

**F-SERIES WHEEL LOADERS  
521F | 621F**

**CASE**  
CONSTRUCTION



**FASTER,  
FUEL EFFICIENT**

[www.casece.com](http://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.



## Less maintenance, lower costs

- Lower costs because **SCR** uses fewer components:
  - No particulate filter
  - No extra fans for additional cooling
  - No specific oil needed
- Longer maintenance intervals:
  - because the engine oil is not contaminated with unfiltered air
- No break down: **SCR** offers the highest fuel compatibility

## Premium engine technology: SCR

**SCR (Selective Catalytic Reduction)** is a well-proven reliable solution.

Having been in use in Europe since 2004 on trucks, the AdBlue™ DEF is can easily be found almost anywhere.

- More productivity with 10% fuel savings because SCR allows optimized combustion temperature
- No loss of power and fuel because no extra cooling is needed
- Cost savings, as SCR engines can be used with “red” fuel





**MORE COMFORT FOR MORE PRODUCTIVITY**



## 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 because the **SCR technology** doesn't require additional fans for cooling.

## All controls at your fingertips

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

## Feel confident with ROPS

All our wheel loaders' cab 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 DNA OF YOUR 521F

## Specifications

### Productivity (50 meter distance cycle)

Considering density at 1.8 t/m<sup>3</sup> and 100% fill factor  
52 cycles/hour including 5 minute break \_\_\_\_\_ 52 loading cycles/h  
with 2.1 m<sup>3</sup> bucket \_\_\_\_\_ 110 m<sup>3</sup>/h or 180 t/h of material

### Engine

Make \_\_\_\_\_ FPT engine F4HFE413J compliant with  
Tier 4i EU regulations  
Number of cylinders \_\_\_\_\_ 4 cylinders - 4.5 liters - common rail  
Max power SAE J1995 \_\_\_\_\_ 106kW / 142 hp @1800 rpm  
Maximum torque SAE J1349 \_\_\_\_\_ 608 Nm @1600 rpm  
Nox emission \_\_\_\_\_ 2.88 g/kWh  
HC emission \_\_\_\_\_ 0.08 g/kWh  
CO emission \_\_\_\_\_ 2.64 g/kWh  
PM emission \_\_\_\_\_ 0.013 g/kWh

### 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:**

100% auto-lock differential on front axle and open rear axles  
Front and rear ZF heavy duty axles with open differential  
type MT-L3065-II

**- 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 m<sup>2</sup>/hub  
Parking brake \_\_\_\_\_ Disc brake on transmission activated from the  
cab cluster  
Area \_\_\_\_\_ 58 cm<sup>2</sup>

### 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  
- Auto.lift (to adjustable height)  
Control type \_\_\_\_\_ Pilot control with single joystick or two levers

### Capacities

Fuel tank \_\_\_\_\_ 189 usable liters  
AdBlue tank \_\_\_\_\_ 41.3 usable liters  
Cooling system \_\_\_\_\_ 22 liters  
Engine oil \_\_\_\_\_ 12 liters  
Hydraulic oil \_\_\_\_\_ Tank: 57 liters, total system: 114 liters  
Transmission oil \_\_\_\_\_ 19 liters

### Cab

For you safety the cab complies to:  
protection against falling objects (FOPS) \_\_\_\_\_ ISO EN3449  
protection against roll over (ROPS) \_\_\_\_\_ ISO EN13510

### Noise and vibration

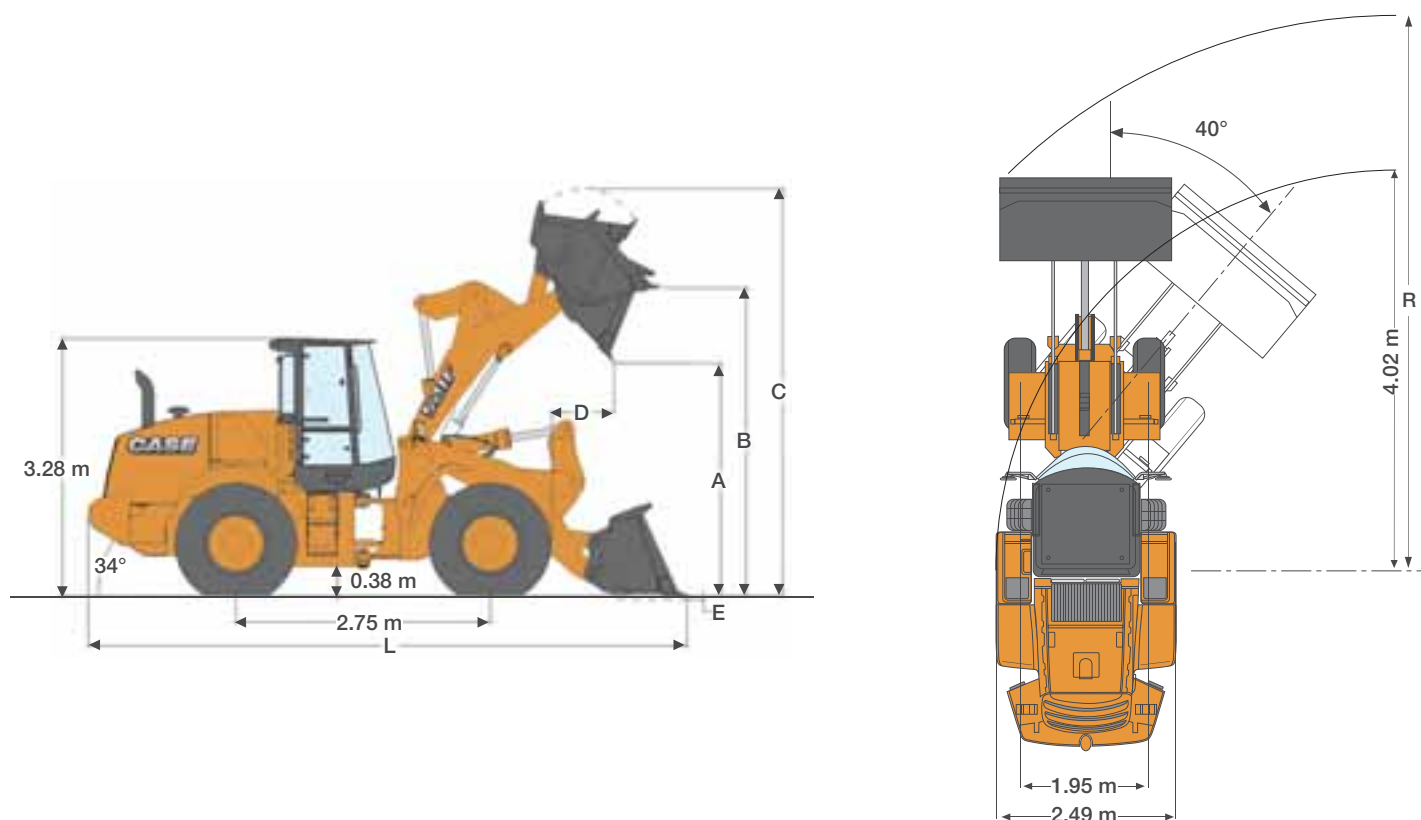
Interior noise \_\_\_\_\_ 72 dB(A) according to ISO6595/6396/3744  
Exterior noise \_\_\_\_\_ 72 dB(A) at 15 meters as per SAE J88 SEP80  
105 dB(A) according to ISO6595/6396/3744  
Switchable reverse gear alarm  
Vibrations \_\_\_\_\_ air-cushioned seat MSG 95A/732

### Electrical

24 V. Batteries 2 x 12V.  
Alternator \_\_\_\_\_ 70 A



# General Dimensions



			Z-bar				Long Reach				XT	
521F			2.1 m <sup>3</sup> bucket		1.7 m <sup>3</sup> bucket with quick coupler		1.9 m <sup>3</sup> bucket		1.7 m <sup>3</sup> bucket with quick coupler		1.7 m <sup>3</sup> bucket with quick coupler	
	Bucket with bolt on :		edge	teeth + segment	edge	teeth	edge	teeth	edge	teeth	edge	teeth
Bucket volume (heaped)	m <sup>3</sup>		2.07	2.07	1.70	1.70	1.88	1.84	1.70	1.70	1.70	1.70
Bucket Payload	kg		3478	3475	3535	3584	2977	2975	2947	2994	3249	3296
Maximum material density	ton/m <sup>3</sup>		1.7	1.7	2.1	2.1	1.6	1.6	1.7	1.8	1.9	1.9
Bucket outside width	m		2.49	2.54	2.44	2.44	2.49	2.54	2.44	2.44	2.44	2.44
Bucket weight	kg		857	877	1137	1065	821	842	1137	1065	1117	1045
Tipping load - straight	kg		8150	8145	8317	8415	7011	7010	6985	7080	7634	7728
Tipping load - Articulated at 40°	kg		6957	6949	7069	7167	5955	5950	5894	5989	6497	6591
Breakout force	kg		7591	7781	7104	6959	8094	8366	7077	6933	8288	8124
Lift capacity from ground	kg		8889	8979	10620	10700	8830	8827	8689	8773	10236	10365
A - Dump height at 45° at full height	m		2.62	2.55	2.58	2.56	3.04	2.97	2.96	2.94	2.5	2.49
B - Hinge pin height	m		3.61	3.61	3.61	3.61	3.99	3.99	3.99	3.99	3.75	3.75
C - Overall height	m		4.75	4.75	4.77	4.77	5.06	5.06	5.14	5.14	4.94	4.94
D - Bucket reach at full height	m		1.12	1.19	1.18	1.22	1.05	1.12	1.16	1.19	1.23	1.27
E - Dig depth	cm		8	8	7	5	11	11	10	9	19	18
L - Overall length with bucket on the ground	m		6.83	6.94	6.90	6.92	7.11	7.21	7.24	7.27	7.05	7.07
R - Turning radius to front corner of the bucket	m		5.5	5.6	5.5	5.5	5.7	5.7	5.6	5.7	5.5	5.6
Bucket rollback in carry position	°		43	43	48	48	44	44	50	50	52	52
Dump angle at full height	°		55	55	50	50	51	51	46	46	62	62
Machine operating weight	kg		10448	10468	10728	10656	10582	10602	10897	10825	11189	11117

# THE DNA OF YOUR 621F

## Specifications

### Productivity (50 meter distance cycle)

Considering density at 1.8 t/m<sup>3</sup> and 100% fill factor  
52 cycles/hour including 5 minute break \_\_\_\_\_ 52 loading cycles/h  
with 2.4 m<sup>3</sup> bucket \_\_\_\_\_ 125 m<sup>3</sup>/h or 227 t/h of material

### Engine

Make \_\_\_\_\_ FPT engine F4HFE613Z compliant with  
Tier 4i EU regulations  
Number of cylinders \_\_\_\_\_ 6 cylinders - 6.7 liters - common rail  
Max power SAE J1995 \_\_\_\_\_ 128 kW / 172 hp @1800 rpm  
Maximum torque SAE J1349 \_\_\_\_\_ 730 Nm @1600 rpm  
Nox emission \_\_\_\_\_ 3.01 g/kWh  
HC emission \_\_\_\_\_ 0.03 g/kWh  
CO emission \_\_\_\_\_ 0.42 g/kWh  
PM emission \_\_\_\_\_ 0.009 g/kWh

### Transmission

All-wheel drive with planetary axles  
4-speed auto Powershift ZF type 02G07135, switchable to manual  
shifting  
Adjustable transmission declutch  
forward speeds: 7-13-24-39 Km/h  
reverse speeds: 7-14-25 Km/h  
Kick-down function

### Axles and differential

- for outstanding traction with 50% longer maintenance  
intervals and 30% less tire wear:  
100% auto-lock differential on front axle and open rear axles  
Front and rear ZF heavy duty axles with open differential and 100%  
front lock  
Type MT-L3075-II - dynamic load: 12.700kg  
- for limited investment and good traction:  
29% Limited slip differential on front and rear axles  
Front heavy duty axle type MT-L3075-II - dynamic load: 12.700kg  
Rear oscillating axle ZF type MT-3065-II rear - dynamic load  
10.700kg

### Tires

Tires \_\_\_\_\_ 20.5R25

### Brakes

Service brake \_\_\_\_\_ Maintenance free, self-adjusting wet 4-wheel  
disc brakes  
Area \_\_\_\_\_ 0.39 m<sup>2</sup>/hub  
Parking brake \_\_\_\_\_ Disc brake on transmission activated from the  
cab cluster  
Area \_\_\_\_\_ 58 cm<sup>2</sup>

### 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 \_\_\_\_\_ Tandem Variable displacement pump  
(171 l/min @250 bar)  
Automatic hydraulic functions  
- Bucket Return-to-dig  
- Boom Return-to-travel  
- Auto.lift (to adjustable height)  
Control type \_\_\_\_\_ Pilot control with single joystick or two levers

### Capacities

Fuel tank \_\_\_\_\_ 248 usable liters  
AdBlue tank \_\_\_\_\_ 41.3 usable liters  
Cooling system \_\_\_\_\_ 26.8 liters  
Engine oil \_\_\_\_\_ 13 liters  
Hydraulic oil \_\_\_\_\_ Tank: 91 liters, total system: 148 liters  
Transmission oil \_\_\_\_\_ 27 liters

### Cab

For you safety the cab complies to:  
protection against falling objects (FOPS) \_\_\_\_\_ ISO EN3449  
protection against roll over (ROPS) \_\_\_\_\_ ISO EN13510  
Air flow \_\_\_\_\_ 8.5 m<sup>3</sup> / min spread through 17 air vents

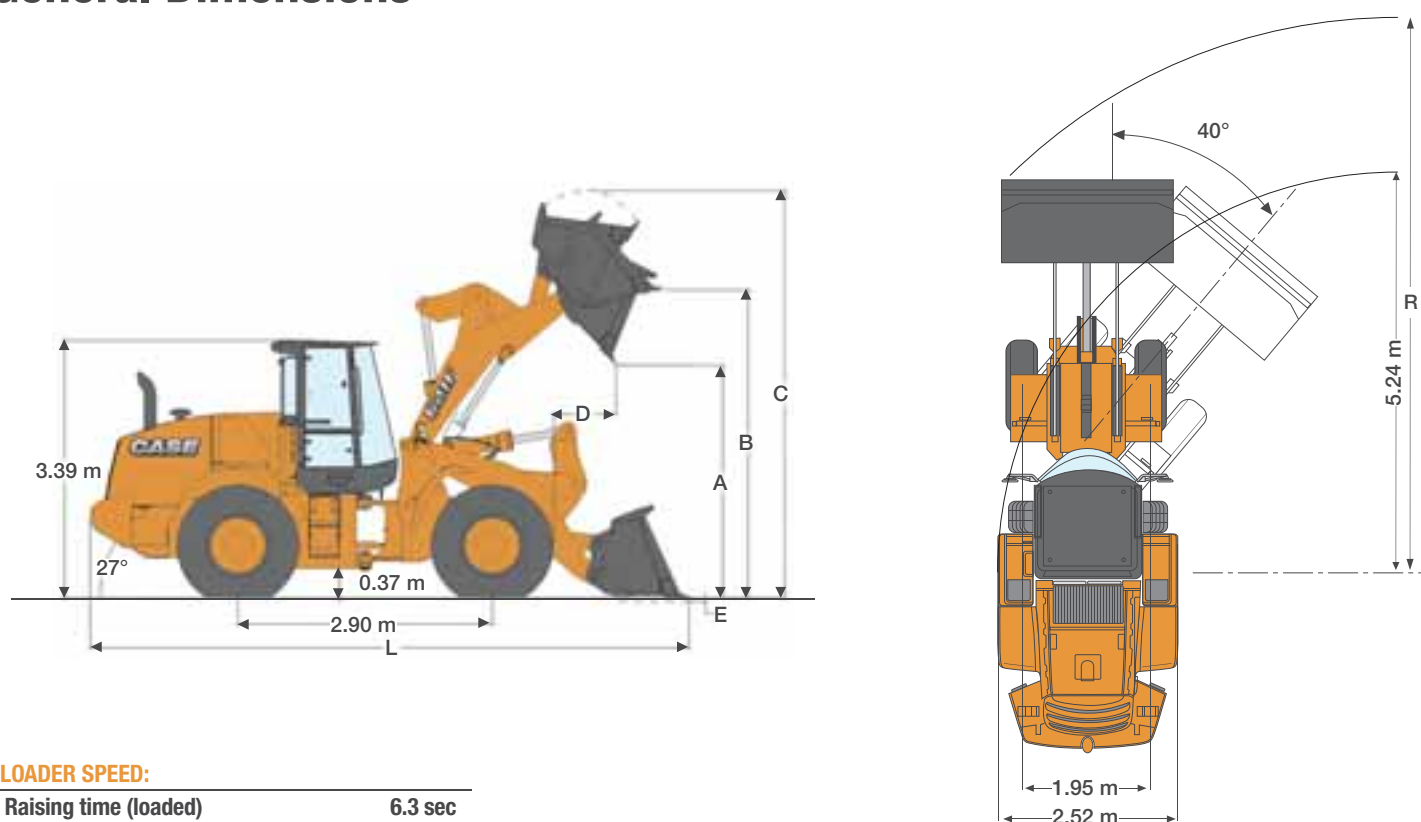
### Noise and vibration

Driving noise in dB (A) 82 to SAE J88 @ 15 meters  
Interior noise \_\_\_\_\_ 71 dB(A) as per ISO 6595/6396/3744  
Exterior noise \_\_\_\_\_ 72 dB(A) at 15 meters as per SAE J88 SEP80  
105dB (A) according to ISO 6595/6396/3744  
Switchable reverse gear alarm  
Vibrations \_\_\_\_\_ air-cushioned seat MSG 95A/732  
average 1.4 m/s 2 as per ISO/TR 25398:2006

### Electrical

24V. Batteries 2 x 12V.  
Alternator \_\_\_\_\_ 65 A

## General Dimensions

**LOADER SPEED:**

Raising time (loaded)	6.3 sec
Dump time (loaded)	1.2 sec
Lowering time (empty, power down)	4.4 sec
Lowering time (empty, float down)	4.4 sec

621F	Bucket with bolt on :	Z-bar				Long Reach				XT	
		2.4 m³ bucket		2.0 m³ bucket with quick coupler		2.2 m³ bucket		2.0 m³ bucket with quick coupler		2.0 m³ bucket with quick coupler	
		edge	teeth	edge	teeth	edge	teeth	edge	teeth	edge	teeth
Bucket volume (heaped)	m³	2.38	2.36	2.00	2.00	2.18	2.14	2.00	2.00	2.00	2.00
Bucket Payload	kg	4371	4367	4519	4570	3707	3704	3708	3757	4092	4157
Maximum material density	ton/m³	1.84	1.85	2.26	2.29	1.70	1.73	1.85	1.88	2.05	2.08
Bucket outside width	m	2.49	2.54	2.49	2.49	2.49	2.54	2.49	2.49	2.49	2.49
Bucket weight	kg	941	968	1242	1168	890	916	1242	1168	1242	1168
Tipping load - straight	kg	9964	9962	10325	10426	8488	8485	8527	8624	9360	9489
Tipping load - Articulated at 40°	kg	8741	8735	9038	9139	7414	7407	7416	7514	8185	8314
Breakout force	kg	9819	10097	9472	9272	11233	11591	9503	9310	10595	10395
Lift capacity from ground	kg	9857	9956	13068	13175	11411	11410	11348	11436	14642	14851
A - Dump height at 45° at full height	m	2.75	2.68	2.71	2.69	3.24	3.17	3.19	3.18	2.65	2.63
B - Hinge pin height	m	3.83	3.83	3.83	3.83	4.24	4.24	4.24	4.24	3.96	3.96
C - Overall height	m	5.04	5.04	5.05	5.05	5.45	5.45	5.46	5.46	5.23	5.23
D - Bucket reach at full height	m	1.08	1.16	1.12	1.16	1.01	1.01	1.22	1.25	1.23	1.26
E - Dig depth	cm	9	9	9	8	9	9	10	9	18	17
L - Overall length with bucket on the ground	m	7.47	7.57	7.53	7.56	7.75	7.86	7.93	7.97	7.78	7.81
Overall length without bucket	m	6.28	6.28	6.28	6.28	6.69	6.69	6.69	6.69	6.20	6.20
R - Turning radius to front corner of the bucket	m	5.7	5.8	5.7	5.7	5.9	6.0	5.9	5.9	5.8	5.8
Bucket rollback in carry position	°	44	44	49	49	46	46	51	51	58	58
Dump angle at full height	°	51	51	46	46	46	46	41	41	55	55
Machine operating weight	kg	12191	12218	12492	12418	12336	12362	12688	12614	12569	12459



www.casece.com

**EXPERTS FOR THE REAL WORLD**  
**SINCE 1842**

**CASE**  
CONSTRUCTION



Form No. 20056GB - Printed in Italy - MediaCross Firenze - 03/15

**CASE CONSTRUCTION EQUIPMENT  
CONTACT INFORMATION**

**CNH UK LTD**

Unit 4, Hayfield Lane Business  
Park, Field Lane, Auckley,  
Doncaster, DN9 3FL  
UNITED KINGDOM  
Tel: 800 2273 7373

**CNH INDUSTRIAL ITALIA SPA**

Strada di Settimo, 323  
10099 San Mauro Torinese (TO)  
ITALIA  
Tel: 800 2273 7373

**CNH INDUSTRIAL  
DEUTSCHLAND GMBH**

Case Baumaschinen  
Benzstr. 1-3 - D-74076 Heilbronn  
DEUTSCHLAND  
Tel: 800 2273 7373

**CNH INDUSTRIAL  
MAQUINARIA SPAIN, S.A.**

Avda. José Gárate, 11  
28823 Coslada (Madrid)  
ESPAÑA  
Tel: 800 2273 7373

**CNH INDUSTRIAL FRANCE, S.A.**

16-18 Rue des Rochettes  
91150 Morigny-Champigny  
FRANCE  
Tel: 800 2273 7373

**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

**CASE** Customer  
Assistance  
**00800-2273-7373**

The call is free from a land line.  
Check in advance with your Mobile Operator  
if you will be charged.