CASE CONSTRUCTION

TV620B

COMPACT TRACK LOADER

TIER 4 FINAL CERTIFIED



ENGINE

Model	FPT F5B FL413 D*C005
Emissions Certification	Tier 4 Final
Type	Diesel 4-stroke, Turbo, D.I.
Cylinders	4
Bore/Stroke	3.9 x 4.3 in (99 x 110 mm)
Displacement	207 in³ (3.4 L)
Fuel injection	Direct, high pressure common rail – HPCR
Fuel	#2 Diesel
Fuel filter:	
Pre-filter	Beta (30) = 200/spin-on
Main filter	Beta (4) = 20/spin-on
Air intake	Turbocharged w/ waste gate and external cooled EGR
Exhaust aftertreatment	Selective Catalytic Reduction (SCR) Diesel Oxidation Catalyst (DOC)
Cooling	Liquid
Engine speeds	RPM
High idle – no load	2500 +/- 25
Rated – full load	2500
Low idle	1150 +/- 25
Horsepower @ 2500 RPM – SAE J1349:	
Gross	114 hp (85 kW)
Net	114 hp (85 kW)
Peak torque @ 1400 RPM	339 lb·ft (460 N·m)
Radiator:	
Core type	Aluminum bar and plate
Core size area	253 in² (0.163 m²)
Rows of tubes x columns	19 rows
Cap pressure	16 +/- 2 psi (1.10 +/- 0.14 bar)
Fan:	
Diameter	22 in (560 mm)
Ratio	0.96:1 standard, 1.1:1 high-flow
Water pump:	
Style	Centrifugal
Flow	47.8 gpm (181 L/min)
Engine lubrication pump:	
Rotor pump w/ deep sump pan, plate cooler and pressurized under-piston nozzles	
Pump operating angle ratings:	
Side to side	45°
Bucket up	35°
Bucket Down	45°

LIFT GEOMETRY

Vertical Lift

DRIVETRAIN

Drive pump controls	Electro-hydraulic
Pump to engine ratio	1:1
Displacement	3.7 in³ (60 cm³)
Flow @ rated engine RPM:	
@ 96% efficiency	37.9 gpm (143.5 L/min)
Charge pressure	377 psi (26 bar)
System relief pressure	5,800 psi (400 bar)
Drive Motors – Rubber Undercarriage:	
Max. displacement	3.0 in³ (49.1 cm³)
Flow @ rated engine RPM @ 96% efficiency:	1.83 in³ (30.0 cm³)
Motor torque @ max. displacement and relief pressure, calculated @ 5,800 psi (400 bar):	4,840 lb·ft (6 562 N·m)
Travel speed – Rubber Track:	
Low range	5.0 mph (8.0 kph)
High range	8.7 mph (14.0 kph)
Travel speed – Steel Track:	
Low range	3.1 mph (5.0 kph)
High range	5.9 mph (9.5 kph)
Final drive:	
Planetary gearbox w/ 2-speed motor	
Tractive effort	10,995 lb (4 998 kg)
Parking brake:	
Type	Spring-applied, hydraulic release multiple disc.
Engagement	Depress on/off brake button on handle or instrument panel, raise seat bar, get off seat or stop engine.

ELECTRICAL

Alternator	145 amp
Starter	4.29 hp (3.2 kW)
Battery	12-volt low-maintenance 950 cold-cranking amps @ 0° F (-18° C°)

OPERATOR ENVIRONMENT

Enclosed cab (ROPS/FOPS Level 1): Fully sealed and pressurized – FSP Glass door w/ wiper and washer, Sliding side windows – removable, Ventilation system w/ integrated heater, Heater and air conditioner, AM/FM Bluetooth radio w/ 2 speakers and USB port; Keyless start ignition; 8 in Color LCD Display; Economy Mode (auto idle shutdown); Auto Engine Protection Shutdown; Deluxe cloth, air suspension seat, w/ heater and lumbar support; 2 in (51 mm) retractable 3 pt lap seat belt; Ignition Timeout; Machine Settings; User Access Levels; Operator Security Codes; Hand and foot throttles; Alarm package – back-up and horn; Rearview mirror; Headliner; Dome Light; Top window; Cup holder; 12V Power plug socket; Foot rest; Seat pocket; Padded seat bar w/ integral armrests; Loader control lockout system; Electric parking brake control; Operator's compartment floor cleanout; Proportional auxiliary hydraulic control – on joystick; Advanced Instrument Cluster w/ digital hour meter, tachometer, Fuel level LCD bar graph w/ alarm, diagnostic features; Electro-hydraulic controls: For drive/steering, loader functions, Switchable between H and ISO patterns, Adjustable sensitivity of controls.

Warning lights w/ alarms:
Engine coolant temperature; Engine oil pressure; Engine malfunction; Hydraulic charge pressure; Hydraulic filter restriction; Hydraulic oil temperature: Critical system stop, Engine system, Hydraulic system, Electrical and diagnostic system.

Warning alarms:
Battery voltage – plus display; Oil service.

Indicator light:
Engine preheat; Parking brake; Seat bar reminder.

OPERATING WEIGHT

Unit equipped w/ closed cab; 165 lb operator; 84 in Heavy Duty bucket; full of fuel: 16,300 lb (7 409 kg)

Shipping weight	16,000 lb (7 273 kg)
Add-on weights:	
Side cab glass	47 lb (21.3 kg)
Polycarbonate cab door	75 lb (34.0 kg)
Glass cab door w/ wiper	75 lb (34.0 kg)
Air Ride	20 lb (9.1 kg)
Additional counterweight	Not Available

HYDRAULICS

Implement pump type	Axial Piston
Displacement:	
Enhanced high-flow aux.	3.8 in³ (63.0 cm³)
Standard flow @ rated engine RPM:	
@ 100% efficiency	24.2 gpm (91.5 L/min)
Optional high-flow @ rated engine RPM:	
@ 100% efficiency	41.6 gpm (157 L/min)
Enhanced high-flow @ rated engine RPM:	
@ 100% efficiency	41.6 gpm (157 L/min)
Loader control valve:	
Type	3 spool/open center/series - series
Relief pressure	3,450 psi (238 bar)
Port relief pressures:	
Loader raise	4,351 psi (300 bar)
Bucket curl	4,351 psi (300 bar)
Bucket dump	4,351 psi (300 bar)
Hydraulic lines:	
Tubing	ORFS + 37° JIC Flare
Loop hoses	SAE 100 R19
Hydraulic oil cooler:	
Number of fins	10 per inch (4 per cm)
Number of tube rows x columns	21 bar/plate
Area	298.2 in² (1 920 cm²)

HYDRAULICS CONT.

Hydraulic filter	Beta (4) = 75/spin-on
Lift cylinders:	
Bore diameter	3.25 in (82.5 mm)
Rod diameter	2.25 in (57.1 mm)
Stroke	38.8 in (985 mm)
Closed length	59.6 in (1 515 mm)
Bucket cylinders:	
Bore diameter	3.25 in (82.5 mm)
Rod diameter	1.75 in (44.5 mm)
Stroke	19.7 in (500 mm)
Closed length	31.5 in (800 mm)

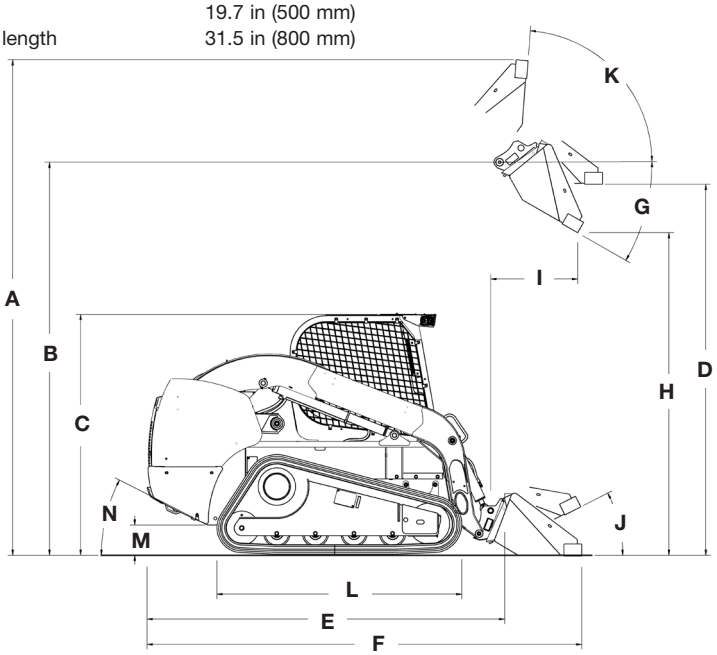
SERVICE CAPACITIES

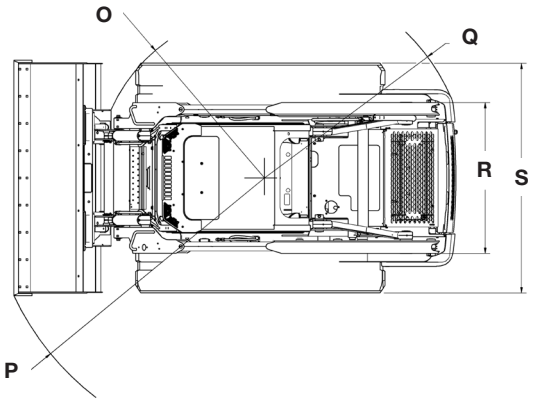
Fuel Tank	30.8 gal (116.5 L)
Engine oil w/ filter	8.9 qt (8.5 L)
Hydraulic system	10.7 gal (40.5 L)
Diesel Exhaust Fluid (DEF) Tank	3.3 gal (12.4 L)

PERFORMANCE SPECS

Rated operating capacity – ROC*:	
35% of tipping load	4,340 lb (1 969 kg)
50% of tipping load	6,200 lb (2 812 kg)
Tipping load*	12,400 lb (5 625 kg)
Breakout forces @ 3,150 psi (217 bar)*:	
Bucket Cylinders	12,907 lb (57.4 kN)
Lift cylinders	12,084 lb (53.8 kN)
Cycle times:	
Raise	4.2 sec
Lower	2.2 sec
Dump	2.3 sec
Roll back	1.6 sec

NOTE: *Measured using 78 in (1.98 m) heavy-duty bucket.





Line drawings are for illustrative purpose only and may not be exact representation of unit.

DIMENSIONS

A. Overall operating height:	
with heavy duty bucket	176.5 in (4.48 m)
with XHD bucket	189.6 in (4.82 m)
Height to:	
B. Bucket hinge pin	140.2 in (3.56 m)
C. Top of ROPS	84.6 in (2.15 m)
D. Bottom of level bucket, fully raised	133.3 in (3.39 m)
Overall length:	
E. without attachment with coupler	129.5 in (3.29 m)
F. with heavy duty bucket on ground	159.1 in (4.04 m)
with XHD bucket	172.7 in (4.39 m)
G. Maximum dump angle	46.1°
H. Dump height:	
with heavy duty bucket	109.0 in (2.77 m) @ 46.1°
with XHD bucket	99.2 in (2.52 m) @ 46.1°
I. Dump reach at maximum height with heavy duty bucket	39.0 in (0.99 m) @ 46.1°
Maximum attachment rollback:	
J. Bucket on ground	30°
K. Bucket at full height	84°
L. Track on ground rubber	74 in (1.88 m)
L. Track on ground steel	66 in (1.7 m)
M. Ground clearance – bottom of belly pan	12.6 in (0.32 m)
N. Angle of departure	37.7°
Clearance circle:	
O. without bucket – Rubber Track	67.4 in (1.71 m)
P. with 84 in (2.13 m) heavy duty bucket on ground – Rubber Track	102.3 in (2.60 m)
Q. Clearance circle rear – Rubber Track	69.5 in (1.77 m)
R. Track gauge	60.6 in (1.54 m)
S. Over the track width – Rubber Track	78.3 in (1.99 m)
S. Over the track width – Steel Track:	
14 in (356 mm) tracks	74.6 in (1.894 m)
18 in (457 mm) tracks	78.6 in (1.995 m)

TRACK SELECTION

Type	Area	Ground Pressure	Width to Outside Track
17.7 in (450 mm) – Rubber Track	2,286 in^2 (1.48 m^2)	6.1 psi (42.2 kPa)	78.3 in (1.99 m)
14 in (356 mm) – Steel Track	1,851 in^2 (1.2 m^2)	9.1 psi (62.6 kPa)	74.6 in (1.894 m)
18 in (457 mm) – Steel Track	2,377 in^2 (1.5 m^2)	7.3 psi (50.2 kPa)	78.6 in (1.995 m)

OPTIONAL BUCKETS

Type	Width	Weight	Heaped Capacity
Dirt & Foundry	78 in (1.98 m)	440 lb (200 kg)	17.7 ft^3 (0.50 m^3)
Low Profile Extended	78 in (1.98 m)	540 lb (245 kg)	19.1 ft^3 (0.54 m^3)
	84 in (2.13 m)	575 lb (262 kg)	20.5 ft^3 (0.58 m^3)
Light Material	84 in (2.13 m)	540 lb (245 kg)	27.5 ft^3 (0.78 m^3)
Heavy-Duty	78 in (1.98 m)	530 lb (240 kg)	15.5 ft^3 (0.44 m^3)
	84 in (2.13 m)	550 lb (250 kg)	17.0 ft^3 (0.48 m^3)
Heavy-Duty Extended with SmartFit Teeth	78 in (1.98 m)	697 lb (316 kg)	18.9 ft^3 (0.54 m^3)
	84 in (2.13 m)	728 lb (330 kg)	20.5 ft^3 (0.58 m^3)
XHD (Extra Heavy Duty)	84 in (2.13 m)	900 lb (410 kg)	33.8 ft^3 (0.96 m^3)
XHD (Extra Heavy Duty) with SmartFit Teeth	84 in (2.13 m)	990 lb (450 kg)	33.8 ft^3 (0.96 m^3)

STANDARD EQUIPMENT

OPERATOR ENVIRONMENT

See page 1

ENGINE

Charge Air Cooler (CAC)
Dual element air cleaner
Organic Acid Technology (OAT)
Anti-freeze solution to -34° F
Over and under radiator and oil cooler
3-stack after cooler/radiator/oil cooler configuration
Glow plugs
Integral engine oil cooler
Fuel filter with water trap
Master electrical disconnect
Jump start terminal
Hydraulically driven reversible fan

DRIVETRAIN

2-speed hydrostatic four wheel drive
SAHR disc parking brake
Foot pedal modes - Accelerate, Trans and Decelerate

HYDRAULICS

Auxiliary hydraulics:
@ 3,450 psi (238 bar) – 24.2 gpm (91.5 L/min)
High-flow auxiliary hydraulics:
@ 3,450 psi (238 bar) – 41.6 gpm (157 L/min)
6 micron oil filtration system
3-spool loader control valve
Auxiliary hydraulic disconnects, ISO flat-face – connect-under-pressure with case drain
Hydraulic circuit pedal lock
Auxiliary function lockout override
Loader lift lockout override
Heavy-duty hydraulic oil cooler
Loader arm float position
Loader function lockout system
Auxiliary front electric control
Hydraulic one-way self leveling
Auto Ride Control
Creep Speed Mode
Auxiliary flow control within cab

LOADER

Hydraulic attachment coupler
Vertical lift geometry
Loader lift arm support pin

TRACKS

Heavy Duty Rubber Tracks

OTHER STANDARD FEATURES

LED lights - 2 front, 2 side, 2 rear flood
Pre-wired for rotating beacon
Lockable service access hood
Single-point daily servicing
Rear tail lights
Remote oil and fuel filters
Block heater
Debris ingression sealing
Auto Idle settings

TELEMATICS

CASE SiteWatch™ Telematics – includes hardware and a 5-yr data subscription
SiteConnect Module providing remote diagnostics capability

OPTIONAL EQUIPMENT

OPERATOR ENVIRONMENT

Open Cab (ROPS/FOPS Level 1) w/ side screens; Keyed Start
Mechanical Suspension Seat - Vinyl
Demolition cab door with polycarbonate

HYDRAULICS

Enhanced High-Flow auxiliary hydraulics – EHF:
@ 4,100 psi (283 bar) – 41.6 gpm (157 L/min)
Second auxiliary hydraulics

TRACKS

14 in (356 mm) – Steel Tracks
18 in (457 mm) – Steel Tracks

DRIVETRAIN

EZ Trac – suspension track with bogey wheel design

SERVICE PARTS

Road lights
Four-corner LED strobe
Precleaner
3 inch (76.2 mm) retractable seat belt
Bolt-on heavy-duty bucket teeth
Rotating beacon
Four point lift hook
Class III 48 in (1.22 m) pallet forks
1150 CCA battery for high altitude
Fire Extinguisher
Tamper resistant front door bracket
Attachment Hose Kit
Drawbar
Extra counterweights not offered for this model

OTHER

Language decals
Buckets – see page 3
Bolt-on bucket cutting edges
Special paint

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Biodiesel Ready

CASE Construction Equipment is biodiesel-friendly. NOTE: All engines meet current EPA emissions regulations. All specifications are stated in accordance with SAE Standards or Recommended Practices, where applicable.

SAFETY™ NEVER HURTS

Always read the Operator's Manual before operating any equipment. Inspect equipment before using it, and be sure it is operating properly. Follow the product safety signs and use any safety features provided.

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