

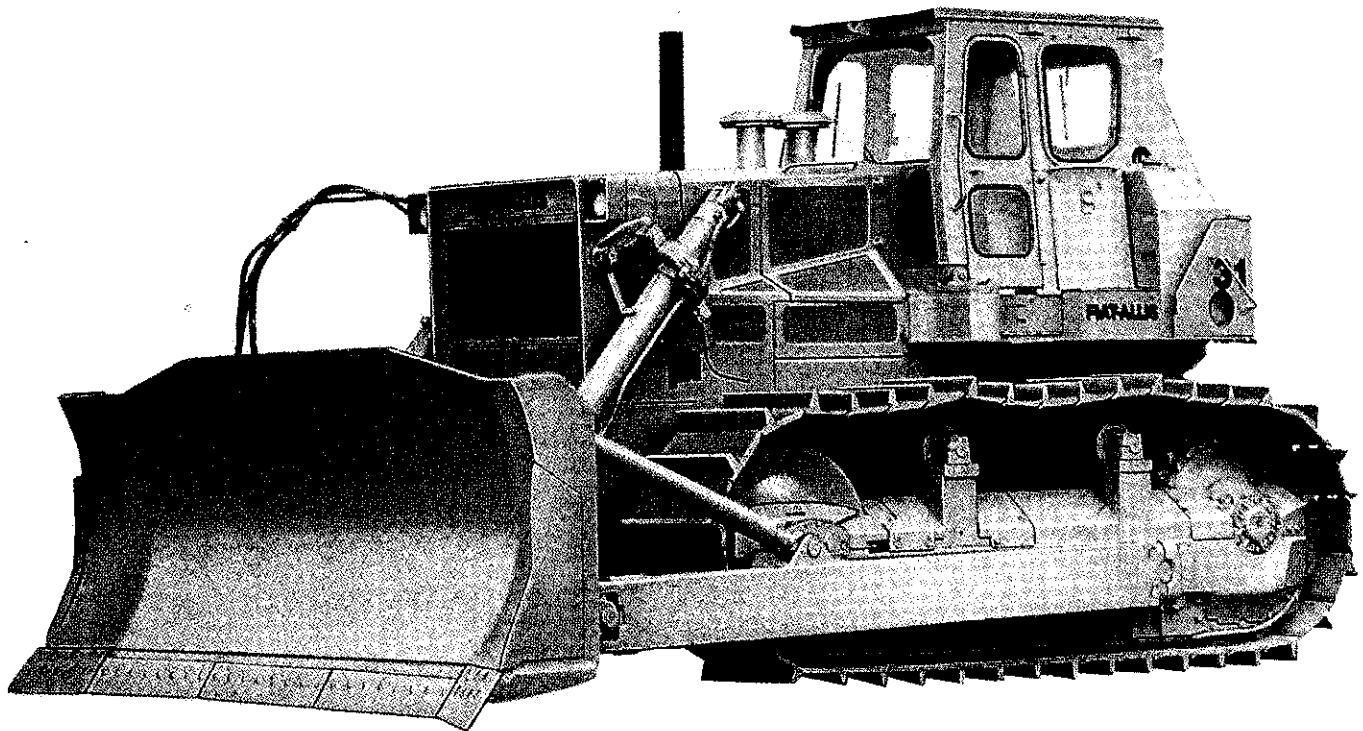


Illustration includes
Optional Equipment.

31 Crawler Tractor

POWER SHIFT ••• 425 Flywheel H.P.

WEIGHT

- Crawler tractor with an operating weight up to 135,000 lbs. (61,235 kg).

POWER

- Unit has complete acceptability in mining, construction and all other applications requiring a big dozer with over 400 HP.

SAFETY & COMFORT

- Designed with operator safety and convenience in mind: Automatic braking system, human engineered operator's compartment, ROPS canopies and cabs.

PROFITABILITY

- **Dozing ability** — Three moldboards to meet any high volume application. Semi-"U", Full "U" and Cushion.
- **Pushing ability** — Power to push-load the largest scrapers. Shaves seconds from load time. Adds yards to production.
- **Ripping ability** — Capabilities of ripping material with seismic reading up to 10,000 ft per second and penetration up to 40".

31 SPECIFICATIONS



ENGINE

FLYWHEEL HORSEPOWER*	425
KILOWATTS**	317
Make and Model	KT-1150-C
Type	Diesel, 4-Cycle, Turbocharged, Direct Injection
Governed RPM	2100
Number of Cylinders	6
Bore and Stroke	6.25 x 6.25 (159 x 159 mm)
Displacement	1150 cu. in. (18.9 lit.)
Lubrication	Full Pressure
Fuel	No. 2 Diesel

*Net flywheel horsepower available at the flywheel of the vehicle engine under SAE J816b standard conditions of 85°F. (29°C) and 29.38" (746 mm) hg. after deductions have been made for Fan, Alternator, Lube Oil Pump, Water Pump, Air Cleaner, and Fuel Pump. This vehicle may be operated up to 9,000 ft. (2744 m) altitude without derating the engine.

**Kilowatts is the International System of Units for power. One (1) horsepower equals 0.746 kilowatt in U.S.A. units.



ELECTRICAL SYSTEM

Voltage	24V
Standard alternator	50 amp
Battery amp/hour rating	225



INPUT CLUTCH

Operation	Fully Automatic
Type	Multiple Disc
Lubrication	Full Pressure



TORQUE CONVERTER

Type	Single Stage, Rotating Housing
Torque multiplication	2.97 to 1

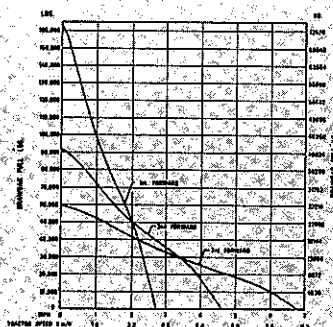


TRANSMISSION

Type	Full Power Shift, Countershaft, Constant Mesh
Actuation	Single Lever
Clutches	Multi-disc, Hydraulic
Lubrication	Full Pressure

SPEEDS

Fwd	MPH	Km/h
1st	0-2.7	(0-4.3)
2nd	0-4.6	(0-7.4)
3rd	0-6.7	(0-10.8)
Rev	MPH	Km/h
1st	0-3.0	(0-4.8)
2nd	0-5.1	(0-8.2)
3rd	0-7.5	(0-12.1)



Maximum drawbar pull depends on traction and weight of tractor with mounted equipment



STEERING AND BRAKING

Hydraulically actuated clutches and spring applied brakes with modulated control provide maximum maneuverability with minimum effort. Clutches and brakes are oil cooled and lubricated for long troublefree hours of operation. Automatic parking brakes.

Friction Surfaces - Each Clutch Assembly	34
Total Friction Area - Each Clutch Assembly	3,608 sq. in. (23280 cm²)
Total Friction Area - Each Brake Assembly	467 sq. in. (3013 cm²)



FINAL DRIVES

Type	Planetary
Ratio	15.5-1
Lubrication	Splash



TRACK

Non-sealed track. Hydraulic track adjusters with interlocking guards. Sprockets with bolt on rim segments. Outer sprocket guards. Disc idlers. Track guiding guards. Track rollers, carrier rollers and idlers are permanently lubricated and sealed.

Frame Oscillation	Maximum — 18.5" (470 mm)
Track Rollers (each side)	6
Double Flange	3
Single Flange	3
Number of Shoes (each side)	37
Width of Standard Track Shoe	28" (711 mm)
Grouser Height (from face of shoe)	4 1/4" (108 mm)
Length of Track on Ground	11 1/2" (3505 mm)
Ground Contact Area	7425 sq. in. (47874 cm²)
Gauge	100" (2540 mm)
Ground Clearance	22" (559 mm)



HYDRAULIC SYSTEM

Reservoir	Closed
Cylinders	Double Acting
Dozer (Two)	6.5" x 49.5" (165 mm x 1257 mm)
Tilt (Right Side)	9" x 7" (228 mm x 177 mm)
Pump	
Capacity @ Governed RPM	
Large Section	95 GPM (360 lit/min)
Small Section	45 GPM (170 lit/min)
Control Valve	Three Spool
Relief Valve Pressure	2000 PSI (141 kg/cm²)
Actuation	Single Lever
Dozer	Raise, Hold, Lower, Float
Tilt	Left and Right



FILTRATION SYSTEMS

ENGINE	
Lube Oil	2 Full Flow 25 Micron and 1 By-pass 5 Micron
Fuel	2 Full Flow 5 Micron
Air Cleaner	Dry Type w/safety Element and Automatic Dust Evacuator
Coolant	Water Filter and Conditioner
TRANSMISSION - TORQUE CONVERTER -	
INPUT CLUTCH	2 Full Flow 10 Micron Full Flow Suction Screen with Magnets
STEERING AND BRAKING	2 Full Flow 25 Micron Full Flow Suction Screen
HYDRAULIC	2 Full Flow 10 Micron Full Flow Suction Screen with Magnets



CAPACITIES

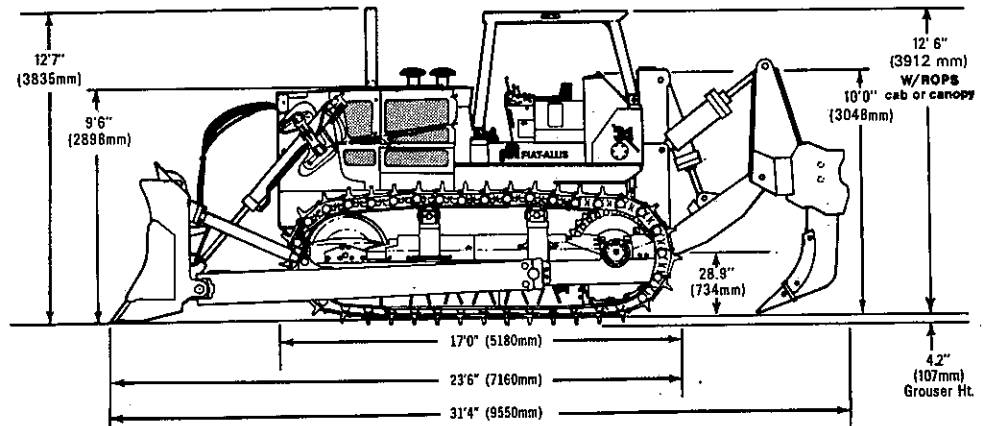
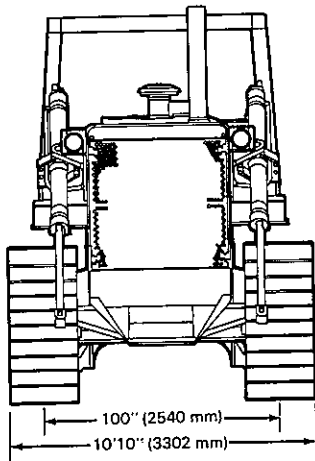
ENGINE CAPACITIES	
Lube Oil	20 U.S. gal (76 lit)
Coolant	35 U.S. gal (132 lit)
Fuel Tank	235 U.S. gal (890 lit)
TRANSMISSION, TORQUE CONVERTER, INPUT CLUTCH	23 U.S. gal (87 lit)
STEERING AND BRAKING	53 U.S. gal (201 lit)
FINAL DRIVES (each side)	15 U.S. gal (57 lit)
HYDRAULIC SYSTEM	56 U.S. gal (212 lit)
HYDRAULIC SYSTEM w/ripper	69 U.S. gal (261 lit)



DIMENSIONS AND WEIGHTS

SHIPPING WEIGHT

(Standard equipment) 92,220 Lb. (41831 Kg)
(w/o canopy & seat belt) 90,250 Lb. (40937 Kg)



TRACTOR AND ATTACHMENTS (w/ROPS Canopy)

HSU w/drawbar
HSU w/31R (std)*
HSU w/31R (opt)*
HC w/drawbar
HC w/31R (std)*
HC w/31R (opt)*
HU w/std cwt
HU w/31R (std)*
HU w/31R (opt)*
ROPS Cab add
* Ripper includes 3 shanks

OPERATING WEIGHTS

110,840 lbs. (50277 Kg)
129,995 lbs. (58965 Kg)
130,995 lbs. (59419 Kg)
104,840 lbs. (47555 Kg)
123,995 lbs. (56244 Kg)
124,995 lbs. (56697 Kg)
113,140 lbs. (51320 Kg)
132,295 lbs. (60009 Kg)
133,295 lbs. (60462 Kg)
965 lbs. (438 Kg)

OVERALL LENGTH

23' 6" (7160 mm)
31' 4" (9550 mm)
31' 4" (9550 mm)
22' 9" (6934 mm)
31' 4" (9550 mm)
31' 4" (9550 mm)
25' 11" (7900 mm)
33' 11" (10084 mm)
33' 11" (10084 mm)



DOZER Specifications

Type Semi-"U"

Full-"U"

Cushion

Blade 31 HSU

31 HU

31 HC

Width* 15'9" (4801 mm)

16'7" (5055 mm)

11'4" (3450 mm)

Height 6'2" (1880 mm)

6'2" (1880 mm)

4'9" (1450 mm)

Digging Depth 21-1/2" (546 mm)

21-1/2" (546 mm)

46" (1168 mm)

Ground Clearance 59-1/2" (1511 mm)

59-1/2" (1511 mm)

31" (787 mm)

Max. Tilt 44" (1118 mm)

52" (1321 mm)

Max. Pitch (degrees) 10°

10°

* Width of blade over severe service end bits.

CUTTING EDGES

Center section (reversible) Yes
Length (Section) 47-3/4" (1213 mm)

Yes
47-3/4" (1213 mm)
32-1/4" (819 mm)

47-3/4" (1213 mm)

Width 12" (305 mm)
Thickness 1-1/4" (32 mm)

12" (305 mm)
1-1/4" (32 mm)

12" (305 mm)
1-1/4" (32 mm)

END BITS:

Width 14" (356 mm)
Thickness 1-3/4" (45 mm)

14" (356 mm)
1-3/4" (45 mm)

12" (305 mm)
1-1/4" (32 mm)



BEAM (Welded Box Section)

SHANKS (none standard, 1, 2, or 3 Optional)



Mech. Pitch Adj.		Ground Clearance Under Tip, Raised			Hydraulic Pitch Adj.		Ground Clearance
Shank Position	Max. Penetration Inches (MM)	Strut Positions			Shank Position	Max. Penetration Inches (MM)	Under Tip Raised
		1	2	3			
A	40" (1016 mm)	18.0" (457 mm)	18.7" (475 mm)	21.0" (533 mm)	A	40" (1016 mm)	25.5" (647 mm)
B	30" (762 mm)	28.0" (711 mm)	28.2" (716 mm)	30.4" (772 mm)	B	30" (762 mm)	34.0" (864 mm)



- Air cleaner — Drive/servos inductor
- safety element and auto start motor
- Alternator — 50 A
- Anti-freeze
- Back-up alarm
- Clutch engine — automatic
- Decelerator
- Fan — pusher
- Gauges:
 - engine oil pressure, transmission
 - clutch pressure, water temperature,
 - voltmeter and hour meter.

- Guards:
 - radiator, wing around crankcase (ss),
 - idler seal, transmission (ss), track
 - roller (full sections), inner sprocket
 - and hood side panels
- Horn
- Hydraulic
- Link and three speed valve, pump and
- flange, laser cylinder and 100 cylinder
- Lights — two front and two rear
- Muffler
- Automatic parking brake
- Pull hook — front
- ROPS canopy
- Seat belt
- Sprocket — segmented

- Starting — direct electric 24
- Steering clutches & brakes
 - oil cooled spring applied band
- Test panel
- Tool box
- Torque converter
- Track — unsuspended
- Track roller — 1 track roller
- Track rollers — 2 each side
 - 3 double flange
 - 3 single flange
- Transmission — power shift
 - 3 forward speed
 - 3 reverse speed
- Track shoes — 28 — 60 x 24
- Water coolant condenser



- Counterweights
- Drawbar
- Fan — reversible
- Fuel tank adapter — quick-fueling
- 4 spool hydraulic valve
- Grille — horizontal

- Optional ripper equipment
selection of shanks 1, 2 or 3
selection of tips
- Dozer — pusher plates
- Radiator sand grid
- ROPS cab — w/ air conditioner

- ROPS cab — w/o air cond.
- Track shoes —
 - 26" (660 mm) full grouser —
 - 32" (813 mm) full grouser —
 - 36" (914 mm) full grouser —
- Vandalism protection



The information contained herein is general in nature and is not intended for specific application purposes. Fiat-Allis reserves the right to make changes in specifications shown herein or add improvements at any time without notice or obligation. Illustrations show standard and optional items.