen for mining application
    - X.1.2.4. 10 Halogen for waste application
    - X.1.2.5. 11 – 6 Halogen, 5 HID for waste application
    - X.1.2.6. 11 – 6 Halogen, 5 HID for mining application
- X.2. GUARDS
  - X.2.1. Dozer lines
  - X.2.2. Final drive, clamshell
  - X.2.3. Final drive seals
  - X.2.4. Idler seal
  - X.2.5. Metal hose protective sleeve
  - X.2.6. Power train
  - X.2.7. Undercarriage
- X.3. OPERATOR ENVIRONMENT
  - X.3.1. Air conditioner, fender mounted
  - X.3.2. Glass, ultra-strength up to 40 psi
  - X.3.3. Operators arrangement, modified (Improves comfort for smaller operators)
  - X.3.4. Seat, air suspension
  - X.3.5. Seat, vinyl
- X.4. POWER TRAIN
  - X.4.1. Fast fuel system
  - X.4.2. Quick oil change system
  - X.4.3. Pre-lube, engine

- X.5. UNDERCARRIAGE
  - X.5.1. Tracks, pair, Sealed and Lubricated:
    - X.5.1.1. 28 in, PPR Extreme Service
    - X.5.1.2. 31.5 in, PPR Extreme Service
  - X.5.2. Roller - Carrier rollers, pin-on (one per side)
- X.6. SPECIAL ARRANGEMENTS
  - X.6.1. Cold Weather arrangement:
    - Provides cold weather seals and oils for undercarriage components.
  - X.6.2.
- X.7. BULDOZER ATTACHMENTS
  - X.7.1. AutoCarry system
  - X.7.2. Coal U blade: p/n 147-5008
  - X.7.3. Blade Capacity: 67.8 Yd<sup>3</sup>
  - X.7.4. Blade Width: 265 in.
  - X.7.5. Blade Height: 110.2 in.
  - X.7.6. Blade Weight: 15,200 lbs.
  - X.7.7. Blade Wing Angle: 30° Degrees
  - X.7.8. ½" Abrasion resistant plate shall be welded to face of blade
  - X.7.9. Dual tilt cylinders
- X.8. RIPPERS
  - X.8.1.1. No Rippers are required.
- X.9. OTHER ATTACHMENTS
  - X.9.1. Counterweights.
    - X.9.1.1. Rear mounted: 19,061 lbs
  - X.9.2. Drawbar rigid
  - X.9.3. Heater, diesel fuel
  - X.9.4. Heater, engine coolant, 120- or 240-volt
  - X.9.5. Low temperature start (includes two additional heavy-duty batteries and additional starting motor)
  - X.9.6. Parts book, paper
  - X.9.7. Strider bars, front
  - X.9.8. Striker bar, rear – included with rear counterweight
  - X.9.9. Winch\* (Dealer Installed)

**XI. DIMENSIONS**

**Dimensions**

All dimensions are approximate



1	Ground Clearance	615 mm	24 in
2	Track Gauge	2.5 m	100 in
3	Width without Trunnions (Standard Shoe)	3160 mm	10.4 ft
4	Width Over Trunnions	3716 mm	12.2 ft
5	Height (Stripped Top)	3222 mm	10.6 ft
6	Height (FOPS Cab)	4078 mm	13.4 ft
7	Height (ROPS/Canopy)	4340 mm	14.2 ft
8	Height (Top of Stack)	4543 mm	14.9 ft
9	Drawbar Height (Center of Clevis)	779 mm	31 in

10	Length of Track on Ground	3855 mm	152 in
11	Length Basic Tractor with Drawbar	5331 mm	17.5 ft
12	Length with SU-blade	7500 mm	24.6 ft
13	Length with U-blade	7754 mm	25.4 ft
14	Length with Single-Shank Ripper	7091 mm	23.3 ft
15	Length with Multi-Shank Ripper	7048 mm	23.1 ft
16	Overall Length (SU-Blade/SS Ripper)	9260 mm	30.4 ft

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