CASE

Hydraulic Excavator

Operating weight: 27 tons
Isuzu engine: 124.5 kW (167 hp)
Maxi reach : 18.35 m

CX240 Long Reach

COMMITTED TO YOUR NEEDS

ENGINE

Latest generation engine, meeting future European standards (Tier II “low smoke emission” regulations applicable as of January 2003).

Make ..... ISUZU
Type BB-6BGIT
Turbo ..... Yes
Injection ..... electronically controlled
No. of cylinders 6
Bore - Stroke ..... 105 x 125 mm
Cubic capacity ..... 6494 cm^3
EEC 80/1269 horsepower ..... 124.5 kW - 167 hp
Engine speed ..... 2150 rpm

Automatic engine pre-heating provides for optimum and immediate operation as soon as the working temperature is reached, a guarantee of longer life for the engine and the hydraulic components.
The injection pump is directly, electronically controlled by a special calculator which takes the hydraulic system load parameters into account. Regulation is quicker and more efficient than on conventional systems, reducing smoke and noise emissions and also significantly reducing fuel consumption.

HYDRAULIC SYSTEM

Linked to the engine power management electronic system, a second electronic system manages all the hydraulic parameters so as to obtain the highest possible available hydraulic power, under optimum conditions of efficiency and economy.
The system consists of two axial piston, variable flow pumps.

Max output ..... 2 x 212 l/min
Max safety valve pressure
- Attachment / **Power Boost** ..... 343/**373** bar
- Upperstructure swing ..... 270 bar
- Travel ..... 343 bar

CONTROL VALVES
4 sections for: LH travel, boom, bucket, and dipper acceleration
5 sections for: RH travel, swing, dipper, auxiliary circuit and boom acceleration.

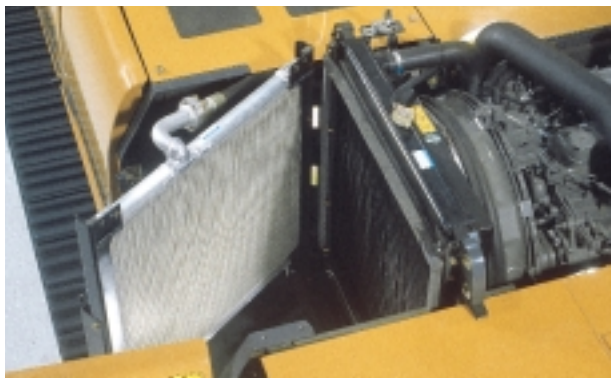
SWING
Axial piston, fixed flow motor
Max upperstructure swing speed ..... 10,4 rpm
Hydraulic system gives priority to the swing when operated simultaneously with the dipper.
Hydrostatic swing brake backed up by mechanical brake during swing stopping and when machine is being transported. Hydrostatic upperstructure braking during working phases, with an “anti-bounce” valve stopping neatly and accurately over a truck body or trench.

Backhoe clamshell circuit operated by means of a manual control on the dipper.

Auxiliary circuit
Using the auxiliary section available as standard, a maximum number of different tools and assemblies can be used, to suit customer requirements.

FILTRATION
Exceptionally fine protection of all hydraulic system components by means of the **“ULTRA CLEAN”** system (a special filter which removes all particles over 1 micron in size, as well as all traces of water condensation).
The use of this system means the hydraulic fluid retains all its qualities for **5000 hours**, thus reducing servicing intervals and maintenance costs. The hydraulic system is also equipped with an inlet filter, a return filter and a filter on the pilot circuit.

COOLING
Servicing of the cooling systems (engine and hydraulics) is considerably simplified due to total accessibility (hydraulic oil cooler radiator pivots).



TRAVEL

The travel circuit is equipped with two axial piston, variable flow motors.
Planetary reduction gear, automatic multi-disc brake.
Max travel speed ..... 5.5 kph
Low travel speed ..... 3.4 kph
Speed change is controlled from the instrument panel.
Gradeability ..... 70% (35°)

ELECTRICAL SYSTEM

Circuit ..... 24 volts
Batteries ..... 2 x 12 v - 112 A/h
Circuit equipped with water-proof connectors
Alternator ..... 24 v - 40 A/h

UNDERCARRIAGE

Type “X” design, strongly built undercarriage provides for quick travel over all types of work-site and better stability when working or travelling under load.
Perfectly protected motors and piping, a guard underneath the hydraulic swivel, high ground clearance - for easy access to the most difficult work-sites.
Spring-type track tensioning, adjustable by an easily accessible grease cylinder.

Specifications (per track set):

Upper rollers 2
Lower rollers 9
Number of track pads 51
Type of shoes ..... Triple grouser
Standard track pad width ..... 800 mm
Chain guides ..... Front and central

CAB

Combining comfort, safety and ergonomics, the CX240 cab has been designed to provide the best possible working conditions in a pleasant environment, thus enabling the operator to get the very best out of his machine.

Suspended cab (6 mounting points with rubber/fluid shock absorbing mountings).
Access to the operator’s compartment is facilitated by a wide door and the fact that the LH control arm can be raised completely out of the way.
Exceptional cab width (1.00 metre) providing a spacious, airy working space.
Air suspension, ergonomic seat, with multiple adjustments as standard equipment.

The windscreen can be raised and locked in the upper or lower position.
The lower portion of the windscreen can be removed and placed in a storage compartment at the rear LH side of the cab.
The windscreen wiper is mounted on the RH cab pillar.
The cab floor is flush with the door sill for easy cleaning.
Self-regulating air conditioning, ventilation and defrosting of the cab by adjustable outlets (windscreen, operator, rear of cab).
Radio pre-equipment with loud-speaker housings.
Double sliding window on door.
Wide foot-rest on either side of the travel pedals and levers.
Optional pedal location.

COMFORT - OPERATION - SAFETY

The safety console and the control panel are located to the right of the operator.
They include:
A large back-lit LCD screen, clearly displaying messages and indicators covering the vital functions of the machine - in a choice of 14 languages.
Touch controls for work mode, travel speed, automatic mode and emergency stop are provided.
There is also a touch control to select the attachment shock absorbing function: a soft or firm mode can be selected by the operator depending on the work being done.
“Clear language text and symbol” messages, plus an audible warning, enable the operator to check that his machine is operating correctly.

ENGINE RETURN TO IDLE

The engine return to idle can be automatic or manual as required by the operator (control on RH control lever).

ANTI-THEFT PROTECTION
An anti-theft system incorporated into the machine's electronic system is standard equipment.

WORK MODES
Hydraulic power is controlled by the electronic system, which provides a continuous link between the hydraulics and the engine.
The operator has a choice of 3 **"traditional"** modes, plus one **"automatic"** mode:

H mode (Heavy) uses all the machine's available power for tough jobs, providing optimum efficiency, high working speed and maximum force.

S mode (Standard) is the "traditional" working mode. It gives 90% of H mode performance (power and speed), and greater fuel economy.

L mode (Light) is the mode to be used for finishing work (sloping banks, profiles, etc), where precision is what is required. It's also the mode used when handling loads and travelling with loads, due to the reduced flow and the continuous availability of **Power Boost** (maximum pressure applied continuously).

For higher efficiency and maximum use of the machine's resources, certain functions have been simplified for the operator. This is the case for the Automatic Mode.

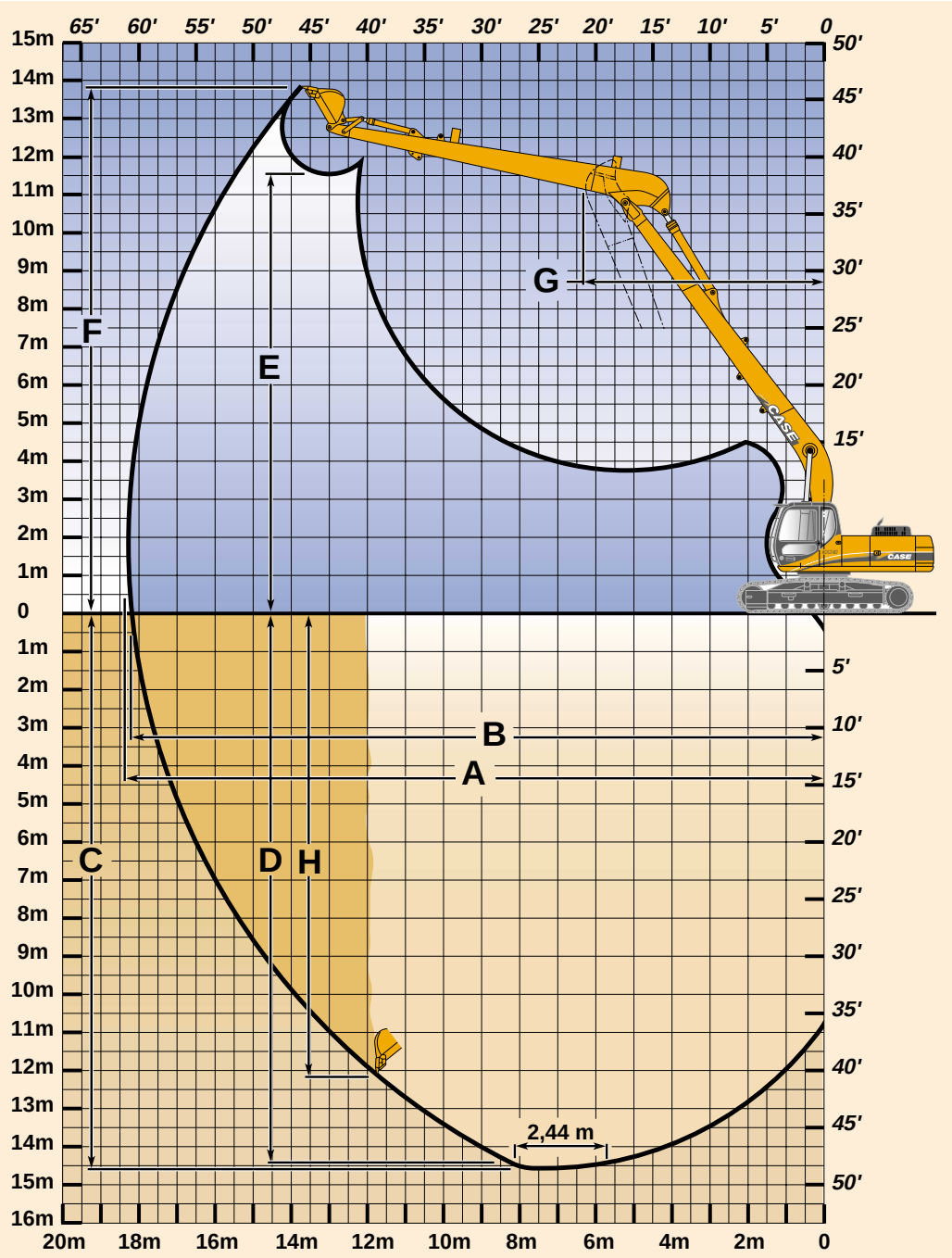
The **AUTO mode** on the new CX240 considerably simplifies machine operation, since it enables the working mode to be changed automatically and continuously (without any action on the part of the operator), depending on the type of work being done.

Over all the cycles performed, a real reduction in fuel consumption is found compared with continuous use in one single working mode.

AUTO POWERBOOST
To simplify the operator's work even further, enabling him to get the maximum performance from his machine, CASE uses a totally automatic powerboost. Regardless of the working mode, AUTO POWERBOOST on the CX240 cuts in whenever the machine encounters a difficult obstacle.
For a period of **8 seconds** the force at the dipper and bucket is increased by 8 to 10 %, totally automatically.

CIRCUIT AND COMPONENT CAPACITIES

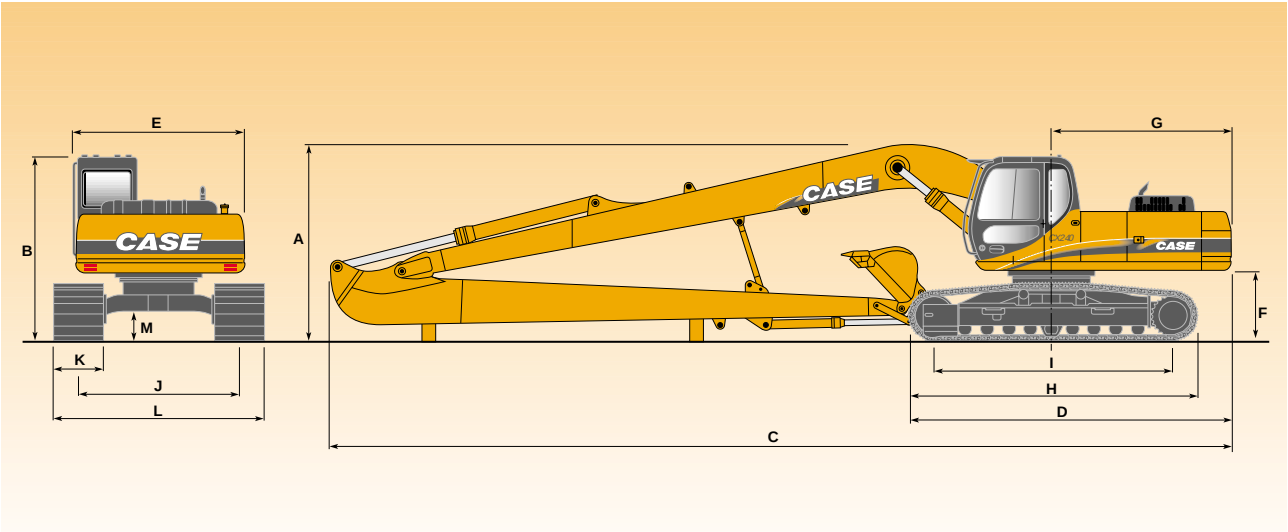
Hydraulic reservoir	120 L
Hydraulic system	225 L
Travel reduction gear (per side)	4.7 L
Swing reduction gear	6 L
Engine (including filter change)	24 L
Fuel tank	340 L



With 10.30 m monobloc boom

	Dipper :	**8.00 m**
A	Maximum digging reach	18.35 m
B	Maximum digging reach at ground levell	18.25 m
C	Maximum digging depth	14.60 m
D	Digging depth - 2.44 m (8') level bottom	14.45 m
E	Maxi dump height	11.55 m
F	Overall reach height	13.70 m
G	Minimum swing radius	6.40 m
H	Vertical straight wall dig depth	12.20 m
Digging force		4000 daN
Breakout force		7700 daN

GENERAL DIMENSIONS



A	Overall height*	3.10 m	
B	Cab height	2.96 m	
C	Overall length*	14.41 m	
D	Overall length (wo/attachment)	5.22 m	
E	Width of upperstructure	2.75 m	
F	Upperstructure ground clearance	1.10 m	
G	Swing (rear end) radius	2.91 m	

H	Track overall length		4.64 m
I	Centre/centre (idler to sprocket)		3.84 m
J	Track gauge		2.59 m
K	Track shoes width (std)		800 mm
L	Track overall width	Shoes 800 mm	3.39 m
M	Ground clearance		0.46 m

** With 10.30 m monobloc boom - 8.00 m dipper and 370 l bucket.*

WEIGHT AND GROUND PRESSURE

With 10.30 m monobloc boom - 8.00 m dipper - 370 l bucket - operator and full fuel tank	Weight (kg)	Ground pressure (bar)
Shoes 800 mm	27400	0.42

BUCKETS

General purpose

SAE capacity 370 l to 570 litres
Width 600 to 910 mm

Ditch

SAE capacity	Litres	570	670
Width	mm	1520	1680

With 10.30 m boom - 8.00 m dipper, 800 mm shoes and 370 l bucket

Reach	3 m		4.50 m		6 m		7.50 m		9 m		10.50 m		12m		13.50 m		15.00 m		16.50 m		Maxi		Maxi reach
Height	*front*	*360°*	*front*	*360°*	*front*	*360°*	*front*	*360°*	*front*	*360°*	*front*	*360°*	*front*	*360°*	*front*	*360°*	*front*	*360°*	*front*	*360°*	*front*	*360°*	*m*
13.50 m																							
12.00 m																					510*		13.90
10.50 m																					**490***		**14.90**
9.00 m																	760*				480*		15.70
7.50 m															**1290***		**980***				**480***		**16.30**
6.00 m															1470*		1170*		610*		490*		16.70
4.50 m													**1880***		**1700***		**1360***		**800***		**510***		**17.00**
3.00 m									2630*		2310*		2070*		1900*	1890	1560	1500	950*		550*		17.20
1.50 m	**3650***		**7030***		**4830***		**3700***		**3020***		**2580**		**2270***	**2200**	**2050***	**1760**	**1780***	**1410**	**1060***		**600***		**17.20**
0 m	3160*		6790*		5620*	5600	4230*	4160	3390*	3210	2840*	2540	2460*	2040	2190*	1640	1980*	1330	1120*	1070	660*		17.10
-1.50 m	**3670***		**6090***		**6200***	**5090**	**4650***	**3790**	**3700***	**2940**	**3080***	**2340**	**2640***	**1890**	**2320***	**1540**	**2080***	**1250**	**1080***	**1020**	**750***		**16.90**
-3.00 m	4430*		6380*		6550*	4790	4960*	3540	3950*	2750	3270*	2190	2790*	1780	2430*	1450	2080	1190	890*		860*		16.50
-4.50 m	**5300***		**7070***		**6710***	**4650**	**5140***	**3390**	**4110***	**2620**	**3400***	**2090**	**2870**	**1700**	**2400**	**1390**	**2040**	**1160**			**1010***		**16.00**
-6.00 m	6260*		8010*	7180	6700*	4610	5200*	3320	4180*	2550	3420	2030	2820	1650	2370	1360	1640*	1140			1230*	1110	15.30
-7.50 m	**7320***		**8790***	**7310**	**6540***	**4650**	**5130***	**3320**	**4160***	**2540**	**3410**	**20100**	**2810**	**1640**	**2370**	**1370**					**1550***	**1230**	**14.50**
-9.00 m	8490*		8230*	7520	6220*	4760	4920*	3390	4010*	2580	3330*	2050	2790*	1680							2080*	1440	13.40
-10.50 m	**9800***		**7410***		**5680***	**4940**	**4540***	**3510**	**3710***	**2670**	**3060***	**2130**									**2520***	**1780**	**12.00**
-12.00 m	8680*		6260*		4870*		3910*	3710	3170*	2840											2670*	2400	10.20
-13.50 m					**3630***		**2870***														**2800***		**7.70**

- Machine in «LIGHT» mode
- Lift capacities are taken in accordance with SAE J 1097 / ISO 10567 / DIN 15019-2.
- Lift capacities shown in kg do not exceed 75% of the tipping load or 87% of the hydraulic lift capacity.
- Capacities that are marked with an asterisk are hydraulic limited
- If the machine is equipped with a quick coupler, subtract the weight of the quick coupler from the load shown in the tables to calculate the real lifting capacity.

STANDARD EQUIPMENT

Hydraulic control
- 4 working modes (3 manual + 1 auto)
- 2 travel speeds with automatic speed change
- Swing brake control
- Load-holding valves on boom and dipper
- Power control - automatic powerboost
- Hydraulic control lever locking, lever position adjustment
- Auxiliary circuit control valve section
- High performance “Ultra Clean” filtration system (1 µ)

Engine control
- Engines to Tier II standard
- Calculator on injection pump
- Automatic / manual engine return to idle
- Fuel level check
- Emergency stop
- Automatic engine pre-heating

System Monitor, with 14 language display
- Messages (Function, safety, etc.)
- Working modes (H-S-L and auto)
- Operating modes (travel mode, swing locking, etc.)
- Audible warning device
- Digital clock
- Water temperature
- Hydraulic oil temperature
- Diagnostic system

Electrical system
- Leak-proof connectors
- Double horn

Lighting
- 1 working light on the fuel tank
- 1 working light on the boom
- 1 working light on the cab

Operator environment
- Modern cab, 1 metre wide
- Safety glass
- Suspended cab (6 mounting points with rubber/fluid shock absorbing mountings)
- Windscreen with lockable opening
- “LCD” display
- Water and dust-proof membrane type touch controls
- Windscreen washer and wiper
- Adjustable heater
- Floor mat
- Sun-visor
- Rear-view mirror and safety mirrors
- Self-adjusting air conditioning
- Anti-theft device

Operator seat
- Air suspension
- Height and tilt adjustment
- Adjustable head-rest
- Adjustable seat-back angle
- Adjustable arm-rests
- Reel-type safety belt

OPTIONS

- Auxiliary hydraulic circuit

Standard and optional equipment cES

Conforms to directive 98/37/CE CE

NOTE: Standard and optional attachments and equipment may vary according to requirements and regulations from country to country. The photos given may show non standard or unmentioned items. Furthermore CASE reserves its right to modify specifications of its machines without prior warning, without incurring any obligation whatsoever that might result from such modifications.

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