

ORIGINAL INSTRUCTIONS - according to Directive 2006/42/EC, Annex I, 1.7.4.1

CX85D SR Long Reach Crawler Excavator

OPERATOR'S MANUAL *Supplement to 51606329*

Part number 90332280
1st edition English
April 2020



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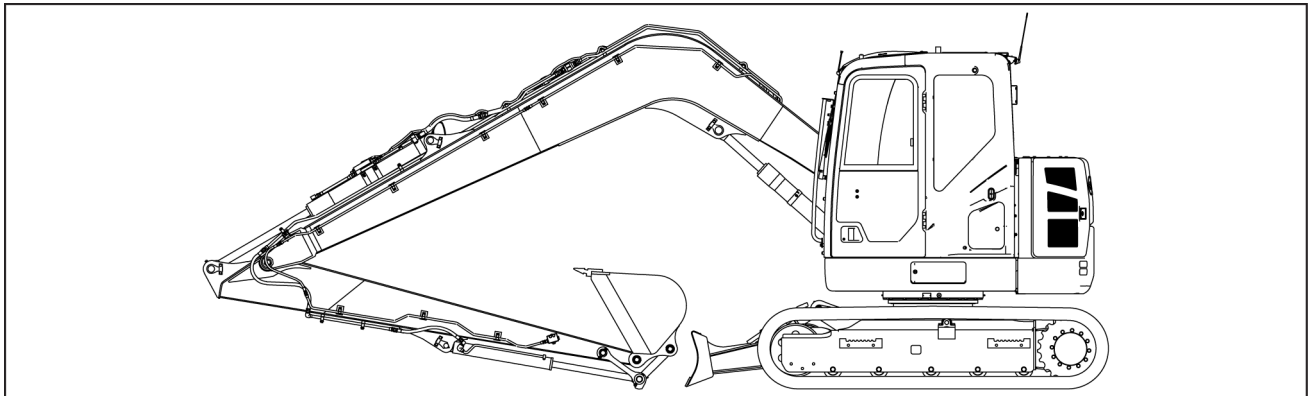
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1 - GENERAL INFORMATION

Product identification

The CX85D SR LR is a crawler hydraulic excavator. It consists of an undercarriage fitted with tracks and a turntable bearing which supports the upperstructure frame. The upperstructure frame supports the attachment, at the front end of the machine, plus the engine, hydraulics and cab. When the operator works the controls, the engine-driven pump delivers hydraulic fluid to the control valves. The control valves distribute the hydraulic fluid to the various cylinders and hydraulic motors employed. A cooling system maintains the hydraulic fluid at normal operating temperature.



SMIL19CEX2808EA 1

CX85D SR LR (Long Reach)

When ordering parts, obtaining information or assistance, always supply your CASE CONSTRUCTION Dealer with the type and serial number of your machine or accessories. Write the following in the spaces below: the type, serial number and year of manufacture of your machine, accessories and the serial numbers of the various hydraulic and mechanical components.

Machine

(1) Designation/Model
Hydraulic Excavator CX85D SR LR

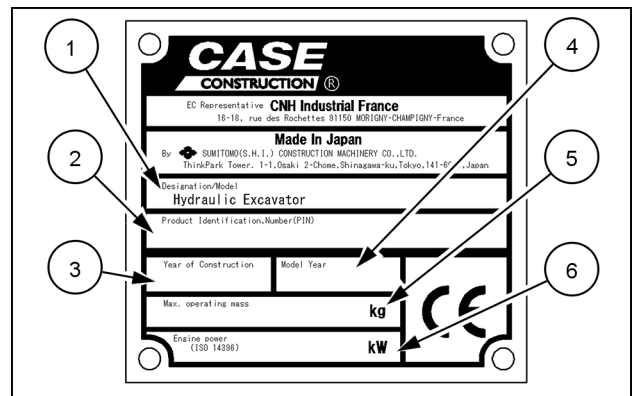
(2) Product Identification Number (PIN)

(3) Year of Construction

(4) Model Year

(5) Maximum operating mass
(the weight shown on the manufacturer's plate is the value using the heaviest configuration and that it does not always correspond to the transport configuration)

(6) Engine power ISO 14396

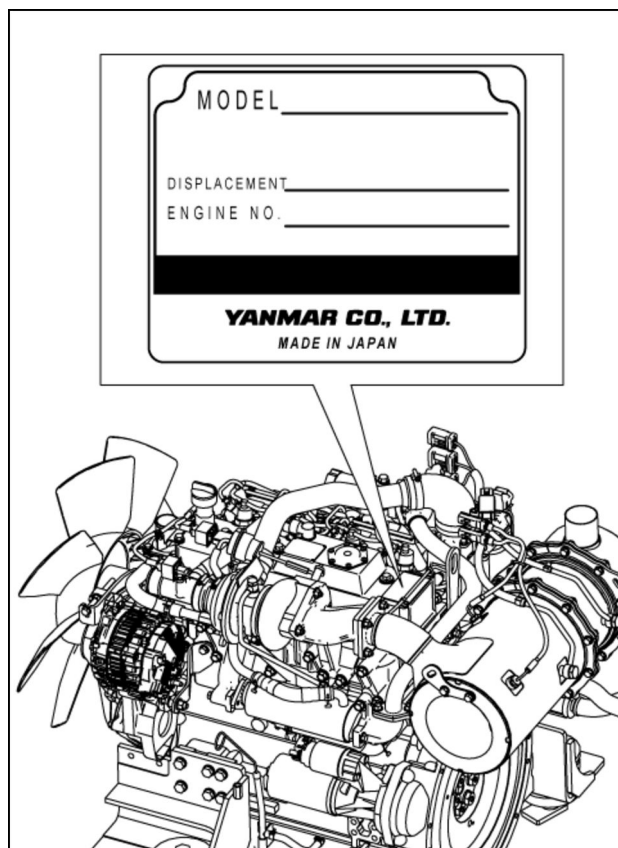


SMIL15CEX3307AA 2

Engine ID label

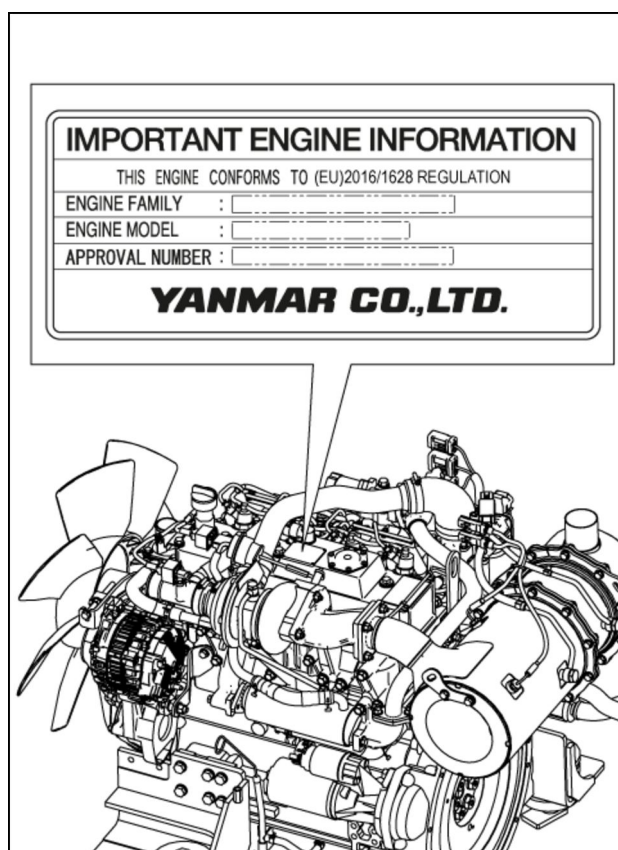
Manufacturer and model: YANMAR 4TNV98CT

Serial number:



SMIL19CEX0616BA 3

Engine emission label




SMIL19CEX0617BA 4

Cab protection ROPS (Roll Over Protective Structure)

Complies with ISO 12117-2.

Product identification number:

 MADE IN JAPAN BY SUMITOMO (S.H.I.) CONSTRUCTION MACHINERY CO., LTD. ThinkPark Tower, 1-1, OSAKI 2-CHOME, SHINAGAWA-KU, TOKYO, 141-6025, JAPAN	
Product No.	***** Q = 0~9
Machine Model	*****
Max Machine Weight	*****
ISO 10262	Cab Top Rated OPG Level 1
ISO 12117-2	ROPS Cab


SMIL17CEX5115AA 5

Cab protection FOPS (Falling Objects Protective Structure)

Complies with ISO 10262 level 1 (cab roof).

Complies with ISO 10262 level 2 (with optional bolt-on top guard).

Product identification number:


 MADE IN JAPAN BY SUMITOMO (S.H.I.) CONSTRUCTION MACHINERY CO., LTD. ThinkPark Tower, 1-1, OSAKI 2-CHOME, SHINAGAWA-KU, TOKYO, 141-6025, JAPAN	Product Identification Number ISO 10262 LEVEL 2 CAB GUARD * ***** * MACHINE RANGE * ***** * XXXXXXXX-XX
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SMIL17CEX5116AA 6

Cab protection FGPS (Front Guard Protective Structure)

Complies with ISO 10262 level 1 (with optional double frame bolt-on front grid).

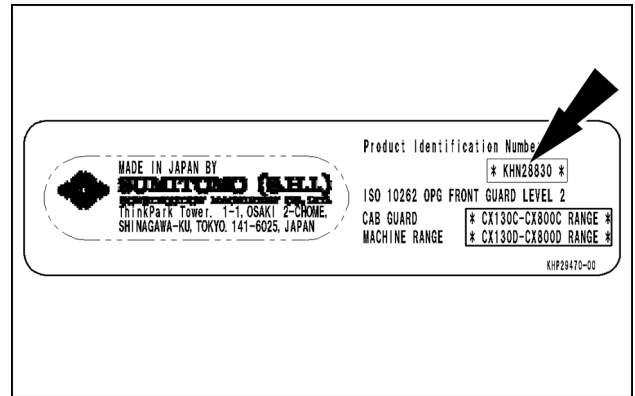
Product identification number:

 MADE IN JAPAN BY SUMITOMO (S.H.I.) CONSTRUCTION MACHINERY CO., LTD. ThinkPark Tower, 1-1, OSAKI 2-CHOME, SHINAGAWA-KU, TOKYO, 141-6025, JAPAN	Product Identification Number * KHN27710 * ISO 10262 OPG FRONT GUARD LEVEL 1 CAB GUARD * CX130C-CX800C RANGE * MACHINE RANGE * CX130D-CX800D RANGE * KHP29400-01
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SMIL15CEX3852AA 7

Complies with ISO 10262 level 2 (with optional single frame bolt-on front grid).

Product identification number:



SMIL15CEX3853AA 8

Component serial numbers

Hydraulic pump:

Swing reduction gear:

Travel reduction gears:

Travel control valve:

Attachment control valve:

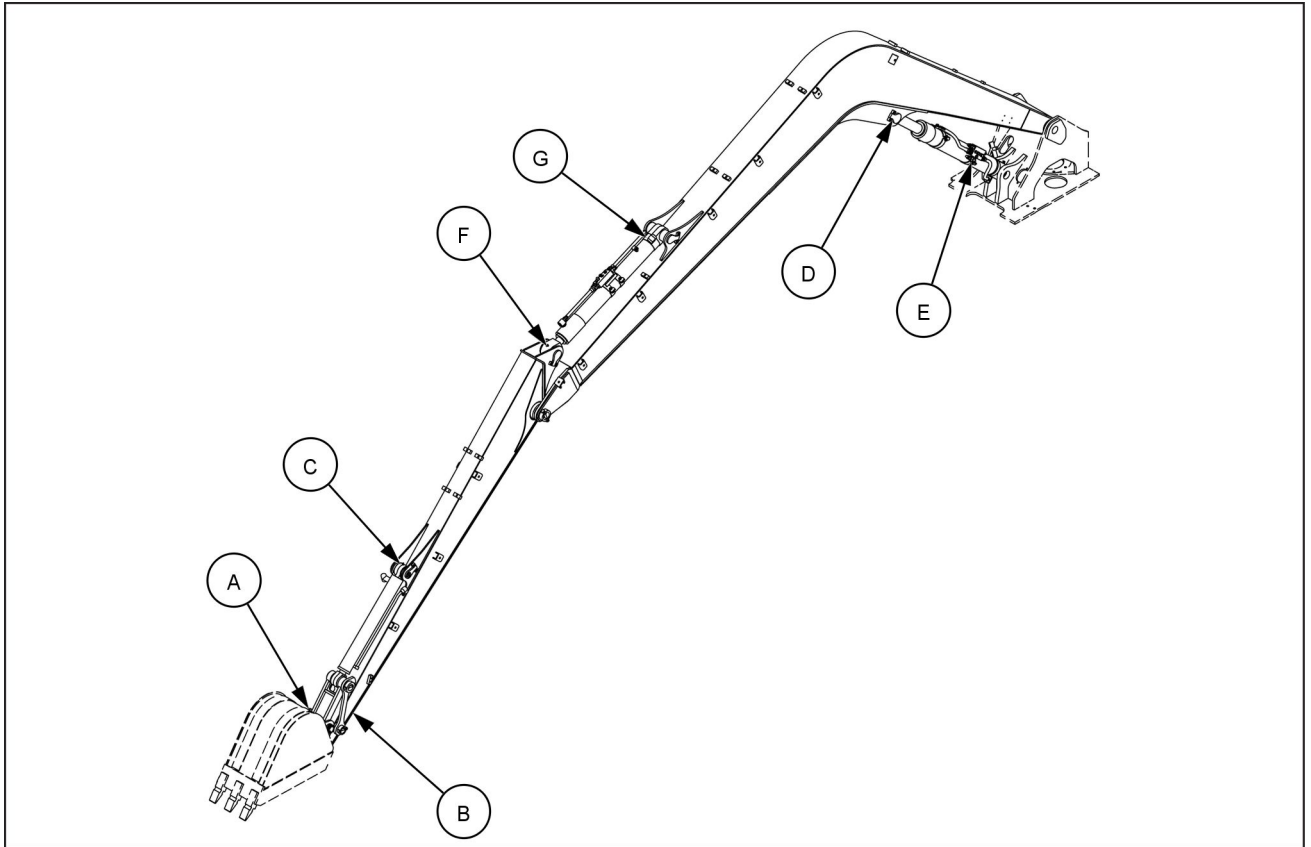
Swing control valve:

2 - MAINTENANCE

Every 50 hours

Grease points

Lubricant: **CASE AKCELA 251H EP MULTI-PURPOSE GREASE.**

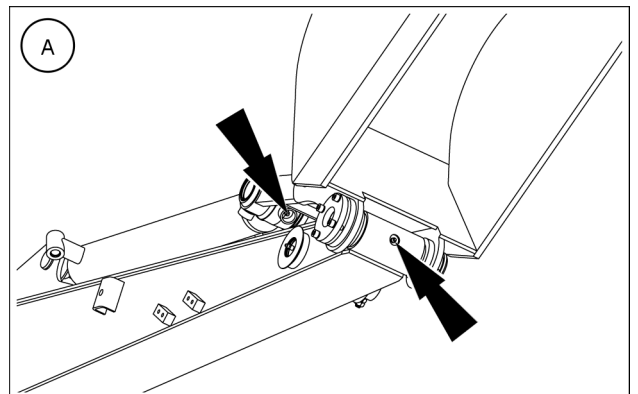


SMIL19CEX2597FA 1

Using a grease gun, inject grease of the specified type in the grease points shown in figures:

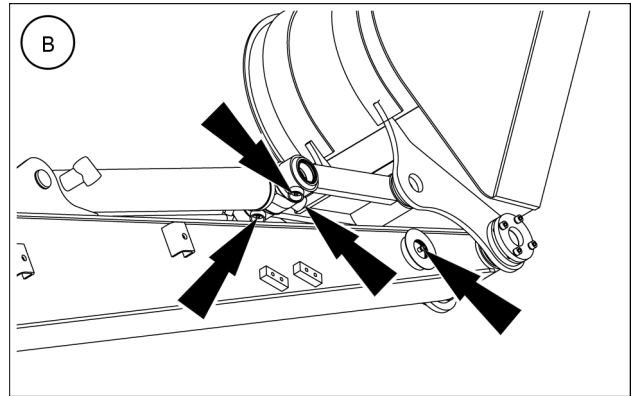
- Bucket linkages

NOTICE: the bucket linkage should be lubricated every **10 h** if the machine is operated in water or mud.



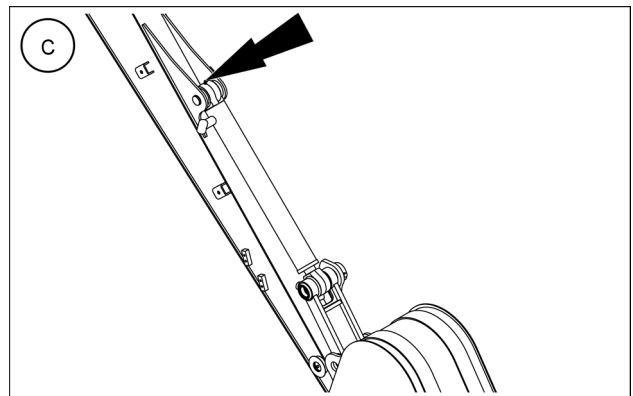
SMIL19CEX2598AA 2

- Arm link/connecting rod



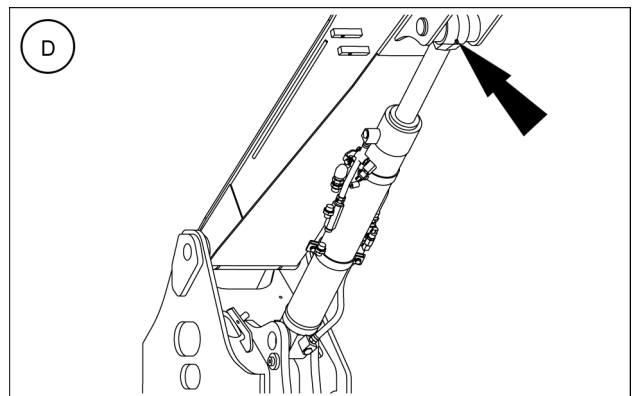
SMIL19CEX2599AA 3

- Bucket cylinder bottom pin



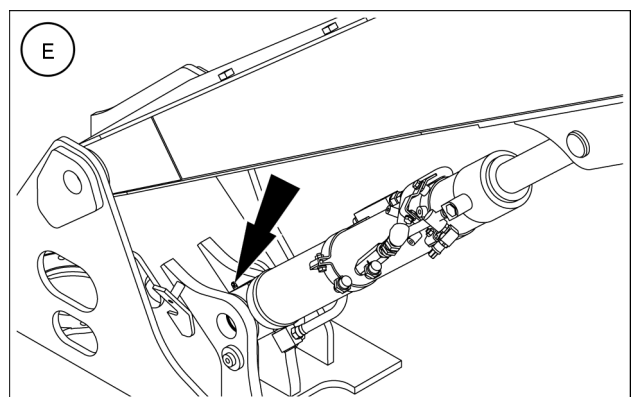
SMIL19CEX2600AA 4

- Boom cylinder top pin



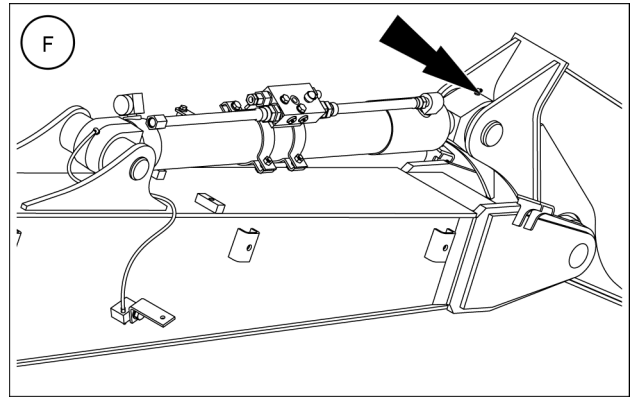
SMIL19CEX2803AA 5

- Boom cylinder bottom pin



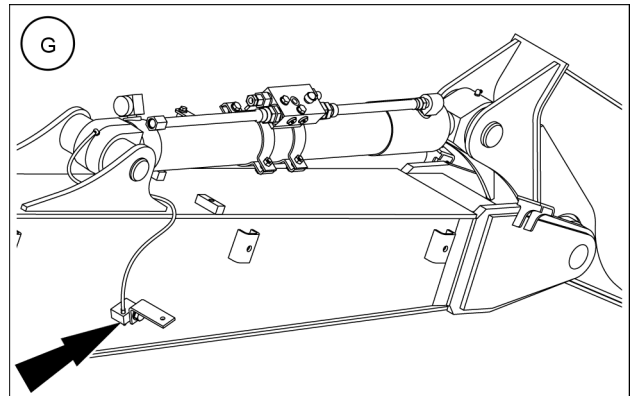
SMIL19CEX2804AA 6

- Arm cylinder top pin



SMIL19CEX2811AA 7

- Arm cylinder bottom pin

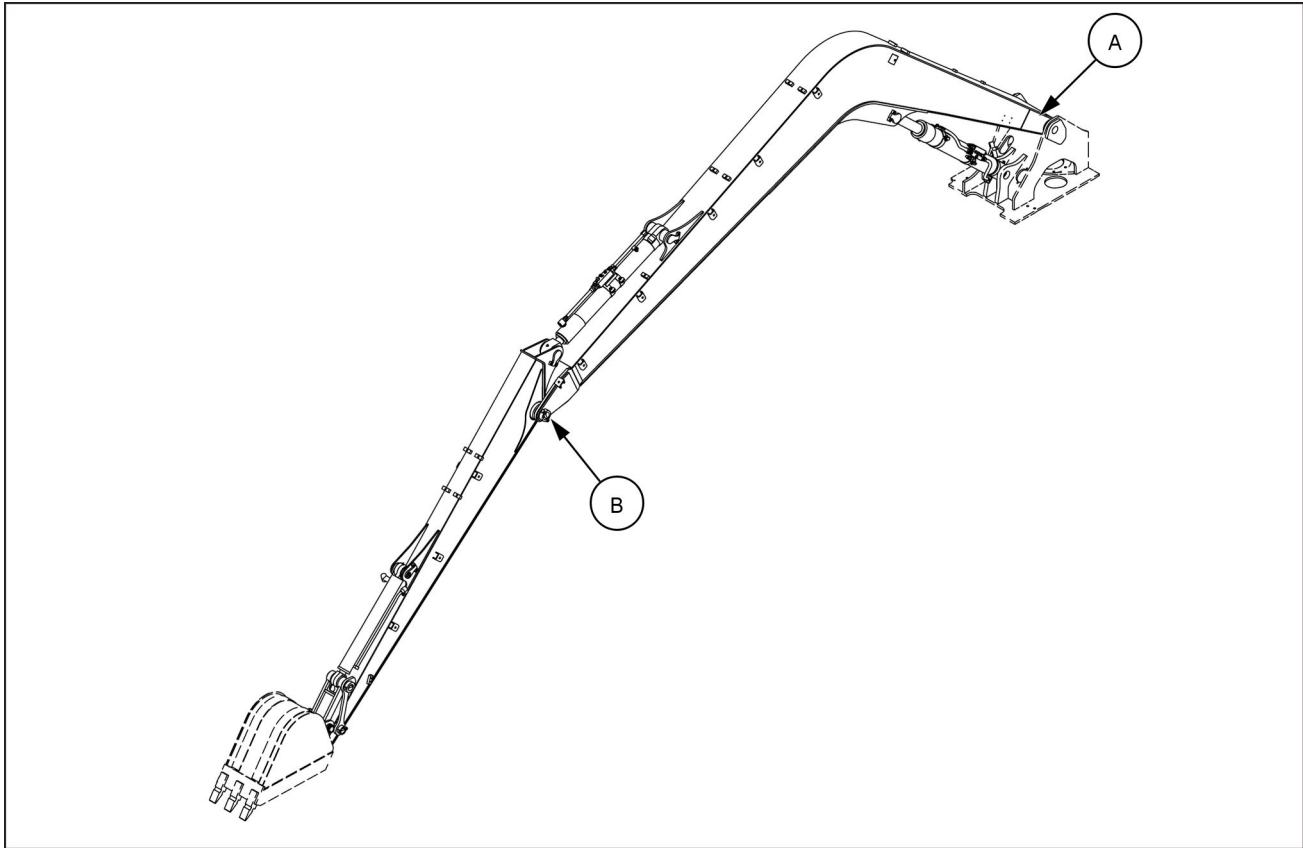


SMIL19CEX2811AA 8

Every 1000 hours

Grease points

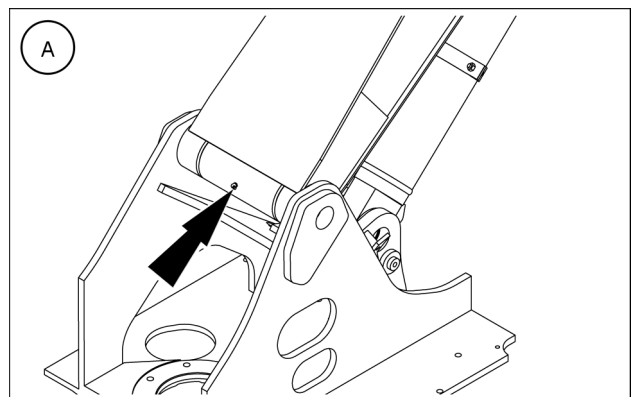
Lubricant: **CASE AKCELA 251H EP MULTI-PURPOSE GREASE.**



SMIL19CEX2597FA 1

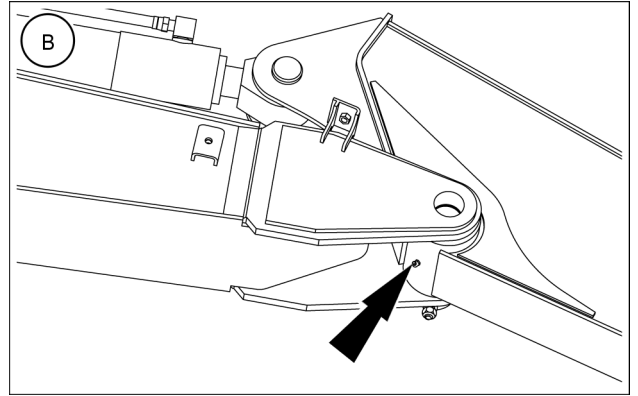
Using a grease gun, inject grease of the specified type in the grease points shown in figures:

- Boom bottom pin



SMIL19CEX2806AA 2

- Boom/arm linkage



SMIL19CEX2807AA 3

3 - SPECIFICATIONS

Machine specifications

Engine

Manufacturer and model	YANMAR 4TNV98CT-L2WSH
Injection	Electronic-controlled High-pressure common rail
Number of cylinders	4
Bore x stroke	98 mm (3.9 in) x 110 mm (4.3 in)
Displacement	3318 cm ³ /rev (202 in ³ /rev)
Rated speed	2000 RPM
Rated power (ISO 9249)	50.7 kW (68.9 Hp)
Cooling	Water-cooled
Battery start	2 x 12 V 64 A·h
Voltage	24 V
Alternator	60 A
Starter	24 V, 3.2 kW

Hydraulic system

Maximum flow of the main pump (at 2000 RPM)	2 x 74 L/min (19.5 US gpm)
Rated working pressure	29.4 MPa (4264.5 psi)
Maximum flow of the pilot pump (at 2000 RPM)	18 L/min (4.8 US gpm)
Rated pilot pressure	3.9 MPa (565.7 psi)

Swing performance

Swing speed	10.4 RPM
Swing torque	14700 N·m (10842 lb ft)

Travel performance

Low speed	0 – 3.2 km/h (0 – 2.0 mph)
High speed	0 – 5.1 km/h (0 – 3.2 mph)
Drawbar pull	59300 N (13331 lb)
Grade ability	70% (35°)

Digging performance

Bucket digging force	3774 daN (8484 lbf)
Arm digging force 3.10 m (122.05 in)	2121 daN (4768 lbf)

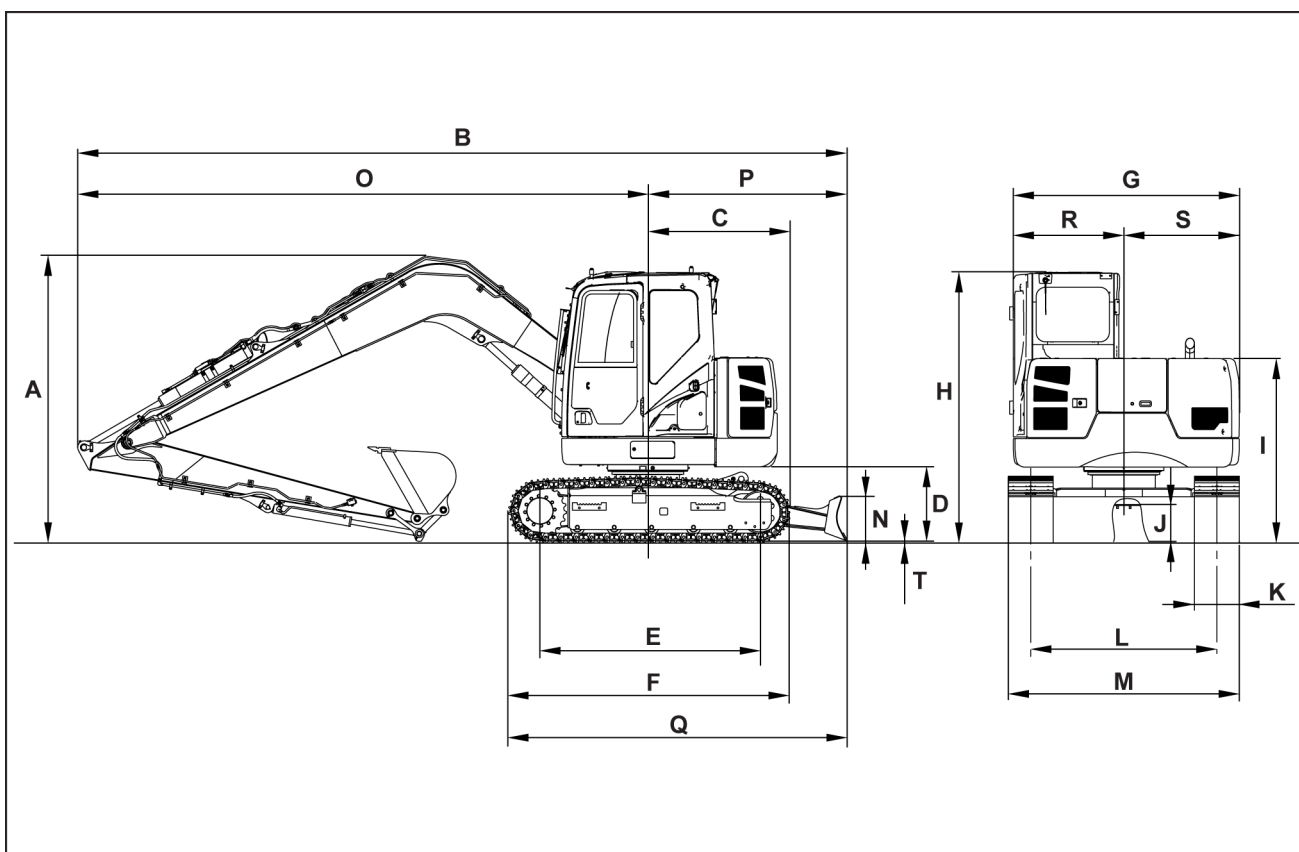
Tracks

Steel track	600 mm (23.6 in)
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Working lights

One on attachment	24 V, 70 W
One on cab	24 V, 70 W

Dimensions

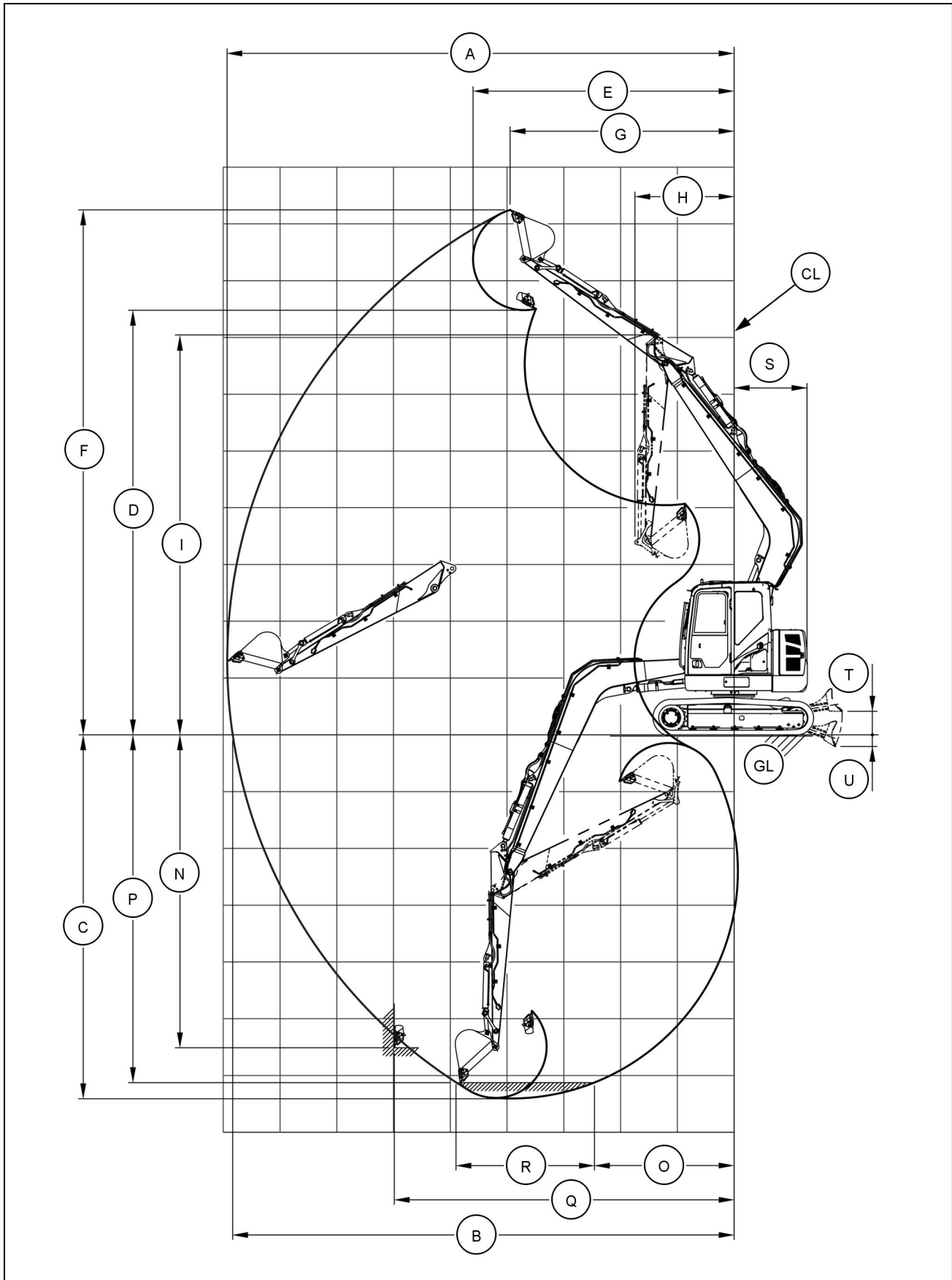


SMIL19CEX2915FA 1

Arm	3.10 m (122.05 in)
Boom	5.35 m (210.63 in)
(A)	2.98 m (117.32 in)
(B)	7.94 m (312.60 in)
(C)	1.43 m (56.30 in)
(D) (without grousers)	0.75 m (29.53 in)
(E)	2.21 m (87.01 in)
(F)	2.85 m (112.01 in)
(G)	2.27 m (89.37 in)
(H) (*)	2.72 m (107.09 in)
(I)	1.86 m (73.23 in)
(J)	0.36 m (14.17 in)
(K)	0.60 m (23.62 in)
(L)	1.87 m (73.62 in)
(M)	2.47 m (97.24 in)
(N)	0.45 m (17.72 in)
(O)	5.95 m (234.25 in)
(P)	1.99 m (78.35 in)
(Q)	3.41 m (134.25 in)
(R)	1.11 m (43.70 in)
(S)	1.16 m (45.67 in)
(T)	0.02 m (0.79 in)

NOTE: (*) 2.86 m (112.60 in) if FOPS level 2 is installed.

Working ranges



SMIL19CEX2813HA 2

3 - SPECIFICATIONS

	Arm	3.10 m (122.05 in)
	Boom	5.35 m (210.63 in)
(A) Max digging reach		8.93 m (351.57 in)
(B) Max digging reach at ground level (GL)		8.83 m (347.64 in)
(C) Max digging depth		6.71 m (264.17 in)
(D) Max dump height		7.49 m (294.88 in)
(E) Max dump distance		4.64 m (182.68 in)
(F) Max working height		9.26 m (364.57 in)
(G) Reach at max working height		3.99 m (157.09 in)
(H) Min equipment swing radius		1.76 m (69.29 in)
(I) Height at min equipment swing radius		7.07 m (278.35 in)
(N) Max digging depth on a vertical face		5.24 m (206.30 in)
(O) Reach at max digging depth on a vertical face		2.00 m (78.74 in)
(P) Max flat-bottomed trenching depth		6.38 m (250.98 in)
(Q) Distance of flat-bottomed trench		6.01 m (236.61 in)
(R) Flat-bottomed trench reference length		2.44 m (96.06 in)
(S) Swing tail radius		1.35 m (53.15 in)
(T) Maximum blade lift		0.44 m (17.32 in)
(U) Maximum blade depth		0.28 m (11.02 in)

NOTE: the dimensions of the working range are defined basing on the two reference lines **(GL)** (ground level) and **(CL)** (center line, i.e. rotation axis of the machine). All the dimensions related to the **(GL)** are defined with the grousers indented into the ground.

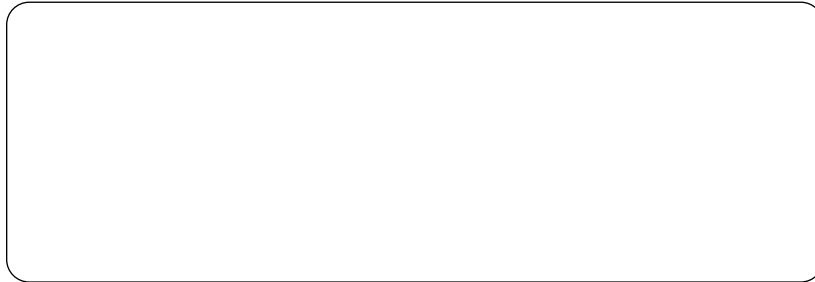
Operating weights

Long Reach Boom 5.35 m (210.63 in) , Long Reach Arm 3.10 m (122.05 in) , 0.19 m³ (0.25 yd³) General Purpose Bucket, 600 mm (24 in) track, operator, fluids, full fuel tank	8615 kg (18993 lb)
Average ground contact pressure	29 kPa (4.2 psi)

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Dealer's stamp



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