CASE CONSTRUCTION

TV380

COMPACT TRACK LOADER

NON-REGULATED/TIER 3



ENGINE

Model	F5C E5454 C* A003
Emissions Certification	Non-regulated/Tier 3
Type	Diesel, Turbo – Direct Injection
Cylinders	4
Bore/Stroke	3.9 x 4.1 in (99 x 104 mm)
Displacement	195 in³ (3.2 L)
Fuel injection	Direct
Fuel	#2 Diesel
Fuel filter	In-line strainer
Oil filtration	Spin-on/full-flow cartridge
Air intake	Turbocharged w/o waste gate
Cooling	Liquid
Engine speeds	RPM
High idle – no load	2675 +/- 25
Rated – full load	2500
Low idle	1075 +/- 25
Horsepower @ 2500 RPM – SAE J1349:	
Gross	90 hp (67 kW)
Net	84 hp (63 kW)
Peak torque @ 1400 RPM	251 lb·ft (340 N·m)
Radiator:	
Core type	All aluminum
Core size area	412 in² (0.266 m²)
Rows of tubes	44 x 4
Cap pressure	16 +/- 2 psi (1.10 +/- 0.14 bar)
Fan:	
Diameter	20.4 in (518 mm)
Ratio	0.96:1
Water pump:	
Style	Centrifugal
Flow	29 gpm (110 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 control	Electro-hydraulic
Pump to engine ratio	1:1
Displacement	2.81 in³ (46 cm³)
Flow @ rated engine RPM:	
@ 100% efficiency	29.4 gpm (111 L/min)
Charge pressure:	360 +/- 18 psi (24.5 +/- 0.5 bar)
System relief	5,220 psi (261 bar)
Drive motors:	
Max. displacement	2.75 in³ (45 cm³)
Optional high speed	34.6 in³ (131 cm³)
Speed @ high idle engine RPM	
100% efficiency @ rated engine RPM	103
Speed @ optional high speed RPM	156
Torque @ max. displacement and relief pressure – calculated	5,003 psi (345 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 reduction
Parking brake:	
Type	Spring-applied, hydraulic release disc
Engagement	Depress on/off brake button on handle or instrument panel, raise seat bar, get off seat or stop engine

ELECTRICAL

Alternator	120 amp
Starter	4.29 hp (3.2 kW)
Battery	12-volt low-maintenance 1,000 cold-cranking amps @ 0° F (-18° C)

OPERATOR ENVIRONMENT

Enclosed Cab w/ Heater and AC; Fully sealed and pressurized – FSP; Glass door w/ wiper and washer; Sliding side windows – removable; Heater and air conditioner; AM/FM radio w/ 2 speakers; Keyless start ignition; Tilt ROPS/FOPS; Rear window w/ emergency escape; Deluxe cloth, air suspension seat, w/ 2 in (51 mm) retractable 3 point lap seat belt w/ heater and lumbar support; Hand and foot throttle; Alarm package – back-up and horn; 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 and security lockout.

Warning lights with 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

Operating weight	10,200 lb (4 625 kg)
Shipping weight	9,865 lb (4 475 kg)
Add-on weights:	
Side cab glass	47 lb (21.3 kg)
Lexan® door	74 lb (33.6 kg)
Glass cab door w/ wiper	134 lb (60.8 kg)
Suspension seat	21 lb (10.0 kg)

HYDRAULICS

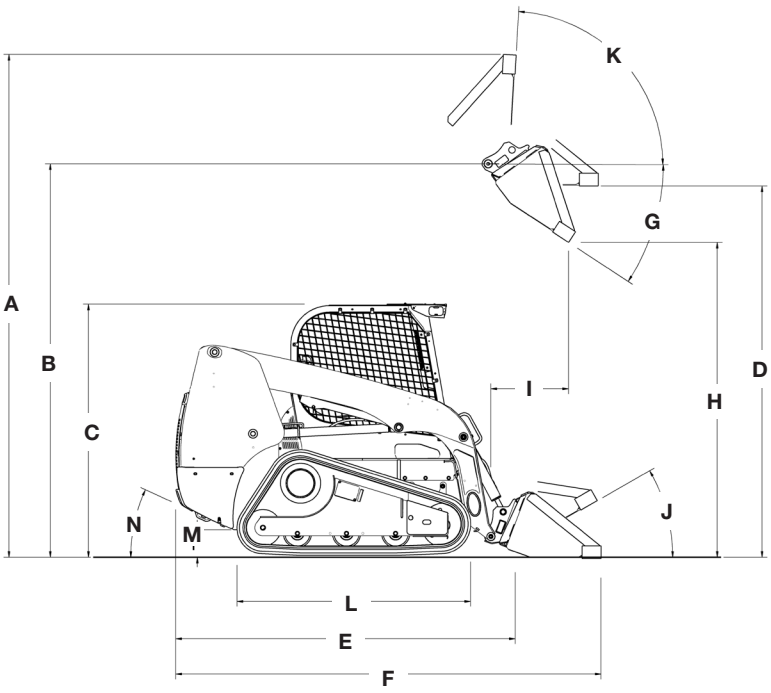
Standard equipment pump type	Gear
Displacement:	
Standard aux.	2.08 in³ (34.1 cm³)
High-flow aux.	1.1 in³ (18.3 cm³)
Pump flow @ rated engine RPM:	
@ 100% efficiency	22.5 gpm (85 L/min)
Optional high-flow @ rated engine RPM:	
@ 100% efficiency	34.6 gpm (131 L/min)
Loader control valve:	
Type	3 spool/Open center/Series
Relief pressure	3,000 (+145/-0) psi (207 bar)
Port relief pressures:	
Loader raise	3,263 psi (225 bar)
Bucket dump	3,770 psi (260 bar)
Bucket curl	1,160 psi (80 bar)
Hydraulic lines:	
Tubing	37° JIC Flare
Loop hoses	SAE 100 R13
Hydraulic oil cooler:	
Number of fins	10 per inch (3.94 per cm)
Number of tubes	11
Area	130.7 in² (843 cm²)
Hydraulic filter	6 micron/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	16.14 in (410.0 mm)
Closed length	24.0 in (610.0 mm)

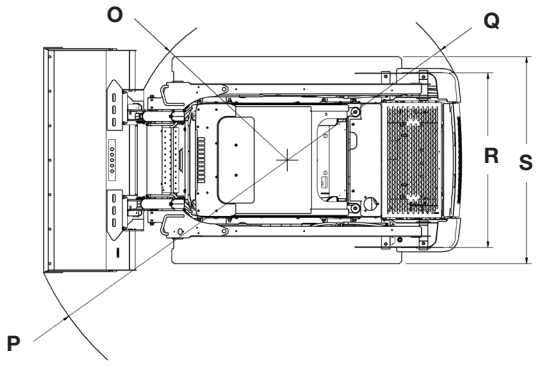
SERVICE CAPACITIES

Fuel Tank	25.5 gal (96.5 L)
Engine oil w/ filter	10 qt (9.4 L)
Hydraulic system:	
Reservoir	6.0 gal (22.7 L)
Total	11.75 gal (44.5 L)

PERFORMANCE SPECS

Rated operating load:	
35% of tipping load	2,660 lb (1 209 kg)
50% of tipping load	3,800 lb (1 723 kg)
Tipping load	7,600 lb (3 447 kg)
Breakout forces @ 3,150 psi (217 bar):	
Bucket cylinder	7,510 lb (33.4 kN)
Lift cylinder	6,020 lb (26.8 kN)
Cycle times:	
Raise	4.8 sec
Lower	2.8 sec
Dump	2.7 sec
Roll back	2.0 sec





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

DIMENSIONS

A. Overall operating height:	
with foundry/excavating bucket short lip	161.9 in (4.11 m)
with low profile/standard lip bucket	166.0 in (4.22 m)
with low profile extended/long lip 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	117.7 in (2.99 m)
F. with foundry/excavating bucket on ground	141.9 in (3.60 m)
with low profile bucket	146.0 in (3.71 m)
with low profile extended bucket	151.0 in (3.84 m)
G. Dump angle	53.5°
H. Dump height:	
with foundry/excavating bucket short clip	105.1 in (2.67 m)
with low profile/standard lip bucket	102.2 in (2.60 m)
I. Dump reach at maximum height	31.4 in (0.80 m)
Maximum attachment rollback:	
J. Bucket on ground	34.2°
K. Bucket at full height	86.0°
L. Track on ground	63.1 in (1.60 m)
M. Ground clearance – bottom of belly pan	9.5 in (0.24 m)
N. Angle of departure	32.0°
Clearance circle:	
O. without bucket	56.2 in (1.43 m)
P. with 78 in (2.0 m) foundry bucket in carry position	84.8 in (2.16 m)
with 78 in (2.0 m) low profile bucket on ground	88.4 in (2.25 m)
with 78 in (2.0 m) extended low profile on ground	92.6 in (2.35 m)
Q. Clearance circle rear	70.4 in (1.79 m)
R. Track width	58.3 in (1.48 m)
S. Over the track width	76.0 in (1.93 m)

TRACK SELECTION

Type	Area	Ground Pressure	Width to Outside of Track
15.7 in (400 mm)	2,038 in^2 (13 120 cm^2)	4.4 psi (30 kPa)	74 in (1.88 m)
17.7 in (450 mm)	2,293 in^2 (13 776 cm^2)	4.5 psi (31 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 Extended	78 in (1.98 m) 84 in (2.13 m)	440 lb (200 kg) 575 lb (262 kg)	19.1 ft^3 (0.54 m^3) 20.2 ft^3 (0.57 m^3)
Light Material	84 in (2.13 m)	575 lb (262 kg)	27.5 ft^3 (0.78 m^3)
Manure & Slurry	84 in (2.13 m)	575 lb (262 kg)	22.6 ft^3 (0.64 m^3)
Heavy-Duty	78 in (1.98 m) 84 in (2.13 m)	440 lb (200 kg) 575 lb (262 kg)	15.5 ft^3 (0.44 m^3) 25.7 ft^3 (0.47 m^3)

STANDARD EQUIPMENT

OPERATOR ENVIRONMENT

See page 1

ENGINE

- F5C E5454 C*A003
- 195 CID (3.2 L) Turbo
- Non-regulated
- Tier 3
- Turbocharged without waste gate fuel injection
- Horsepower:
  - Gross: 90 (67 kW)
  - Net: 84 (63 kW)
  - Peak torque 251 lb·ft (340 N·m)
- 120 amp alternator
- Dual element air cleaner
- Organic Acid Technology (OAT)
- Anti-freeze solution to -34° F
- Fuel tank - 25.5 gal (U.S.)
- 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
- 1,000 CCA 12V battery
- Master electrical disconnect

DRIVETRAIN

- 2-speed hydrostatic four wheel drive
- SAHR disc parking brake

HYDRAULICS

- Auxiliary hydraulics:
  - @ 3,050 psi (210 bar) – 23.8 gpm (90 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
- Hydraulic one-way self-leveling
- Ride control

LOADER

- Heavy duty hydraulic attachment coupler
- Vertical lift geometry
- Loader lift arm support strut
- SAE operating load: 3,800 lbs
- Tipping load: 7,600 lbs
- In-CAB loader lock

TRACKS

- HiQual S-Wave Tracks

OTHER STANDARD FEATURES

- Halogen lights - 2 front, 2 side, 2 rear flood
- Heavy duty front lights
- Pre-wired for rotating beacon
- Lockable service access hood
- Single-point daily service
- Rear tail lights
- Remote oil drain
- Remote oil and fuel filters
- Block heater
- Debris ingression sealing
- Machine protection auto shutdown
- Mounting points for add-on counterweights

OPTIONAL EQUIPMENT

OPERATOR ENVIRONMENT

ROPS/FOPS Level 1 canopy
with side screens
Keyed start ignition
Ventilation system with integrated heater
Electro-hydraulic controls:
For drive/steering, loader functions
Switchable between H and ISO patterns
Adjustable sensitivity of controls
Mechanical hand controls
Hand and foot controls:
Hand controls the loader drive function
and foot controls the bucket and boom
Non suspension seat
Suspension seat, vinyl
Open cab interior trim package
Demolition cab door with polycarbonate
FOPS level 2
Heavy duty rear door

HYDRAULICS

High-flow auxiliary hydraulics – combined:
@ 3,050 psi (210 bar) – 33.2 gpm
(126 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
Manual attachment coupler

OTHER

Language decals
Factory-installed tires – see page 3
Buckets – see page 3
Bolt-on bucket cutting edges
Bolt-on heavy-duty bucket spill guard
Special paint
Offsite service arrangement
Telematics

FACTORY SUPPLIED ATTACHMENTS

Interior mirror
Add-on counterweights
Road lights
Rotating beacon
Four-corner LED strobe
Bolt-on heavy-duty bucket teeth
48 in (1.22 m) pallet forks

SERVICE PARTS

3 inch (76.2 mm) retractable seat belt

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