

SR175B

SKID STEER LOADER

TIER 4 FINAL CERTIFIED



Model		Perkins 404F-E22TA
Emissions Certification		Tier 4 Final
Type	Dies	sel 4-stroke, Turbo. D.I.
Cylinders		4
Bore/Stroke		3.31 x 3.94 in (84 x 100 mm)
Displacement		135.2 in ³ (2.2 L)
Fuel injection		Direct, high pressure common rail – HPCR
Fuel		#2 Diesel
Fuel filter: Pre-filter Main filter	Е	Beta (30) = 200/spin-on Beta (4) = 20/spin-on
Air intake		charged w/ waste gate cooled w/ external EGR

Exhaust aftertreatment:

Diesel Oxidation Catalyst – DOC Diesel Particulate Filter – DPF

Cooling	Liquid
Engine speeds	RPM
High idle - no load	2825 +/- 25
Rated - full load	2800
Low idle	1200 +/- 50
Horsepower @ 2800 RPM - SA	AE J1349:

Horsepower @ 2800 RPM – SAE J1349: Gross 67 hp (50.0 kW) Net 64 hp (47.7 kW)

Peak torque @ 1800 RPM 153 lb·ft (208 N·m)

Radiator:

Core type Aluminum bar and plate
Core size area 265 in² (0.171 m²)
Rows of tubes 20
Cap pressure 16 +/- 2 psi
(1.10 +/- 0.14 bar)

Fan: Diame

 Diameter
 17.7 in (450 mm)

 Ratio
 0.89:1

Water pump:

Style Centrifugal Flow 14.7 gpm (55.5 L/min)

Engine lubrication pump Pressure feed w/ Trichoid pump

Pump operating angle ratings:

Side to side 35°
Bucket up 35°
Bucket Down 35°

LIFT GEOMETRY

Radial Lift

DRIVETRAIN

Drive pump controls Direct mechanical Pump to engine ratio 1:1 Displacement 2.14 in³ (35 cm³) Flow @ rated engine RPM: @ 97% efficiency 25.1 gpm (95 L/min) Charge pressure 360 psi (24.5 bar) System relief pressure 5,000 psi (345 bar) Drive pump controls Electro-hydraulic Pump to engine ratio 2.14 in³ (35 cm³) Displacement Flow @ rated engine RPM: @ 97% efficiency 25.1 gpm (95 L/min) 362 psi (24.5 bar) Charge pressure System relief pressure 5,220 psi (360 bar) Drive motors: Max. displacement 19.8 in³ (325 cm³) Displacement:

High speed 12.2 in³ (200 cm³)
Motor RPM @ high idle and 97% efficiency:
2-speed 443

Motor torque @ max. displacement and relief pressure, calculated @ 5,000 psi (345 bar): 1,315 lb·ft (1 783 N·m)

Travel speed:
Low range 7.4 mph (11.9 kph)
High range 10.8 mph (17.4 kph)
Final drive Single-reduction chain drive

Drive chain:

Size ASA #80 Tensile strength 21,000 lb (93.4 kN)

Axles

Torque @ max. displacement and

relief pressure 4,381 lb-ft (5 940 N⋅m)
Diameter 2.0 in (50.8 mm)
Length 15.1 in (384.0 mm)

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	120 amp
Starter	2.68 hp (2.0 kW)
Battery	12-volt low-maintenance
950 cold-crar	nking amps @ 0° F (-18° C°)

OPERATOR ENVIRONMENT

ROPS/FOPS Level 1 canopy w/ side screens; Keyed start ignition; Tilt ROPS/FOPS; Rear window w/ emergency escape; Suspension Seat, vinyl w/ 2 in (51 mm) retractable 3 point lap seat belt; Hand and foot throttle; 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 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

Unit equipped w/ open cab; 165 lb operator; 66 in Dirt & Foundry bucket; full of fuel; 10 x 16.5 tires: 6,270 lb (2 842 kg) 5,970 lb (2 705 kg) Shipping weight Add-on weights: Side cab glass 47 lb (21.3 kg) Polycarbonate cab door 74 lb (33.6 kg) Glass cab door w/ wiper 134 lb (60.8 kg) Suspension seat 22 lb (10.0 kg) Additional counterweight 140 lb (63.5 kg)

HYDRAULICS

Area

Hydraulic filter

Implement pump type	Gear		
Displacement:			
Standard aux.	1.7 in ³ (27.8 cm ³)		
High-flow aux.	0.84 in ³ (13.8 cm ³)		
Standard flow @ rated engine RPM:			
@ 100% efficiency	20.6 gpm (78.0 L/min)		
Optional high-flow @ r	ated engine RPM:		
@ 100% efficiency	30.7 gpm (116.2 L/min)		
Loader control valve:			
Type 3 spool/o	pen center/series - series		
Relief pressure	3,050 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	9.5 per inch (3.74 per cm)		
Number of tube rows	7		

108 in² (700 cm²)

Beta (4) = 75/spin-on

HYDRAULICS CONT.	
Lift cylinders:	
Bore diameter	2.25 in (57.2 mm)
Rod diameter	1.50 in (38.1 mm)
Stroke	31.69 in (804.9 mm)
Closed length	45.59 in (1 158 mm)
Bucket cylinders:	
Bore diameter	2.75 in (69.9 mm)
Rod diameter	1.38 in (34.9 mm)
Stroke	16.14 in (410 mm)
Closed length	24.02 in (610 mm)

SERVICE CAPACITIES	
Fuel tank	19.5 gal (73.8 L)
Engine oil w/ filter	7.5 qt (7.1 L)
Hydraulic system: Reservoir	5.0 gal (18.9 L)
Total	8.5 gal (32.2 L)
Chain tanks – per side	1.95 gal (7.4 L)

PERFORMANCE SPECS

Rated operating capacity – ROC*:
50% of tipping load 1,750 lb (790 kg)
w/ additional counterweight 1,850 lb (839 kg)

Tipping load* 3,500 lb (1 588 kg)

Breakout forces @ 3,150 psi (217 bar)*:

Bucket cylinders 7,270 lb (32.3 kN) Lift cylinders – tip limit 3,810 lb (16.9 kN)

Cycle times:

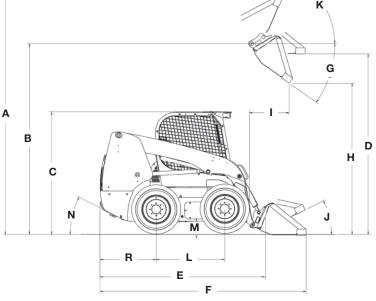
 Raise
 3.4 sec

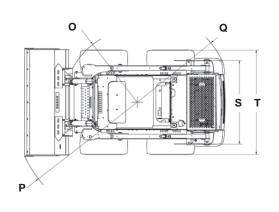
 Lower
 1.9 sec

 Dump
 2.6 sec

 Roll back
 1.9 sec

NOTE: *Measured using 66 in (1.68 m) foundry/ excavating bucket.





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

DIMENSIONS	
A. Overall operating height: with foundry/excavating bucket with low profile bucket with low profile extended bucket	153.4 in (3.90 m) 157.3 in (4.00 m) 162.2 in (4.12 m)
Height to: B. Bucket hinge pin C. Top of ROPS D. Bottom of level bucket, fully raised	122.0 in (3.10 m) 77.7 in (1.97 m) 115.2 in (2.93 m)
Overall length: E. without attachment with coupler F. with foundry/excavating bucket on ground with low profile bucket with low profile extended bucket	105.7 in (2.69 m) 130.1 in (3.31 m) 134.3 in (3.41 m) 139.3 in (3.54 m)
G. Maximum dump angle	39.6°
H. Dump height: with foundry/excavating bucket with low profile bucket	97.2 in (2.47 m) @ 39.6° 94.6 in (2.40 m) @ 39.6°
I. Dump reach at maximum height with low profile bucket	24.4 in (0.62 m) @ 39.6°
Maximum attachment rollback: J. Bucket on ground K. Bucket at full height	31.6° 98.6°
L. Wheelbase	44.4 in (1.13 m)
M. Ground clearance – bottom of belly pan	7.0 in (0.18 m)
N. Angle of departure	23.0°
Clearance circle: O. without bucket P. with 66 in (1.68 m) foundry/excavating bucket in carry position with 66 in (1.68 m) low profile bucket on ground with 66 in (1.68 m) extended low profile on ground	52.2 in (1.33 m) 79.3 in (2.02 m) 83.1 in (2.11 m) 87.7 in (2.23 m)
Q. Clearance circle rear	62.9 in (1.60 m)
R. Rear axle to bumper	36.4 in (0.92 m)
S. Tread over gauge with spec lines	53.9 in (1.37 m)
T. Over the tire width spec tires	64.6 in (1.64 m)

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OPTIONAL BUCKETS			
Туре	Width	Weight	Heaped Capacity
Dirt & Foundry	66 in (1.68 m)	385 lb (175 kg)	14.8 ft ³ (0.42 m ³)
	72 in (1.83 m)	420 lb (190 kg)	16.2 ft ³ (0.46 m ³)
	78 in (1.98 m)	440 lb (200 kg)	17.7 ft ³ (0.50 m ³)
Low Profile	66 in (1.68 m)	440 lb (200 kg)	13.4 ft ³ (0.38 m ³)
	72 in (1.83 m)	480 lb (218 kg)	14.8 ft ³ (0.42 m ³)
Low Profile Extended	66 in (1.68 m)	470 lb (214 kg)	15.9 ft ³ (0.45 m ³)
	72 in (1.83 m)	510 lb (232 kg)	17.7 ft ³ (0.50 m ³)
	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	72 in (1.83 m)	475 lb (216 kg)	23.3 ft ³ (0.66 m ³)
	84 in (2.13 m)	540 lb (245 kg)	27.5 ft ³ (0.78 m ³)
Manure & Slurry	72 in (1.83 m)	480 lb (218 kg)	19.1 ft ³ (0.54 m ³)
Heavy-Duty	72 in (1.83 m)	510 lb (230 kg)	14.1 ft ³ (0.40 m ³)
	78 in (1.98 m)	530 lb (240 kg)	15.5 ft ³ (0.44 m ³)
Heavy-Duty Extended with SmartFit Teeth	72 in (1.83 m)	667 lb (303 kg)	17.4 ft ³ (0.49 m ³)
	78 in (1.98 m)	697 lb (316 kg)	18.9 ft ³ (0.54 m ³)

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STANDARD EQUIPMENT

OPERATOR ENVIRONMENT

See page 1

ENGINE

Charged Air Cooler (CAC) Dual element air cleaner

Organic Acid Technology (OAT)

Anti-freeze solution to -34° F

Fuel tank – 20 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

925 CCA 12V battery

Master electrical disconnect

DRIVETRAIN

2-speed hydrostatic four wheel drive ASA #80 drive chain SAHR disc parking brake

HYDRAULICS

Auxiliary hydraulics:

@ 3,050 psi (210 bar) - 20.6 gpm (78.0 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

LOADER

Auxiliary front electric control Manual attachment coupler Radial lift geometry Loader lift arm support strut

10 X 16.5 Heavy duty

OTHER STANDARD FEATURES

Halogen lights - 2 front, 2 side, 2 rear flood

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

Mounting points for add-on counterweights

OPTIONAL AND FIELD INSTALLED EQUIPMENT

OPERATOR ENVIRONMENT

Enclosed cab:

Fully sealed and pressurized - FSP Glass door with wiper and washer Sliding side windows - removable Heater and air conditioner AM/FM Bluetooth radio with 2 speakers

Keyless start ignition 8 in Color LCD Display

Economy Mode (auto idle shutdown)

Auto Engine Protection Shutdown

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

Deluxe cloth, air suspension seat, with heater and lumbar support

Demolition cab door with polycarbonate

Ignition Timeout

Machine Settings User Access Levels Operator Security Codes

HYDRAULICS

High-flow auxiliary hydraulics - combined: @ 3,050 psi (210 bar) - 30.7 gpm (116.2 L/min)

Hydraulic one-way self-leveling

Auto Ride Control

Ride control

LOADER

Hydraulic attachment coupler

DRIVETRAIN

Creep Speed Mode

OTHER

Language decals

Buckets - see page 3

Bolt-on bucket cutting edges

Special paint

CASE SiteWatch™ Telematics

Rotating beacon

4 Point Lift Hook

SERVICE PARTS

3 inch (76.2 mm) retractable seat belt

Bolt-on heavy-duty bucket teeth

Second auxiliary hydraulics

Add-on counterweights

Road lights

Four-corner LED strobe

Fire Extinguisher

Tamper Resistant Front Door Bracket

Bucket Cylinder Guards

Single Point Lift Hook

FOPS level 2

Aspirator

Attachment Hose Guide Kit

Drawbar

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