

**F-SERIES WHEEL LOADERS
521F**

CASE
CONSTRUCTION



**FASTER,
FUEL EFFICIENT**

www.casece.com
**EXPERTS FOR THE REAL WORLD
SINCE 1842**

FASTER, FUEL EFFICIENT

A SAFE INVESTMENT FOR THE TOUGHEST JOBS

For the toughest jobs, reliability comes with a perfect control of the oil temperature in the axles.

- **For soft soil** where higher grip control and higher resistance are needed:
 - **Effective grip control** with the differential lock on the front axle. It can be activated automatically or manually controlled with the left foot.
 - **No overheating** because the differential lock does not slip
 - **Higher resistance** with heavy duty front and rear axles.
- **For a limited investment**, standard axles with limited slip differential are also available and proven to be reliable.
- **For even more reliability**, we have invented the COOLING BOX that keeps constant the cooling fluids temperature.

EASIER MAINTENANCE, LOWER COSTS

- A single piece electronically-operated engine hood lifts clear of the engine for service and maintenance
- There are remote fluids drain taps for the engine oil, coolant and hydraulic oil.



HIGH EFFICIENCY

This electronically-controlled 4.7 liter engines offers the operator a choice of four power and torque ratings, MAX, STANDARD, ECONOMY or AUTOMATIC mode. This boosts productivity and reduce fuel consumption.



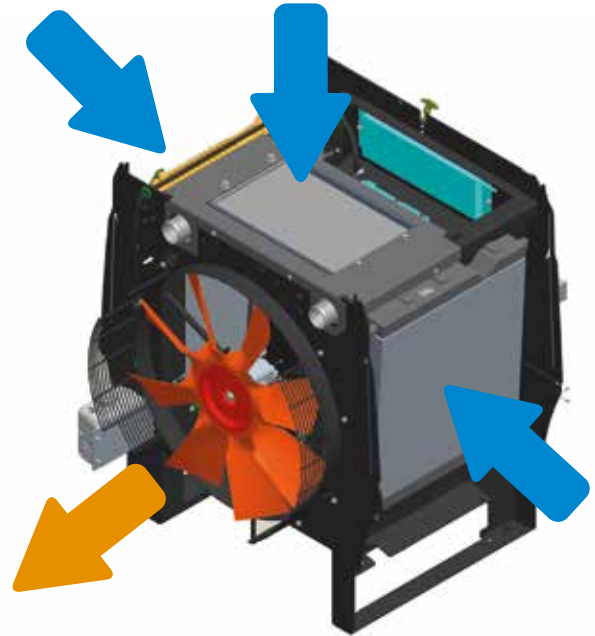
MORE COMFORT FOR MORE PRODUCTIVITY

BETTER WEIGHT DISTRIBUTION WITH THE REAR MOUNTED ENGINE

MID-MOUNT COOLING SYSTEM

This unique design, with the five radiators mounted to form a cube instead of overlapping, ensures that each radiator receives fresh air and that clean air enters from the sides and the top, maintaining constant fluid temperatures. The high efficiency of the cooling system lengthens the life of the coolant to 1500 hours. The standard reversible fan can be activated from the cab and is very effective thanks to the midmount cooling system.

The engine is mounted at the rear of the machine, therefore minimizes the need for an additional counterweight. This, together with the lower fan speed (just 1200 rpm), results in lower noise and vibration levels in the cab.



DESIGNED FOR DUSTY ENVIRONMENT

The cooling system is mounted behind the cab, far from the rear of the machine and from the ground - away from the dust.



ACCESS FIT FOR A KING

Getting in the cab is easy; the wide steps and the handle make you feel safe, while the wide door provides unobstructed access.

OUTSTANDING VISIBILITY

You'll feel more confident and work faster with the great all round visibility. The curved rear hood shape is very low, reducing the risk of accidents and improving safety on site.

ALL CONTROLS AT YOUR FINGERTIPS

Greater focus on the job and less stress with fewer arm movements thanks to the ergonomic positioning of the control panel under your right hand.

FEEL CONFIDENT WITH ROPS

All F Series cabins are reinforced and guarantee the operator protection against roll over (**ROPS certified**).

GREAT STORAGE SPACE

The overhead radio placement and the storage make the Case cab even more convenient for you





THE CASE DEALER: YOUR PROFESSIONAL PARTNER

Your success starts with world-class Case machinery and attachments.

Your Case dealer will help you work smarter and faster by selecting equipment that delivers performance and operator comfort.

Your dealer has the knowledge and experience necessary to help you choose the right attachments so you can...

- **Work faster and extend equipment life.**
- **Increase machine utilization.**
- **Increase your capabilities.**

Let your Case dealer service your machine on the jobsite.

You'll be back on the job faster.

Advantages include...

- **Responsive job site service to keep your equipment running.**
- **Increase machine uptime.**
- **Certified service staff and improved parts availability.**



PARTS

When you're looking for superior parts options to maximize the performance and lower the operating costs of your Case machinery, turn to CNH Industrial Genuine Parts to keep you equipped for success.

CNH Industrial Genuine Parts fit better, install faster and last longer and in an industry where "high impact" and "heavy lifting" are the norm, the smallest mechanical differences can lead to big problems.

CNH Industrial Genuine Parts from Case are manufactured from superior materials and specifically designed for Case construction equipment to continually and reliably withstand the punishment of everyday construction. So steer clear of mechanical problems and future breakdowns, by choosing CNH Industrial Genuine Parts from Case. They're the only parts that are field-tested and proven to keep your Case equipment performing its best.

SERVICE. RELY ON CASE TO DELIVER FOR YOU

Your commitment to your operation is evident every day, but that doesn't minimize the enormous pressure you face to reduce operating costs and improve productivity. So when you're on the job, make sure you have top-notch service and support of Case behind you every step of the way.

With our factory trained technicians, you can ensure that top-notch service professionals are working on your maintenance needs, so you can focus on your business and the big job challenges ahead, not on the tasks of servicing your equipment.

With your Case Service, you get more than mere oil changes. A Case Service ensures your Case equipment receives a thorough service that meets all requirements of its service schedules and properly maintains it for the day-in, day-out punishment of construction work.

Don't give another thought to time-consuming maintenance tasks. Simply rest easy and make certain that your service needs are taken care of by a Case factory trained technician.

When the unexpected occurs, you need to know your equipment is protected.
At Case Construction we understand the importance of your machinery being in good working order when it counts.

ProCover is designed to help keep your equipment working well beyond the manufacturer's base warranty period while taking away the concerns of the cost and inconvenience of mechanical failure.

WHAT ARE THE ADVANTAGES OF PROCOVER?

PEACE OF MIND

Provides protection beyond the Manufacturer's Base Warranty Period.

FLEXIBLE OPTIONS

Plans can be customised to meet individual needs.

DEPENDABLE SERVICE

Eligible repairs completed by an authorised Case Construction Dealership and their trained service technician's using genuine OEM parts & lubricants.

TRANSFERABLE PROTECTION

New Equipment Plans may be transferred to a new owner at no charge

COVERAGE

- **STANDARD PROTECTION PLAN** **3 Years / 5000 Hours**
Additional years/hours can be purchased.
Please contact your local Case Construction dealer for further information.



STANDARD PROCOVER PLUS PROTECTION PLAN

CONSTRUCTION EQUIPMENT MASTER PARTS SCHEDULE

This plan provides coverage for the components listed below when a failure occurs due to a defect in material or workmanship, and may provide coverage for additional components not listed when the damage is caused by or resulting from a covered failure of a listed component.

PREMIER COMPONENTS COVERED

ENGINE AND ALL INTERNAL LUBRICATED COMPONENTS WITHIN	TRANSMISSIONS/AXLES/HYDROSTATICS	ELECTRICAL	HYDRAULICS
Accessory Gears	Axle Housing	Alternator	Accumulator And Related Relief Valve
Air Intake Hose	Axle Shaft	Gauges	Brake Accumulator
Camshaft	Clutch Discs (Wet Only)	Horn	Brake Pressure Sensor
Camshaft Bearings	Clutch Plates (Wet Only)	Indicators	Brake Pump, Brake Valve
Camshaft Drive Gear	Control Rods	Instruments	Differential Lock Valve
Catalytic Converter	Counter Shaft Clutch	Electronic Joysticks	Fan Pumps And Motors
Charge Air Cooler	Differential Housing	Electric Motors	Hydraulic Cylinders
Cold Start Enrichment Systems	Differential Pinion Gear / Ring Gear	Factory Installed Telematics	Hydraulic Hoses and Piping
Connecting Rods & Bearings	Drive Axle Hub	Sensors	Hydraulic Motors
Crankshaft Bearings & Gear	Drive Shaft Support Bearing	Solenoid Valves	Hydraulic Oil Coolers
Crankshaft Including Front And Rear Crankshaft Seals	Drive Shaft with Universal Joints	Starter And Starter Solenoid	Hydraulic Pumps
Cylinder Heads/ Head Gaskets	Electronic Transmission Controller and Valve	Switches	Hydraulic Reservoir
Cylinder Liners	Enclosed Oil Immersed Chains and Sprockets	Traction Control System	Hydraulic Valves
Diesel Exhaust Fluid Tank and Dispensing System	External Oil Lines	Voltage Regulator	Internal O-Rings and Bonded Washers
Diesel Particulate Filter	Filler Tubes (Transmission)	Wiring Harnesses	Pilot Control
EGR System Manifold	Final Drive Pinion	Wiring Harnesses Exclusions	Pressure Reducing Valves
Electronic Engine Control Module	Final Drive Planetary Gears	Rubbing, Chafing, Loose Or Corroded Connections	Unloading Valves
Engine Block	Front Wheel Drive Sensors	FACTORY INSTALLED HEAT AND AIR CONDITIONING	STRUCTURAL
Engine Mounts And Supports	Hydraulic Drive / Travel Motor	Accumulator	Backhoe Booms
Engine Oil Cooler	Hydraulic Drive Pump	Clutch	Backhoe/Excavator Dipper Sticks
Engine Speed Controls, Linkages, and Cables	Hydraulic Transmission-Control Valve	Compressor	C Frame
Exhaust Manifold and Muffler	Hydrostatic Motor	Condenser	Car Body
Fan And Fan Drive	Hydrostatic Transmission Charge Pump	Dryer	Chassis
Filter Mount	Hydrostatic Transmission Pump	Evaporator	Circle Frame
Flywheel, Ring Gear	Hydrostatic/Hydraulic Pump Drives	Expansion Valve	Engine Frame
Front And Rear Engine Covers And Seals	Internal Lubricated Clutch Housings	Heater Core	Equipment Frame
Front Damper	Internal Transmission Control Linkage	Hoses	Excavator Booms
Fuel Lines	Internal Wet Service Brakes	Pulley	Falling Object Protection Structure (FOPS)
Fuel Tank	MFWD Axle/Differential Assembly including Driveshaft and U Joint	Seals & Gaskets	Forklift Masts
Fuel Transfer Pump & Gasket	Planetary Gear Carrier	Temperature Control Programmers and Valves	Inner and Outer Dipper Arms of the Extendable Boom (Backhoe Loader)
Injection Pump	Pneumatic Valves	OPERATOR AREA	Main Frame
Injectors	Rotary Hydraulic Manifold	Covers and Panels	Rollover Protection Structure (ROPS)
Intake and Exhaust Manifold And Gaskets	Splitter Drive/Drop Box	Exterior/Interior Door/Panel Latches, Hinges & Struts	Swing Frame
Oil Filler Tube	Steering Clutches (Wet)	Exterior/Interior Moldings	Swing Tower Castings (Backhoe Loader)
Oil Lines	Swing Motor And Swing Gear Box	Knobs for Switches and Handles	Track Frame
Oil Pan And Gasket	Torque Converter	Mirrors	Wheel Loader/Skid steer Loader Arms
Oil Pump	Torque Converter Pump	Seat Frame & Suspension	
Pistons & Rings	Transfer Drive		
Pre-Cleaner/Air Cleaner Housing	Transmission Case		
Pressure/Temperature Sensors & Sending Units	Transmission Gears, Bearings, & Shafts		
Pulleys	Transmission Pump		
Radiator	Travel & Swing Sections (only) Of Main Control Valve		
Rocker Arm Assembly	Travel Control Valve		
Selective Catalytic Reduction System	Turntable Bearing		
Thermostats	Undercarriage Roller And Idler Seals And Bearings		
Timing Gears	Undercarriage Tensioners		
Turbocharger And Gasket	UNDERCARRIAGE EXCLUSIONS: Sprocket, Tracks, Pads, Bolts, Chains, Or Any Failure Due To Wear, Or Breakage Caused By Wear		
Valve Cover And Gasket			
Water Piping			
Water Pumps			

F-SERIES WHEEL LOADERS

521F

PRODUCTIVITY (50 meter distance cycle)

Considering density at 1,8 t/m³ and 100% fill factor
52 cycles/hour including 5 minute break _____ 52 loading cycles/h
with 2.1 m³ bucket _____ 110 m³/h or 198 t/h of material

ENGINE

Make _____ FPT engine F4HFA413A compliant with
EPA Tier2 or EU Stage II regulations
Number of cylinders _____ 4 cylinders - 4,7 liters - common rail
Max power SAE J1995 _____ 106kW / 142 hp @1800 rpm
Maximum torque SAE J995 _____ 608 Nm @1600 rpm

TRANSMISSION

All-wheel drive with planetary axles
Kick-down function
4-speed torque converter
4-speed auto Powershift ZF type 4WG130, switchable to manual shifting
forward speeds: 6-11-22-36 Km/h
reverse speeds: 6.4-12-23 Km/h
Adjustable transmission declutch

AXLES AND DIFFERENTIAL

- for outstanding traction with 50% longer maintenance intervals and 30%
less tire wear:
- for limited investment and good traction:
29% Limited slip differential on front and rear axles
front and rear axle ZF type MT-L3065-II

TIRES

Tires _____ 17,5R25

BRAKES

Service brake _____ Maintenance free, self-adjusting wet 4-wheel
disc brakes
Area _____ 0,31 m²/hub
Parking brake _____ Disc brake on transmission activated from the
cab cluster
Area _____ 58 cm²

HYDRAULICS

Valves _____ Rexroth Closed-center, Load sensing hydraulic system.
Main valve with 3 sections
Steering _____ The steering orbitrol hydraulically is actuated with
priority valve
Type of pump _____ Variable displacement pump
(134 l/min @250 bar)Automatic hydraulic functions
- Bucket Return-to-dig
- Boom Return-to-travel
- Autolift (adjustable height)
Control type _____ Pilot control with single joystick or two levers

CAPACITIES

Fuel tank _____ 189 usable liters
Cooling system _____ 22 liters
Engine oil _____ 12 liters
Hydraulic oil _____ Tank: 57 liters, total system: 114 liters
Transmission oil _____ 19 liters

CAB

Cab complies to:
protection against falling objects (FOPS) _____ ISO EN3449
protection against roll over (ROPS) _____ ISO EN13510
Air flow _____ 8.5 m³ / min spread through 17 air vents

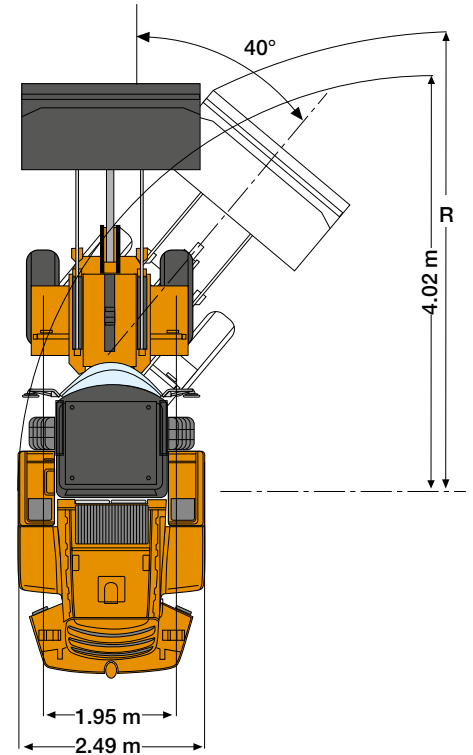
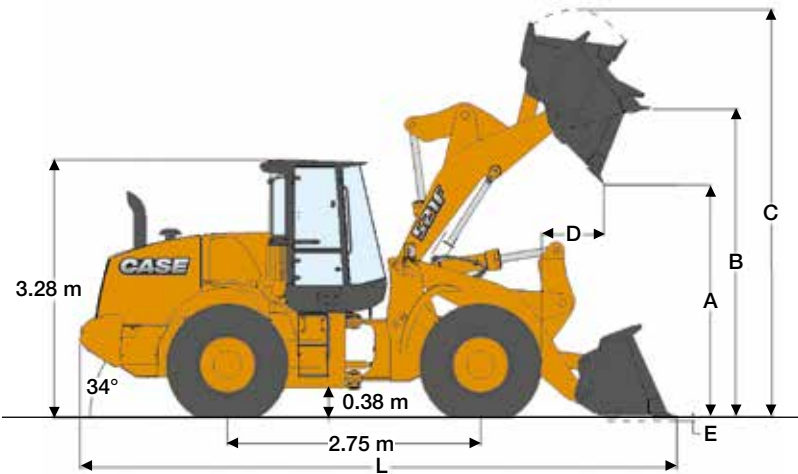
NOISE AND VIBRATION

Interior noise _____ 72 dB(A) according to ISO6595/6396/3744
Exterior noise _____ 72 dB(A) at 15 meters as per SAE J88 SEP80
103 dB(A) according to ISO6595/6396/3744
Reverse gear alarm
Vibrations _____ air-cushioned seat MSG 95A/732

ELECTRICAL

24 V. Batteries 2 x 12V.
Alternator _____ 70 A

GENERAL DIMENSIONS



LOADER SPEED:

Raising time (loaded)	5.4 sec
Dump time (loaded)	1.2 sec
Lowering time (empty, power down)	3.9 sec
Lowering time (empty, float down)	3.9 sec

		Z-bar		XT	
		2.1 m ³ bucket	teeth + segment	1.7 m ³ bucket with quick coupler	teeth
521F		edge		edge	
Bucket with bolt on					
Bucket volume (heaped)	m ³	2.07	2.07	1.70	1.70
Bucket Payload	kg	3478	3475	3249	3296
Maximum material density	ton/m ³	1.7	1.7	1.9	1.9
Bucket outside width	m	2.49	2.54	2.44	2.44
Bucket weight	kg	857	877	1117	1045
Tipping load - straight	kg	8150	8145	7634	7728
Tipping load - Articulated at 40°	kg	6957	6949	6497	6591
Breakout force	kg	7591	7781	8288	8124
Lift capacity from ground	kg	8889	8979	10236	10365
A - Dump height at 45° at full height	m	2.62	2.55	2.5	2.49
B - Hinge pin height	m	3.61	3.61	3.75	3.75
C - Overall height	m	4.75	4.75	4.94	4.94
D - Bucket reach at full height	m	1.12	1.19	1.23	1.27
E - Dig depth	cm	8	8	19	18
L - Overall length with bucket on the ground	m	6.83	6.94	7.05	7.07
R - Turning radius to front corner of the bucket	m	5.5	5.6	5.5	5.6
Bucket rollback in carry position		43°	43°	52°	52°
Dump angle at full height		55°	55°	62°	62°
Machine operating weight	kg	10448	10468	11189	11117

Note: bucket specification can slightly differ according to plant source. More bucket choice is available, please contact your local dealer.



PARTS AND SERVICE

Wide network of customer support across the world.

No matter where you work, we're here to support and protect your investment and exceed your expectations. You can count on CASE and your CASE dealer for full-service solutions-productive equipment, expert advice, flexible financing, genuine CASE parts and fast service. We're here to provide you with the ultimate ownership experience. To locate a CASE dealer or learn more about CASE equipment or customer service, go to www.casece.com

NOTE: CASE provides specific outfits for various countries and many optional fittings (OPT). The illustrations on this or other leaflets may relate to standard or optional fittings. please consult your CASE dealer for any information in this regard and any possible updating on components. CNH Industrial reserves the right to modify machine specifications without incurring any obligation relating to such changes.

