F-SERIES WHEEL LOADERS RECYCLING AND INDUSTRIAL MISSIONS





BORN TO RECYCLE

WWW.casece.com EXPERTS FOR THE REAL WORLD SINCE 1842



EXPERTS FOR THE REAL WORLD SINCE 1842

- **1842** Case is founded.
- **1869** The first Case portable steam engine road construction is born!
- **1958** The first Case 4-WD wheel loader, the W9, is introduced.
- **1969** Case begins skid steer loader production.
- **1998** Ride control on loader backhoes and skid steer loaders: another Case first. From 1998 Case Wheel Loaders run FPT engines, leaders in industrial engine technology.
- 2001 The exclusive mid-mounted Cooling Cube in Case wheel loaders means clean engine, reliability and massive bucket payloads.

HERITAGE A TRADITION OF INDUSTRY FIRSTS



- **2011** The first wheel loaders with SCR engine technology and Proshift transmission lead to faster cycles and fuel economy.
- **2012** Case completes its Tier 4i (EU Stage IIIB) wheel loader range: once again, the first in the industry.
- 2015 Case wheel loaders achieve Tier 4 Final / EU Stage IV emissions standards.

BORN FOR 24/7 PRODUCTION AND FUEL SAVING

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HIGH EFFICIENCY with no EGR or particulate filter

The engine was developed and manufactured by our award winning sister company FPT Industrial, which produces over 500,000 engines per year and powers world record winners.

The in-house design leverages advanced technologies developed for commercial vehicles and agriculture, and introduces specific tailored solutions for off-road applications.

The engine is designed to offer both fuel efficiency and reliability with plenty of power available.

- The air intake flow is increased by a turbocharger with air-to-air cooling.
- The multiple injection delivers best-in-class high torque performance at low rpms.
- No EGR valve is used: 100% fresh air is taken for combustion without DPF and no extra cooling system is needed.

Our engine technology is so reliable that it is trusted by the French Sea Rescue service for their boats:

what better guarantee could you wish for?



ENGINE KEEP IT SIMPLE





LOW EMISSIONS without particulate filter

With HI-eSCR after-treatment, FPT technology meets EU Stage IV (Tier 4 final) emissions standards, a big step towards cleaner air. With this system, fewer components are involved, engine oil quality is not compromised

and there is no need for a particulate filter (DPF) or

additional cooling. This allows for a very compact engine compartment, resulting in excellent rear visibility. In addition, the maximum temperature reached by HIeSCR is 500°C, 200°C below the maximum temperature of a particulate filter.





It would take six months for a Tier 4 Final wheel loader with Hi-eSCR technology to produce the particulate and NOx emissions that a Tier 1 wheel loader would produce in one day.





HIGH EFFICIENCY ProShift transmission

ProShift transmission provides on average 1,5 litre/hour fuel saving and up to 20% faster cycle time. This is the result of three premium features:

1. 5-speed transmission

The 5 speeds allow to always work at lower rev's compared to 4-speed transmission. Lower rev's result in lower fuel usage.

When the ECO mode is selected not only the engine gives priority to fuel efficiency but also the transmission shifts at lower rev's in order to increase fuel efficiency and noise emission.

2. Torque Converter Lock-up

Wheel loaders continuously shift gears and every time diesel saving is achieved with:

- Torque converter lock-up that kills viscous losses from 2nd up to 5th gear
- Engine de-rating during gear shifts that kills torque peaks in the clutch and contributes to lower fuel usage

PROSHIFT TRANSMISSION GO FASTER, STAY EFFICIENT





EASY TO USE

Intelligent clutch cut off with power inch

3. Power inch

With Power Inch, positioning the loader is as smooth as with a hydrostatic transmission, with the added advantage of massive pushing power delivered by the torque converter. This also prevents rolling back on slopes.





- Multiple sintered bronze brake discs are cooled in an oil bath.
- Metal face seals are more resistant to water, fine debris and low temperatures.



HIGH RELIABILITY Case heavy-duty axles

The heavy-duty axles are tougher, bigger and easier to service thanks to the 3-piece housing design. Wet multiple disc brakes, made of resistant sintered bronze, are located in each wheel hub. Our heavy-duty axles are engineered to support L5 or solid tyres for very abrasive environments. Solid tyres can be factory fitted.

A higher value results from:

- 20-30% lower tyre wear because of no slippage between the wheels;
- reduced fuel consumption because there is no friction in the differential
- reduced downtime for maintenance because of fewer moving components with open differentials.



AXLES AND DIFFERENTIALS WHEN EFFICIENCY MEETS PRODUCTIVITY





COST SAVINGS

100% auto lock differential

With open differentials, no friction is applied to reduce wheel slip. As a result, there is less tyre wear and lower energy losses. With the 100% Auto-lock, 100% of the available torque is transmitted to the wheels to provide maximum tractive effort.



Taking a curve on solid ground With limited slip differential:



Automatic slip limited engagement - Internal losses and wind up

- Increased tyre wear



No engagement (open diff) - No energy loss

- Less tyre wear

Loading on soft ground

With limited slip differential:



- 70% tractive effort transmitted to the wheels

- automatic engagement

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With 100% diff lock (optional):



- 100% tractive effort transmitted to the wheels
- automatic or manual engagement



HIGH RELIABILITY Case cooling cube

The unique design of the CASE cooling cube, with five radiators mounted to form a cube instead of overlapping, ensures a constant flow of fresh and clean air from the sides and from the top, to maintain constant fluid temperatures.

The cube structure provides easy access to radiators for a more effective cleaning and serviceability: additional cleaning can also be easily done manually, with separate access to each radiator.

CAS





HIGH PAYLOAD

Better weight distribution with the rear mounted engine*

* Except on 1021F and 1121F that have conventional engine position.

CASE COOLING CUBE THE ANTI-CLOGGING SOLUTION





HIGH RELIABILITY

Heavy duty protection

To make your loaders last long in the toughest conditions, Case offers a full package of 16 guards that you can select depending the mission of each of your loaders.







Articulation and front cover



621F AND 721F WASTE HANDLER





THE ANTI-CLOGGING SOLUTION

Heavy duty cooling

Indoor handling of fertilizer, cereals, animals feed or other material usually lead to radiator clogging.

Case solution is the Heavy Duty Cooling option, it features:

- Extra thin inlet grille that bigger particles
- Sealed radiator covers guarantees cooling air is 100% filtered
- Wide core radiators increase the self cleaning by the reversible fan and avoids clogging.



HEAVY-DUTY GRILLE OUTSIDE





Heavy-Duty

HEAVY-DUTY COOLERS INSIDE





Heavy-Duty

Standard

Standard





COMFORTABLE AND SAFE CAB

Wider and well protected cab

- Our reinforced cab guarantees protection against roll over (ROPS) and falling objects (FOPS).
- Our cab is also certified P2 level according to European Standards EN143, which means that 94% of airborne particles are filtered. When working in particularly tough conditions, additional pressurisation and particle filtration can be fitted.
- On Waste Handler models windshield guards, provide protection from falling pieces of solid waste.
- The CASE Cab is 2.06 m³ and 1.64 m wide: it is the widest cab in the industry
- The air suspended seat features a high back design and lumbar adjustment, a saving grace during long working days. It includes seat heaters which warm up cold winter mornings.

CAB COMFORT RULES





HIGH VISIBILITY

Wide glazed surfaces and curved engine hood

You'll feel more confident and work faster with the great all-round visibility provided by the very low shape of the curved rear hood and the ample glazed surfaces.



COMFORTABLE AND SAFE CAB

Low engine vibrations

- The rear mounted engine is far from the cab, further enhancing operator comfort.
- Engine noise and vibrations are reduced by the 3-step injection: pre-, main- and post-injection.



The layout of the components under the hood is optimised and results in easier maintenance.



Hood opening and battery on/off switches. In case of flat battery, hood can be opened externally with Remote jump start



Grouped drains for clean and quick oil changes



SAFE AND EASY MAINTENANCE

Ground level serviceability

One-piece electric hood

The positioning of the engine at the rear and the easy-to-open electric hood provide fast access to the service points. Jumper cables are available as standard for jump starting the engine if the battery is low.

Grouped service points*

Don't be surprised if you don't see any safety handrails around the hood or steps behind the rear wheels, all service points are easily accessible at ground level. You can do a fast visual check of the hydraulic and transmission oil levels. The three drains are grouped together on the left side, so that fluids are easy and quick to replace.

Greater safety

All the main service points are easily accessible from the ground, so you can carry out your daily maintenance safely and efficiently.

* Except on 1021F and 1121F that have conventional engine position.

MAINTENANCE AND TELEMATICS FAST AND EASY





THE SCIENCE BIT

The Case SiteWatch telematics system uses a high-tech control unit mounted on each machine to collate information from that machine and from GPS satellites. This data is then sent wirelessly through the mobile communication networks to the Case Telematics Web Portal.

SiteWatch: centralised fleet control benefits at your fingertips

🔊 Measure your true asset availability and optimise it

- Eliminate the "phantom fleet": SiteWatch allows to identify spare units or under loaded machines on each site.
- Become able to reallocate units where they are more needed.
- Forward Maintenance Planning is easier since the actualised working hours are always available.
- Extend the benefits of SiteWatch to the rest of your fleet: SiteWatch can be installed on the units of other brands as well.

Shallenge your Total Cost of Ownership!

- Being able to compare the fuel usage of different machine types will allow you choose the right equipment.
- Save on transport costs with planned and grouped maintenance tasks.
 Bases of mind, antimized untime and lower repair costs;
- Peace of mind, optimised uptime and lower repair costs: with preventive maintenance you can for example be alerted if the engine needs to be serviced and avoid a disruptive breakdown.
- Be able to compare your asset Return On Investment on different sites.
- Your equipment is used only during working hours. You can set up alerts so that you know if it is in use during the weekend or at night.
- Integrate with the programmed maintenance package, so that you can be sure every machine is at the right place at the right time.

More Safety, Lower Insurance Premium

- Keep thieves away: dissuade them from attacking your asset because it is geo-localised. SiteWatch is hidden so that thieves can't find it quickly.
- Your fleet is used only where you decide. You can define a virtual fence and receive an email when a machine exits that perimeter.





ENGINE	521F	621F	721F	821F	921F	
FPT engine	N45	N67	N67	N67	N67	
Cylinders	4	6	6	6	6	
Displacement (I)	4.5	6.7	6.7	6.7	6.7	
Air intake	Turk	ocharger	with air-to	-air cooling	g.	
Injection	С	Common Rail Multiple Injection.				
After treatment system	SCR	SCR	HI-eSCR	HI-eSCR	HI-eSCR	
Emission level EU	Stage III B	Stage III B	Stage IV	Stage IV	Stage IV	
Emission level USA	Tier 4i	Tier 4i	Tier 4F	Tier 4F	Tier 4F	
Max. power (kW)	106	128	145	172	190	
Max. power (hp)	142	172	195	230	255	
(@rpm)	1800	1800	2000	1800	1800	
(SAE J1995 / ISO 14396)						
Max. torque (N.m)	608	730	950	1184	1300	
(@rpm)	1600	1600	1300	1300	1300	
(SAE J1349)						

TRANSMISSION

Proshift: 5-speed powershift with lock up

Lock-up clutch eliminates torque converter losses

from second gear up to fith gear.

Power inch _____ Proportional decluching depending on braking intensity.

	on braining	interiority.			
Forward 1 (km/h)	-	-	7	6,6	6,4
Forward 2 (km/h)	-	-	13	11	11
Forward 3 (km/h)	-	-	19	17	17
Forward 4 (km/h)	-	-	30	26	26
Forward 5 (km/h)	-	-	40	40	40

4-Speed powershift by ZF with Intelligent Clutch Cut Off (ICCO)					
Forward 1 (km/h)	6	7	8	7	7
Forward 2 (km/h)	11	13	13	12	12
Forward 3 (km/h)	22	24	25	23	23
Forward 4 (km/h)	36	39	37	37	36

AXLES AND DIFFERENTIAL

Rear axle total oscillation	24°
A-Choice by ZF	Heavy duty axles with open differentials and
	automatic. 100% lock system on the front
	differential. 100% tractive effort always, no wheel
	slip, less tire wear.
B-Choice by ZF	Standard axles with limited slip differentials front
	and rear 73% tractive effort on slippery ground.

TYRES

Tyle5	Tyres	17.5R25	20.5R25	20.5R25	23.5R25	23.5R25
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BRAKES

Service brake	Maintenance free, self-adjusting					
	wet 4-wheel disc brakes.					
Brake disc area (m²/hub)	0.31	0.39	0.39	0.39	0.47	
Parking brake	With the negative brake all four wheels					
	are automatically stopped when the engine					
	is stopped.					
Disc brake area (cm ²)	58	58	82	82	82	

HYDRAULICS 521F 621F 721F 821F 921F

Valves	_ Rexroth Closed-center, Load sensing hydraulic.				
	Main valve	with 3 se	ctions.		
Steering	The steerii	ng orbitrol	hydraulica	lly is actua	ated
	with priori	ty valve.			
Automatic functions	_ Bucket Return-to-dig, Boom Return-to-travel,				
	Boom Auto-lift.				
Control type	Pilot contro	ol with sing	gle joystick	k or two lev	/ers.
Type of pump	Tandem Va	ariable disp	olacement	pump.	
(l/min)	134	171	206	240	282
(@rpm)	2000	2000	2000	2000	2000

AUXILIARY HYDRAULIC CIRCUIT

Max flow (I/min)	162	162	260	260	260
Max pressure (bar)	227	227	224	224	224

SERVICE CAPACITIES

Fuel tank (I)	189	248	246	288	288
AdBlue tank (I)	41.3	41.3	41.3	41.3	41.3
Cooling system (I)	22	26.8	28	30	30
Engine oil (I)	12	13	13	13	13
Hydraulic oil tank (I)	57	91	91	91	91
Total hydraulic					
system oil (I)	114	148	180	180	200
Front and Rear Axles (I)	22+22	22+22	35+35	40+40	42+40
Transmission oil (I)	19	27	34	34	34

CAB PROTECTION

Protection against falling	
objects (FOPS)	ISO EN3449
Protection against	
roll over (ROPS)	ISO EN13510

SOUND AND VIBRATION

In the cab - LpA (dB)	70	70	70	70	70
(100 0030/0030/0144)	1 100	1104	1100	1104	1104
Outside - LwA (dB)	_1102	1104	103	1104	1104
(SAE J88 SEP80)					
Vibrations	_ Operator	's seat me	ets the cri	teria of ISC)
	7096:200	00. The vib	rations tra	nsmitted d	o not
	exceed 0	.5 m/s²			

ELECTRICAL SYSTEM

24V. Batteries 2 x 12V.	
Alternator (A)	65

SPECIFICATIONS

ENGINE

1021F 1121F

FDT ongine	Curoor	2				
	Cursor 9					
Cylinders	6					
Displacement (I)	8.7					
Air intake	Turbocharger with	th air-to-air				
	cooling. No EGR	valve is used:				
	Only fresh air is	taken for				
	combustion and	no extra cooling				
	system is needed.					
Injection	Common Rail Multiple Injection.					
After Treatment System	HI-eSCR (DOC + SCR).					
Emission level	Compliant with EU Stage IV					
	and US Tier IV Final.					
Max. power (kW/hp)	239 / 320	259 / 347				
(@ rpm)	1800	1800				
(SAE J1995 / ISO 14396)						
Max. torque (Nm)	1479	1604				
(@ rpm)	1100 1100					
(SAE J1349)						

TRANSMISSION

4-Speed Powershift

4x4 transmission with auto-shift system and Intelligent Clutch Cut Off (ICCO).

Forward 1 (km/h)	7	7
Forward 2 (km/h)	13	12
Forward 3 (km/h)	19	18
Forward 4 (km/h)	38	38
Reverse 1 (km/h)	7	7
Reverse 2 (km/h)	13	13
Reverse 3 (km/h)	27	26

AXLES AND DIFFERENTIAL

Rear axle total oscillation	24°
A-Choice	100% lock
	of the front differential.
	(Heavy duty axles)
B-Choice	Open center differentials.
	(Standard axles)

26.5R25

TYRES

Tyres_

BRAKES

ce free, self-adjusting el disc brakes
ci disc brakes.
).74
egative brake all
s are automatically
nen the engine is
2
82

HYDRAULICS 1021F 1121F Valves_____ Rexroth Closed-center, Load sensing hydraulic system. Main valve with 3 sections. Steering ____ The steering orbitrol hydraulically is actuated with priority valve. Bucket Return-to-dig, Automatic functions Boom Return-to-travel, Boom Auto-lift. Pilot control with single joystick Control type_ or two levers. Type of pump ____ Tandem Variable displacement pump. 380 (I/min) 352 2000 (@ rpm)_ 2000

AUXILIARY HYDRAULIC CIRCUIT

Max flow (I/min)	260	260
Max pressure (bar)	224	224

SERVICE CAPACITIES

Fuel tank (I)	459	459
AdBlue tank (permanently		
heated by engine coolant) (I)	65	65
Cooling system (I)	57	57
Engine oil (I)	26	26
Hydraulic oil tank (I)	134	134
Total hydraulic system oil (I)	250	250
Front and Rear Axles (I)	68	68
Transmission oil (I)	45	45

CAB PROTECTION

Protection against falling objects (FOPS)	ISO EN3449
Protection against roll over (ROPS)	ISO EN13510

SOUND AND VIBRATION

In the cab - LpA (dB)	71
(IS06395/6396/3744)	
Outside - LwA (dB)	107
(IS06395/6396/3744)	
Vibrations	Operator 's seat meets the
	criteria of ISO 7096:2000. The
	vibrations transmitted do not
	exceed 0.5 m/s ²

ELECTRICAL SYSTEM

24V. Batteries 2 x 12V. Alternator (A) _____

65

RECYCLING BUCKET SPECIFICATIONS



Conventional light material buckets



High tip light material buckets

		521F	621F	721F	821F	921F	1021F	1121F
C - Ground Clearance	m	0.39	0.39	0.39	0.44	0.44	0.44	0.44
Cab Roof Height	m	3.28	3.38	3.38	3.45	3.45	3.57	3.57
Tipping load - Straight (SAE)	t	8.2	10.0	12.4	14.5	16.9	19.2	21.1
Tipping load - at 40° (SAE)	t	7.0	8.7	10.9	12.5	14.5	16.0	18.9
Z-bar - Hinge Pin Height	m	3.61	3.83	3.98	4.12	4.12	4.24	4.44
XT - Hinge Pin Height	m	3.74	3.96	4.16	n/a	n/a	n/a	n/a
XR - Hinge Pin Height	m	3.99	4.24	4.37	4.56	4.56	4.83	4.86



CONVENTIONAL LIGHT MATERIAL BUCKETS

\sim (up to 0.8 t/m ³)		52	21F	62	1F	72	1F		821F		92	1F	1021F	1121F
		XR	ХТ	XR	ХТ	XR	ХТ	Х	R	Z-bar	XR	Z-bar	Z-bar	Z-bar
Bucket volume - SAE		3.5	m ³	4.0	m ³	5.0	m ³	5.0 m ³	6.0 m ³	6.0 m ³	5.0 m ³	7.5 m ³	9.0 m ³	11.0 m ³
Bucket fitting		Direct	Coupler	Direct	Coupler	Direct	Coupler	Coupler	Direct	Direct	Direct	Direct	Direct	Direct
Max bucket payload	t	2.6	2.2	3.1	3.2	3.9	4.1	4.2	4.0	5.0	4.7	6.0	6.9	7.4
Material specific weight	t/m³	0.7	0.6	0.8	0.8	0.8	0.8	0.8	0.7	0.8	0.8	0.8	0.8	0.7
Bucket width	m	2.50	2.50	2.50	2.50	3.00	3.00	3.00	3.20	3.20	3.20	3.20	3.25	3.75
Bucket weight	t	1.3	1.2	1.3	1.6	1.5	1.8	2.1	2.3	2.3	2.5	2.9	3.8	4.1
H - Max dump height at 45°	m	2.79	2.67	2.92	2.36	2.97	2.55	3.05	2.98	2.53	3.05	2.56	2.64	2.84

HIGH TIP BUCKETS FOR LIGHT MATERIAL

(0.5 up to 1.0 t/m ³)		521F 621F 721F		1F	821F		921F	1021F	1121F		
		Z-bar / XT	ХТ	Z-bar	ХТ	Z-bar	Z-I	bar	Z-bar	Z-bar	Z-bar
Bucket volume - SAE		3.0 m ³	3.0 m ³	3.5 m ³	4.0 m ³	4.5 m ³	5.0 m ³	6.0 m ³	6.0 m ³	8.0 m ³	8.0 m ³
Bucket fitting		Direct	Coupler	Direct	Coupler	Direct	Coupler	Direct	Direct	Direct	Direct
Max bucket payload	t	2.6	3.2	3.4	3.7	4.3	4.6	4.7	5.8	7.0	8.0
Material specific weight	t/m³	0.9	1.1	1.0	0.9	1.0	0.9	0.8	1.0	0.9	1.0
Bucket width	m	2.50	2.50	2.50	2.85	2.85	3.00	3.20	3.20	3.75	3.75
Bucket weight	t	1.7	1.7	1.8	2.1	2.0	2.9	3.0	3.2	3.8	3.8
H - Max dump height at 45°	m	4.33	4.32	4.26	4.77	4.51	4.76	4.65	4.66	4.97	4.97

HIGH TIP BUCKETS FOR VERY LIGHT MATERIAL

(up to 0.5 t/m ³)		721F	821F	921F	1021F	1121F
		Z-bar	Z-bar	Z-bar	Z-bar	Z-bar
Bucket volume - SAE		6.0 m ³	7.0 m ³	8.0 m ³	10.0 m ³	12.0 m ³
Bucket fitting		Direct	Direct	Direct	Direct	Direct
Max bucket payload	t	4.0 t	3.5	3.2	5.2	7.2
Material specific weight	t/m³	0.7	0.5	0.4	0.7	0.6
Bucket width	m	3.20	3.40	3.40	4.40	4.40
Bucket weight	t	3.0	3.5	3.8	4.3	4.8
H - Max dump height at 45°	m	4.65	4.50	4.90	5.00	5.00

BORN To recycle



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NOTE: Standard and optional fittings can vary according to the demands and specific regulations of each country. The illustrations may include optional rather than standard fittings - consult your Case dealer. Furthermore, CNH Industrial reserves the right to modify machine specifications without incurring any obligation relating to such changes.

Conforms to directive 2006/42/EC



The call is free from a land line. Check in advance with your Mobile Operator if you will be charged. Toll free number not available from all calling areas.

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