CASE CONSTRUCTION

TV380

COMPACT TRACK LOADER TIER 4 FINAL CERTIFIED

ENGINE

Model	FPT F5B FL413 E*B002
Emissions Certification	Tier 4 Final
Type	Diesel, Turbo – Direct Injection
Cylinders	4
Bore/Stroke	3.9 x 4.3 in (99 x 110 mm)
Displacement	207 in³ (3.4 L)
Fuel injection	Direct
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)
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	90 hp (67 kW)
Net	84 hp (63 kW)
Peak torque @ 1400 RPM	282 lb·ft (383 N·m)
Radiator:	
Core type	Aluminum Bar and Plate
Core size area	319 in² (0.206 m²)
Rows of tubes	21
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°

DRIVETRAIN

Drive pump controls	Servo-assist mechanical
Pump to engine ratio	1:1
Displacement	2.81 in³ (46 cm³)
Flow @ rated engine RPM:	
@ 97% efficiency	29.4 gpm (111 L/min)
Charge pressure	360 psi (24.5 bar)
System relief pressure	5,220 psi (360 bar)
Drive pump controls	Electro-hydraulic
Pump to engine ratio	1:1
Displacement	2.75 in³ (45 cm³)
Flow @ rated engine RPM:	
@ 97% efficiency	28.8 gpm (109 L/min)
Charge pressure	362 psi (25.0 bar)
System relief pressure	5,220 psi (360 bar)

DRIVETRAIN (cont.)

Drive motors:	
Max. displacement	3.10 in³ (50.9 cm³)
Displacement – optional:	
High speed	2.02 in³ (33.1 cm³)
Motor RPM @ high idle and 97% efficiency:	
Standard 1-speed	103
Optional 2-speed	156
Motor torque @ max. displacement and relief pressure, calculated @ 5,220 psi (360 bar):	4,654 lb·ft (6 310 N·m)
Travel speed:	
Low range	5.1 mph (8.2 kph)
High range – optional	7.6 mph (12.2 kph)
Final drive:	
Planetary gearbox w/ 2-speed motor	
Tractive effort	7,414 lb (3 370 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	160 amp
Starter	4.29 hp (3.2 kW)
Battery	12-volt low-maintenance 1,000 cold-cranking amps @ 0° F (-18° C)

OPERATOR ENVIRONMENT

ROPS/FOPS level 1 canopy w/ side screens; Tilt ROPS/FOPS; Rear window w/ emergency escape; Top window; Instrument panel w/: hour meter, tachometer, fuel level, DEF level, engine coolant temperature, diagnostic features and security lockout; Non-suspension vinyl seat; 2 in (51 mm) retractable lap seat belt; Hand and foot throttles; Alarm package – back-up and horn; Headliner; Dome light; Cup holder; 12-volt power plug socket; Foot rest; Storage tray; Low effort ergonomic hand controls; Padded seat bar w/ integral armrests; Loader control lockout system; Electric parking brake control; Floor cleanout panel; Proportional auxiliary hydraulic control – on joystick.

Indicators:
Digital hourmeter; Fuel level LCD bar graph w/ alarm.

Warning lights w/ alarms:
Engine coolant temperature; Engine oil pressure; Engine malfunction; Hydraulic charge pressure; Hydraulic filter restriction; Hydraulic oil temperature.

OPERATOR ENVIRONMENT (cont.)

Warning alarms:
Battery voltage – plus display

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

OPERATING WEIGHT

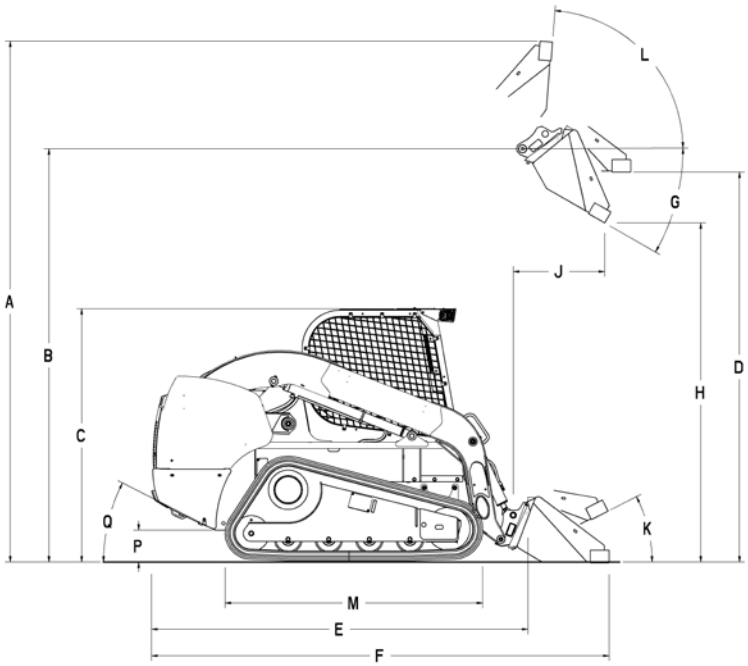
Operating weight	10,550 lb (4 785 kg)
Shipping weight	10,207 lb (4 630 kg)
Add-on weights:	
Side cab glass	47 lb (21.3 kg)
Polycarbonate cab door	75 lb (34.0 kg)
Glass cab door w/ wiper	75 lb (34.0 kg)
Suspension seat	22 lb (10.0 kg)
Additional counterweight	600 lb (273.0 kg)

HYDRAULICS

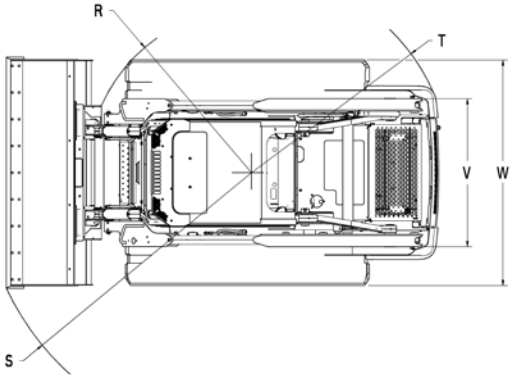
Implement pump type	Gear
Displacement:	
Standard aux.	2.23 in³ (36.6 cm³)
High-flow aux.	1.24 in³ (20.4 cm³)
Pump flow @ rated engine RPM – 100% efficiency:	
Standard flow	24.2 gpm (91.5 L/min)
Optional high-flow	37.6 gpm (142.5 L/min)
Enhanced High-Flow	35.0 gpm (132.5 L/min)
Loader control valve:	
Type	3 spool/open center/series - series
Relief pressure	3,046 psi (210 bar)
Port relief pressures:	
Loader raise	3,263 psi (225 bar)
Bucket curl	3,770 psi (260 bar)
Bucket dump	1,160 psi (80 bar)
Hydraulic lines:	
Tubing	37° JIC Flare
Loop hoses	SAE 100 R19
Hydraulic oil cooler:	
Number of fins	10 per inch (3.94 per cm)
Number of tube rows x columns	9 bar/plate
Area	130.7 in² (843.2 cm²)
Hydraulic filter	Beta (4) = 75/spin-on
Lift cylinders:	
Bore diameter	2.75 in (69.85 mm)
Rod diameter	2.00 in (50.8 mm)
Stroke	34.90 in (886.5 mm)
Closed length	47.40 in (1 205.0 mm)
Bucket cylinders:	
Bore diameter	3.0 in (76.2 mm)
Rod diameter	1.5 in (38.1 mm)
Stroke	16.4 in (410.0 mm)
Closed length	24.0 in (610.0 mm)

SERVICE CAPACITIES

Fuel tank	25.5 gal (96.5 L)
Engine oil w/ filter	8.9 qt (8.5 L)
Hydraulic system:	
Reservoir	6.0 gal (22.7 L)
Total	11.9 gal (45.4 L)



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



PERFORMANCE SPECS

Rated operating capacity – ROC*:	
35% of tipping load	2,660 lb (1 209 kg)
50% of tipping load	3,800 lb (1 723 kg)
with additional counterweight	4,000 lb (1 814 kg)
Tipping load*	7,600 lb (3 447 kg)
Breakout forces @ 3,150 psi (217 bar)*:	
Bucket cylinders	8,776 lb (39.0 kN)
Lift cylinders – hydraulic limit	6,300 lb (28.0 kN)
Cycle times:	
Raise	4.7 sec
Lower	2.7 sec
Dump	2.6 sec
Roll back	2.0 sec

NOTE: *Measured using 78 in (1.98 m) foundry/excavating bucket.

DIMENSIONS

A.	Overall operating height:	
	with foundry/excavating bucket	161.9 in (4.11 m)
	with heavy-duty dirt bucket	166.0 in (4.22 m)
	with low profile extended bucket	171.0 in (4.34 m)
	Height to:	
B.	Bucket hinge pin	131.6 in (3.34 m)
C.	Top of ROPS	80.4 in (2.04 m)
D.	Bottom of level bucket, fully raised	124.8 in (3.17 m)
	Overall length:	
E.	without attachment with coupler	119.1 in (2.99 m)
F.	with foundry/excavating bucket on ground	143.2 in (3.60 m)
	with heavy-duty dirt bucket	147.3 in (3.71 m)
	with low profile extended bucket	152.4 in (3.84 m)
G.	Maximum dump angle	53.5°
H.	Dump height:	
	with foundry/excavating bucket	105.1 in (2.67 m) @ 45°
	with heavy-duty dirt bucket	102.2 in (2.60 m) @ 45°
J.	Dump reach at maximum height with heavy-duty dirt bucket	31.4 in (0.80 m) @ 45°
	Maximum attachment rollback:	
K.	Bucket on ground	34.2°
L.	Bucket at full height	86.0°
M.	Track on ground	64.5 in (1.64 m)
P.	Ground clearance – bottom of belly pan	9.5 in (0.24 m)
Q.	Angle of departure	32.0°
	Clearance circle:	
R.	without bucket	56.2 in (1.43 m)
S.	with 78 in (1.98 m) foundry/excavating bucket in carry position	87.7 in (2.16 m)
	with 78 in (1.98 m) heavy-duty dirt bucket on ground	91.5 in (2.25 m)
	with 78 in (1.98 m) extended low profile on ground	96.0 in (2.35 m)
T.	Clearance circle rear	71.2 in (1.79 m)
V.	Track gage	58.3 in (1.48 m)
W.	Over the track width	76.0 in (1.93 m)

TRACK SELECTION

Type	Area	Ground Pressure	Width to Outside of Track
17.7 in (450 mm)	2,286 in^2 (14 750 cm^2)	4.4 psi (30 kPa)	76 in (1.93 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	78 in (1.98 m)	540 lb (245 kg)	19.1 ft^3 (0.54 m^3)
Extended	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)
Manure & Slurry	84 in (2.13 m)	545 lb (248 kg)	22.6 ft^3 (0.64 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	78 in (1.98 m)	605 lb (275 kg)	19.8 ft^3 (0.56 m^3)
with spillguard	84 in (2.13 m)	640 lb (290 kg)	21.5 ft^3 (0.61 m^3)

STANDARD EQUIPMENT

OPERATOR ENVIRONMENT

See page 1

ENGINE

FPT F5B FL413 E*B002 diesel
Over & under radiator and oil cooler
Glow plugs
Integral engine oil cooling
Fuel filter with water trap
Dual element air cleaner
120 amp alternator
925 CCA 12-volt battery
Master electrical disconnect

DRIVETRAIN

1-speed hydrostatic drive
Servo-assist mechanically-controlled pumps
SAHR disc parking brake

HYDRAULICS

Auxiliary hydraulics:
@ 3,050 psi (210 bar) – 24.2 gpm (91.5 L/min)
Auxiliary hydraulic disconnects, ISO flat-face – connect-under-pressure with case drain
Hydraulic circuit pedal lock
Loader arm-mounted ISO flat-face connectors
Auxiliary function lockout override
Loader function lockout system
Loader lift lockout override
3-spool loader control valve
Heavy-duty oil cooler
Loader arm float position

LOADER

Vertical loader arm design
Mechanical attachment coupler
Loader lift arm support strut

OTHER

Machine protection auto shutdown
Mounting points for add-on counterweights
Halogen lights:
2 front
2 side
2 rear flood
Rear tail lights
Lockable service access hood
Single-point daily servicing
Pre-wired for rotating beacon
Remote oil drain
Remote oil and fuel filters

OPTIONAL EQUIPMENT

OPERATOR ENVIRONMENT

Enclosed cab:
Fully sealed and pressurized – FSP
Glass door with wiper and washer
Sliding side windows – removable
3-point seat belt – 2 in (51 mm) width
Ventilation system with integrated heater
AM/FM radio with 2 speakers
Keyless start ignition
Electro-hydraulic controls:
For drive/steering, loader functions
Switchable between H and ISO patterns
Adjustable sensitivity of controls
Vinyl mechanical suspension seat
Deluxe cloth, air suspension seat, with heater and lumbar support
Interior mirror
3 inch (76.2 mm) retractable seat belt
Heater and air conditioner
Open cab interior trim package
Demolition cab door with polycarbonate
FOPS level 2

DRIVETRAIN

2-speed hydrostatic drive

ENGINE

Coolant block heater

HYDRAULICS

High-flow auxiliary hydraulics – combined:
@ 3,050 psi (210 bar) – 37.6 gpm (142.5 L/min)
Enhanced High-Flow auxiliary hydraulics – EHF:
@ 4,000 psi (276 bar) – 35.0 gpm (132.5 L/min)
Second auxiliary hydraulics

LOADER

Auxiliary front electric control
Ride control
Hydraulic attachment coupler
Hydraulic one-way self-leveling

OTHER

Add-on counterweights
Road lights
Rotating beacon
Four-corner LED strobe
Lift points – four-point or single-point
Language decals
Factory-installed tracks – see below
Buckets – see below
Bolt-on bucket cutting edges
Bolt-on heavy-duty bucket spillguard
Bolt-on heavy-duty bucket teeth – field kit
42 in (1.07 m) and 48 in (1.22 m) pallet forks
Rear door guard insert
Special paint
Debris reduction seal package

CASE Customer Assistance
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NOTE: All specifications are stated in accordance with SAE Standards or Recommended Practices, where applicable.

NOTE: All engines meet current EPA emissions requirements.

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