788/988 - 788/988 *Plus* Crawler Excavators
788/988 - 788/988 *Plus* Wheeled Excavators
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** * Consult the engine Service Manual.*

Section

1001

SAFETY, GENERAL INFORMATION AND TORQUE SPECIFICATIONS

Case

Cre 7-56942GB

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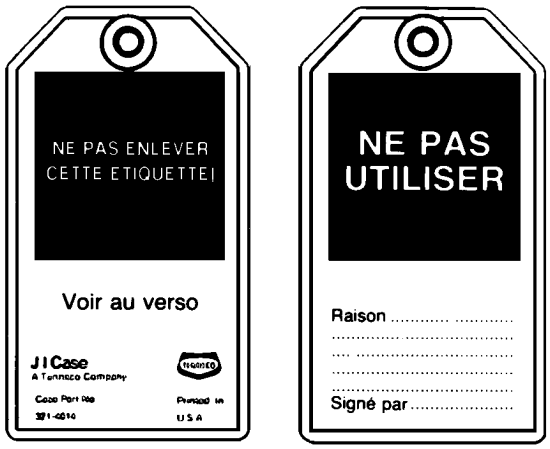
SAFETY

WARNING: *This symbol means WARNING ! BE VIGILANT ! YOUR SAFETY IS AT RISK. The message that follows the symbol contains important safety information. Read it carefully. Be sure you understand the possible risks of injury or even death.*

To avoid all risks, always follow the safety notes contained in this section and throughout this manual.

Put the warning tag shown below on the key for the keyswitch when servicing or repairing the machine. One warning tag is supplied with each machine. Additional tags, Part Number 321-4614, are available from your service parts supplier.



PDG0328

WARNING: *Read the Operator's Manual carefully and make sure you understand how to operate the controls correctly.*

WARNING: *Never operate the machine and attachment controls unless you are seated in the operator's seat. If you are not in the operator's seat, you run the risk of serious injury.*

WARNING: *The machine is built to carry the operator only. Do not allow passengers to ride on the machine.*

WARNING : *Prior to starting up the engine read the safety messages contained in the operator's manual carefully. Read all safety stickers on the machine. Have people move back from the machine. Learn how to use the controls before starting up the machine. It is your responsibility to follow the manufacturer's instructions on how to operate and maintain the machine. It is your responsibility to follow applicable rules and regulations. Service and Operator's Manuals are available from your J.I. Case Dealer.*

WARNING: *If you wear loose clothing or if you omit to use safety equipment for your work, you risk injury. Always wear clothes that do not risk getting caught in the machine. Other safety equipment may be necessary, in particular : helmets, safety shoes, ear plugs, safety glasses, protection mask, thick gloves and reflecting clothes.*

WARNING: *When working close to the fan with the engine running, avoid wearing loose clothing and operate with extreme caution.*

WARNING: *When checking the hydraulic circuits, follow procedures to the letter. DO NOT CHANGE procedures.*

WARNING: *Prior to operating the hydraulic cylinders of this machine for setting or to bleed the circuit, have all people standing around the machine move away.*

WARNING: *Wear gloves or insulated mittens when working on hot parts.*

WARNING: *Lower all attachments to the ground or rest them on stands before carrying out maintenance jobs.*

WARNING: *Fine sprays of hydraulic oil under pressure can penetrate the skin and cause serious infection. If hydraulic oil under pressure penetrates the skin, see a doctor immediately. Maintain all hoses and pipes in good condition. Make sure that all connections are properly tightened. Change all hoses or pipes that have been damaged or that are suspect. DO NOT CHECK for leaks with bare hands. Use a piece of cardboard or wood.*

WARNING: *To remove a hardened pin such as a pivot pin, or a hardened shaft, use a soft head hammer (brass or bronze) or a brass or bronze strip and a steel head hammer.*

WARNING: *When using a hammer to remove or reassemble pivot pins, or when using compressed air, or when using a grinder make sure to wear safety glasses that protect the eyes from all sides.*

WARNING: *Use proper lifting/hoisting equipment to lift wheels or tracks and always work on safe ground. Prevent the machine from moving using correct safety chocks.*

WARNING: *When performing maintenance or repair operations on the machine, make sure that the work shop floor, the cab and the steps of the excavator are free from oil, water, grease, tools etc. Use oil absorbing material or rags as necessary. Always think safety.*

WARNING: *Certain components of this machine are very heavy. Use hoisting tools or additionnal assistance as recommended in this manual.*

WARNING: *Exhaust fumes can cause death. If it is necessary to start up the engine in a closed building, evacuate exhaust fumes using an exhaust pipe extension. Open the doors and let fresh air into the building.*

WARNING: *When battery liquid is frozen, the battery can explode if : (1) you try to charge the battery or (2) you try to start the engine by connecting an auxiliary power source. To prevent battery electrolyte from freezing keep the battery fully charged. If you do not follow these instructions, you or others nearby may be injured.*

WARNING: *Batteries contain acid and explosive gases. A spark, a flame or an improper cable connection may cause an explosion. For proper connection of cables to the battery of this machine see the Operator's Manual. If you do not follow these instructions, you risk severe injury.*

TWIN WHEELS

Safety rules

WARNING: *In all cases, before removing twin wheels, always deflate both tyres completely.*

WARNING: *If a tyre bursts it can cause serious injury. Check tyres regularly to see that they are in good condition and always be sure to inflate them to the correct pressure.*

WARNING: *Never face a tyre when checking pressure or adding air. Always stand in front of the tread. Use an inflation cage if the wheel has been removed from the machine. Make sure all people standing in the area move well away.*

WARNING: *Never weld near a tyre.If this can not be avoided, it is mandatory to remove the tyre before performing any welding operations.*

WARNING: *Make sure that all decals on the machine are perfectly legible, clean them regularly and replace any decals which are damaged, missing or painted over, with new ones.*

Safety instructions

- Use appropriate, good quality tools to disassemble the various wheel components. Never use a hammer. Use a rubber, plastic or copper-faced mallet.

IMPORTANT: *Never remove the inner tyre valve extension, as this will be necessary afterwards for inflating and deflating the tyre.*

IMPORTANT: *If the valve or the valve extension are no longer accessible, take the necessary precautions and then, imperatively, puncture the tyre.*

- Use suitable grease to facilitate the installation and removal of the tyre.
- Never re-inflate a tyre on the machine which has been used at a pressure lower than 5.6 bar.
- Check the various components: tyre, rim, shoulder, retaining ring and replace any defective items.
- Never reuse a retaining ring which is distorted or rusty.

GENERAL INFORMATION

CLEANING

Clean all metal parts except bearings with white spirit or steam. Do not use caustic soda when steam cleaning. After cleaning, dry and lubricate all parts. Clean hydraulic lines with compressed air. Clean bearings with kerosene, then dry them and lubricate them.

INSPECTION

Check all parts when disassembled. Change all parts showing wear or damage. Scratches that are not too deep can be removed by honing or with a rag dipped into buffing compound. A full visual inspection to detect wear and pitting and subsequent changing of parts will prevent premature failure.

BEARINGS

Check that bearings rotate freely. If their adjustment is too loose or if they do not run regularly, change them. Wash bearings with a good solvent or kerosene and let them dry. DO NOT DRY BEARINGS WITH COMPRESSED AIR.

NEEDLE BEARINGS

Before inserting needle bearings into a bore, remove all metal particles from the edge of the bore. Prior to mounting bearings with a press, coat the inside and the outside of the bearing with vaseline.

GEARS

Check all the gears for wear or damage. Change worn or damaged gears.

SEAL RINGS, O-RINGS, GASKETS

Always use new seal rings. O-rings and gaskets. Coat sealing rings and O-rings with vaseline.

SHAFTS

Check all shafts showing signs of wear or damage. Check that the surface of a shaft running in a bearing is not damaged.

SPARE PARTS

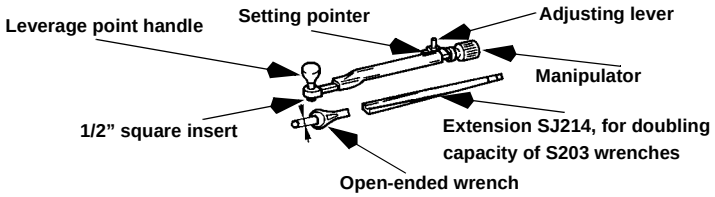
Always use original CASE spare parts. To order spare parts, see the Spare Parts Catalogue to indicate the proper reference of original CASE spare parts. Failures caused by the use of parts that are not original CASE spare parts are not covered by the warranty.

LUBRICATION

Use only oils and lubricants specified in the Operator's and Service Manuals. Failures due to the use of oils and lubricants not specified are not covered by the warranty.

CORRECT USE OF TORQUE WRENCHES

TORQUE WRENCHES



PDG0315

CORRECT USE

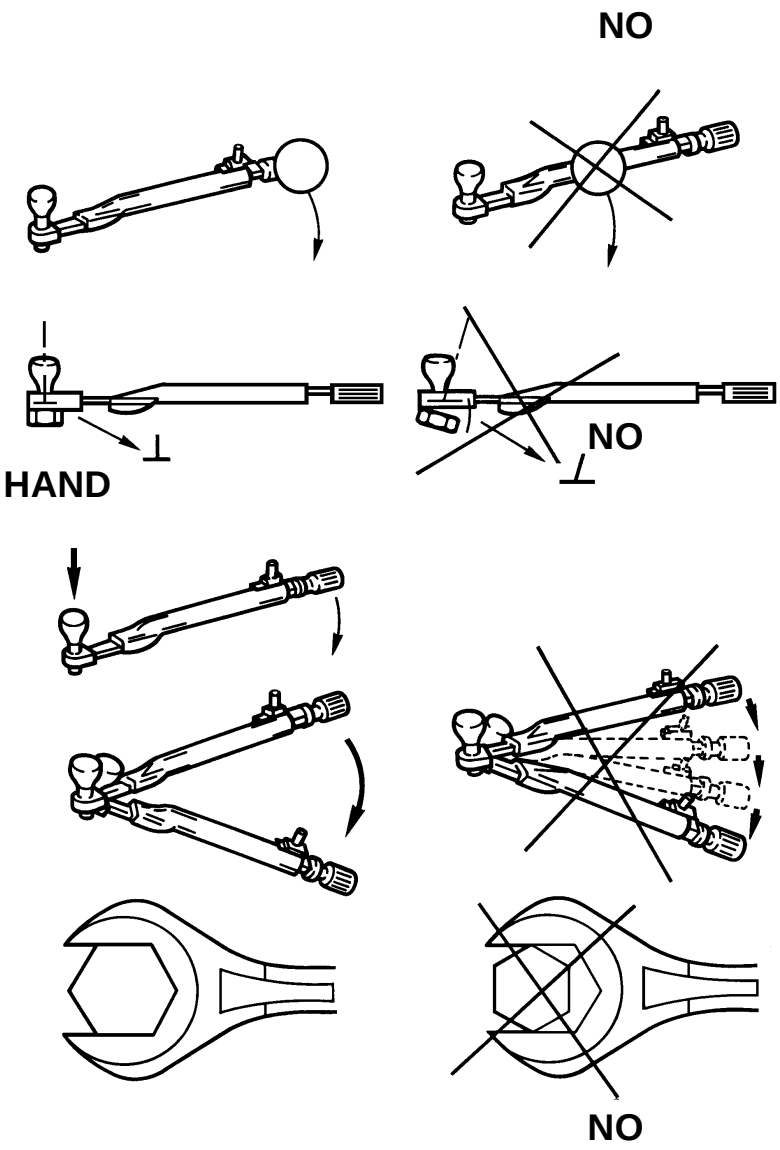
a - Hold the wrench by the handle provided.

b - When tightening, always keep the wrench perpendicular to the screw.

c - Keep one hand on the leverage point handle on the wrench.

d - Tighten progressively in one movement.

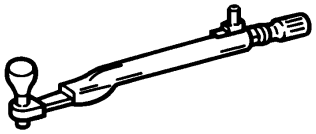
e - Position a correctly dimensioned socket or open-ended wrench on the flats of the screw head.



PDG0316

HARDWARE TIGHTENING ORDER

TORQUE WRENCHES



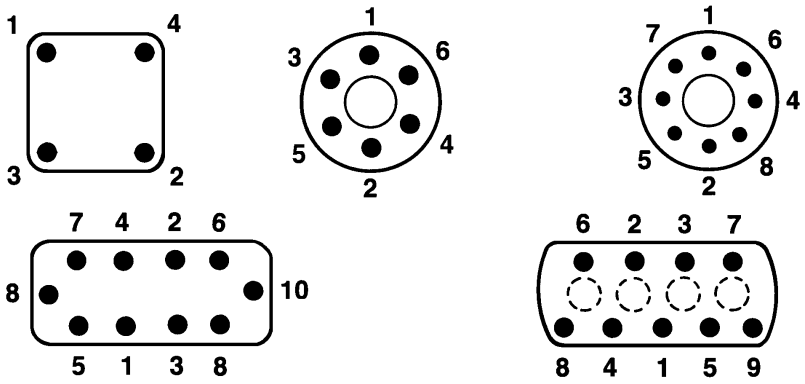
PDG0317

INITIAL TORQUE

a - Torque wrench.

- Follow the correct order of procedure when tightening.

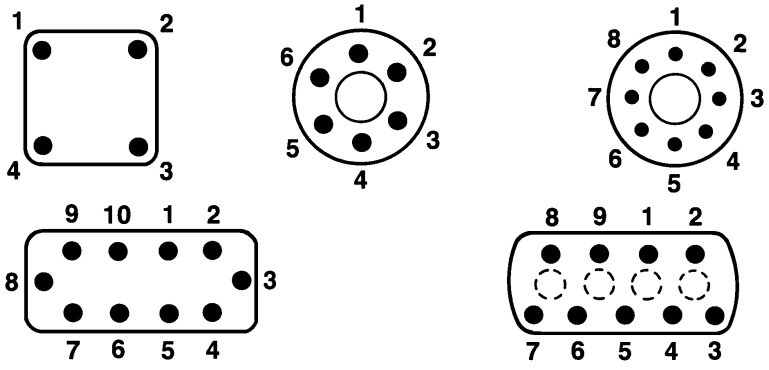
- Cross or diagonal pattern tightening.



PDG0318

FINAL TORQUE

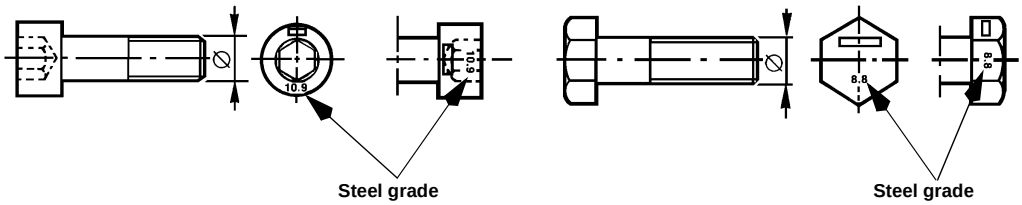
Always tighten in clockwise order.



PDG0319

STANDARD SCREW A TORQUE SPECIFICATIONS

Correct screw identification



PDG0320

	Diameter x thread size Grade 8.8	Key		Torque Nm		Torque lb.ft	
				□	■	□	■
Two-part hydraulic connector (to SAE J518 specifications)	M5 x 0.8	4	8	5.5	5.5	4.1	4.1
	M6 x 1	5	10	9	9	6.7	6.7
	M8 x 1.5	6	13	22.5	22.5	16.6	16.6
	M10 x 1.5	8	17	45	45	33.2	33.2
	M12 x 1.75	10	19	70	80	51.6	59
	M14 x 2	12	22	100	120	73.8	88.6
	M16 x 2	14	24	170	200	125.5	147.6
	M18 x 2.5	14	27	250	300	184.5	221.4
	M20 x 2.5	17	30	350	400	258.3	295.2
	M22 x 2.5	17	32	500	600	369	442.8
	M24 x 3	-	36	600	700	442.8	516.6
	M27 x 3	-	41	900	1000	664.2	738
	M30 x 3.5	-	46	1200	1400	885.6	1033.2
Components assembled by screws and bolts **SCREW**	**Grade 10.9**						
	M5 x 0.8	4	8	75	75	5.6	5.6
	M6 x 1	5	10	12.5	12.5	9.3	9.3
	M8 x 1.5	6	13	35	35	25.8	25.8
	M10 x 1.5	8	17	60	70	44.3	51.6
	M12 x 1.75	10	19	100	120	73.8	88.6
	M14 x 2	12	22	170	200	125.5	147.6
	M16 x 2	14	24	250	300	184.5	221.4
	M18 x 2.5	14	27	350	400	258.3	295.2
	M20 x 2.5	17	30	500	600	369	442.8
	M22 x 2.5	17	32	700	800	516.6	442.8
	M24 x 3	-	36	900	1000	664.2	738
	M27 x 3	-	41	1200	1400	885.6	1033.6
	M30 x 3.5	-	46	1700	1900	1254.6	1402.2

PDG0321

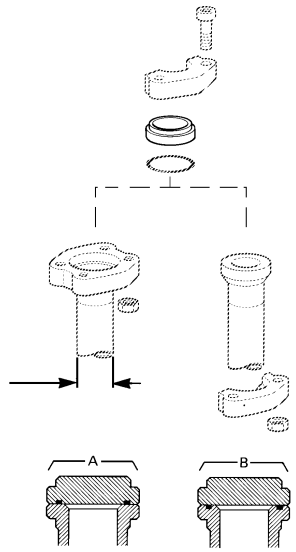
PDG0322

□ Zinc bichromate

■ Phosphate

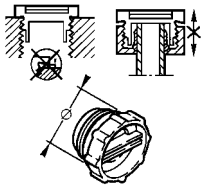
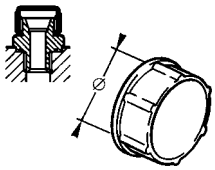
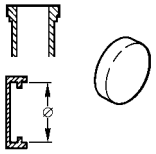
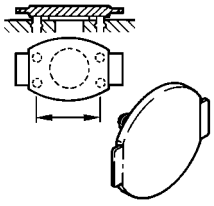
METAL CAP REFERENCES

To SAE J518 specifications

	NP 250 bar Ø ND	NP 400 bar Ø ND	Part number	
			A	B
 PDG0323	13 mm	-	D5327838	E5327839
	19 mm	-	F5327840	G5327841
	25 mm	-	H5327842	J5327843
	32 mm	-	K5327844	L5327845
	38 mm	-	M5327846	N5327847
	-	13 mm	U5327830	V5327831
	-	19 mm	W5327832	X5327833
	-	25 mm	Z5327834	A5327835
	-	32 mm	B5327836	C5327837

NP = Nominal pressure
NP = Nominal diameter

PLASTIC PLUG AND CAP REFERENCE CHART

	Dia. x pas	Part number	Dia. x pas	Part number
Tapped orifices and connectors with tightening nuts = screw-type plugs				
 PDG0324	M10 x 1.5	F3237416	M20 x 1.5	L3237421
	M12 x 1.5	G3237417	M22 x 1.5	M3237422
	M14 x 1.5	H3237418	M24 x 1.5	N3237423
	M16 x 1.5	J3237419	M27 x 2	Q3237448
	M18 x 1.5	K3237420		
Unions = Screw-type plugs				
 PDG0325	M12 x 1.5	X3237409	M20 x 1.5	C3237413
	M14 x 1.5	Z3237410	M22 x 1.5	D3237414
	M16 x 1.5	A3237411	M30 x 1.5	E3237415
	M18 x 1.5	B3237412		
S.A.E tube or hose collars = external plugs	NP 250 bar		NP 400 bar	
 PDG0326	30.2	J2537460	31.8	P2537465
	38.1	K2537461	41.3	Q2537466
	44.5	L2537462	47.6	R2537467
	50.8	M2537463	54	S2537468
	60.4	N2537464	63.6	T2537469
S.A.E orifices = caps for installation into tapped fitting orifices	NP 250 bar L =		NP 400 bar L =	
 PDG0327	38.1	A2340480	40.5	K1640415
	47.65	B2340481	50.8	R1640421
	52.35	C2340482	57.15	S1640422
	58.07	D2340483	66.7	T1640423
	69.85	E2340484	79.4	Z1640479

NP = Nominal pressure
ND = Nominal diameter

Section

1002

1002

SPECIFICATIONS
Crawler excavators

Case

Cre 7-80071GB

Printed in France
Issued November 1999

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WARNING: *This symbol is used in this manual to indicate important safety messages. Whenever you see this symbol, carefully read the message that follows, as there is a risk of serious injury.*

FLUIDS AND LUBRICANTS

Lubricants must have the correct properties for each application.

WARNING: *The conditions of use for individual fluids and lubricants must be respected.*

Hydraulic fluid

CASE hydraulic fluid is specially designed for high pressure applications and for the CASE hydraulic system. The type of fluid to be used depends on the ambient temperature.

Temperate climates

-20°C to +40°C
Fluid type ISO VG 46
CASE reference: POHYDR

Hot climates

0°C to +60°C
Fluid type ISO VG 100
CASE reference: POHYDC

Cold climates

-40°C to +20°C
Fluid type ISO VG 22
CASE reference: POHYPF

These various grades of fluid must be in conformity with CASE France specification P9903201Z.

Temperate climate biodegradable fluid:
This yellow fluid is compatible with standard fluid. If adopted, it is advisable to drain the circuit completely.
Fluid type ISO VG 46
CASE reference: CASYNTH46

This grade of fluid must be in conformity with CASE France specification P9903203B

Transmission component oil

Extreme pressure oil used for transmission components inside sealed housings.
Extreme pressure oil TYPE API GL5 GRADE 80W90 or ISO VG 150

Grease

The type of grease to use depends on ambient temperature.

Temperate and hot climates

-20°C to +60°C
Extreme pressure grease EP NLGI grade 2 with molybdenum disulphide.

Cold climates

-40°C to +20°C
Extreme pressure grease EP NLGI grade 0.

Engine oil

CASE engine oil N°1 is recommended for your engine. This oil ensures correct lubrication of your engine in all working conditions.

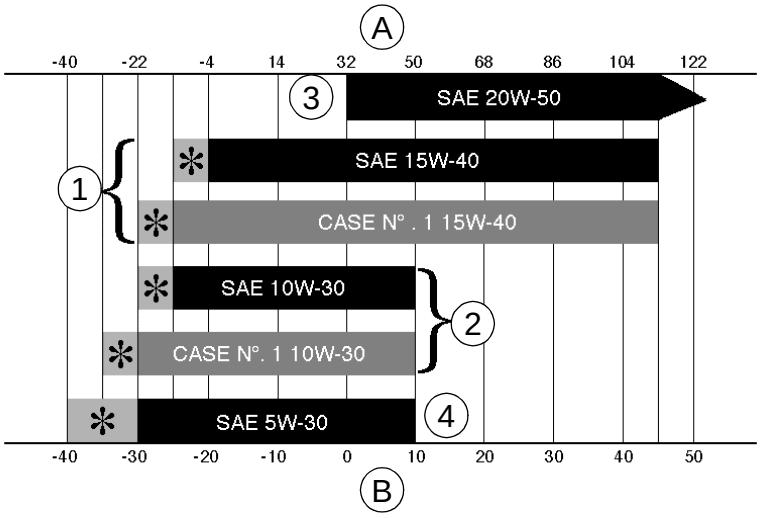
If CASE N°1 Multiperformance or Performance engine oil is not available, use oil corresponding to category API/CG/CF.

NOTE: *Do not put any Performance Additive or other additive in the sump. Oil change intervals shown in this manual are based on tests carried out on CASE lubricants.*

RF97F136

RB97F100

Oil viscosity/Oil range



CS98M561

(A) FAHRENHEIT TEMPERATURE
(B) CELSIUS TEMPERATURE
(1) ALL-SEASONS
(2) WINTER
(3) TROPICAL
(4) ARCTIC
(*) SHOWS THAT AN ENGINE OIL HEATER OR ENGINE COOLANT SOLUTION HEATER MUST BE USED.

Fuel

Use fuel that is to ASTM (American Society for Testing and Materials) D975 standard.

Use Grade No N°2 fuel. The use of other types of fuel can result in a loss of power and may cause high fuel consumption.

In cold weather, the use of a mixture of fuels N°1 and N°2 is temporarily permitted. Consult your fuel supplier.

If the temperature falls below the fuel cloud point (point at which wax begins to form) the wax crystals will cause power loss or will prevent the engine from starting.

IMPORTANT: *In cold weather, fill the fuel tank at the end of the day's work, in order to prevent the formation of condensation.*

Fuel storage

Long storage can lead to the accumulation of impurities and condensation in the fuel. Engine trouble can often be traced to the presence of water in the fuel.

The storage tank must be placed outside and the temperature of the fuel should be kept as low as possible. Drain off water and impurities regularly.

Anti-freeze/Anti-corrosion

Use anti-freeze in all seasons to protect the cooling system from corrosion and all risk of freezing.

In environments with a temperature higher than -36°C, use a mixture of 50% ethylene-glycol based anti-freeze.

For areas where the temperature is below -36°C, it is advisable to use a blend of 40% water and 60% anti-freeze.

Environment

Before carrying out any servicing operation on this machine and before disposing of used fluids or lubricants, always think of the environment. Never throw fluid or oil on the ground and never keep them in leaking receptacles.

Consult your local ecological recycling centre to obtain information on the appropriate means of disposing of these substances.

Components made from plastic or resin

When cleaning polycarbonate windows, the console, the instrument panel, the gauges, etc., do not use petrol (gasoline), paraffin (kerosene), paint solvents, etc. Use only water, soap and a soft cloth.

The use of petrol (gasoline), paraffin (kerosene), paint solvents, etc, will cause discoloration, cracking or deformation of these components.

GENERAL MACHINE SPECIFICATIONS

Engine

(788 and 788 "Plus")

	788	788 "Plus"
Make and type	CASE 4T 390	CASE 4TA 390
4 stroke, 4 cylinder	turbo-charged diesel	
Capacity	3920 cm^3	
Bore	102 mm	
Stroke	120 mm	
Cooling	water-cooled	
Staring: 2 x 12 volt batteries, 24 V	120 A/h	

Working specifications

Engine speed		2000 rpm	
Horsepower:	SAE J1995	68.6 kW (93 hp)	81 kW (110 hp)
	DIN 70020 - DIN 6271	65 kW (88 hp)	76 kW (103 hp)
	EEC 80/1269 - ISO 9249	65 kW (88 hp)	76 kW (103 hp)

Specifications maintained up to an altitude of 3000 m at a temperature of 25°C.

Capacities:	Engine oil sump	10 L	
	Fuel tank	249 L	
Electric fuel filler pump		optional equipment	
Average consumption per hour	10 L/h		14.5 L/h

Engine and pump assembly mounted on rubber blocks.
Heavy-duty dust filtration.

(988 and 988 "Plus")

	988	988 "Plus"
Make and type	CASE 6T 590	
Total SAE horsepower at 2800 rpm	126.4 kW (172 hp)	
4 stroke, 6 cylinder	turbo-charged diesel	
Capacity	5880 cm^3	
Bore	102 mm	
Stroke	120 mm	
Cooling	water-cooled	
Staring: 2 x 12 volt batteries, 24 V	120 A/h	

Working specifications

		988	988 "Plus"
Engine speed		2000 rpm	
Horsepower:	SAE	91 kW (124 hp)	92 kW (125.7 hp)
	DIN 70020 - DIN 6271	86 kW (116 hp)	90 kW (122 hp)
	EEC 80/1269 - ISO 9249	86 kW (116 hp)	90 kW (122 hp)

Specifications maintained up to an altitude of 3000 m at a temperature of 25°C.

Capacities:	Engine oil sump	14.3 L	
	Fuel tank	249 L	
Electric fuel filler pump		optional equipment	
Average consumption per hour	13 L/h		16.2 L/h

Engine and pump assembly mounted on rubber blocks.
Heavy-duty dust filtration.

Hydraulic system

Variable output system with independent and simultaneous operation of all functions.
Electronic regulation of hydraulic power ("Powersensor" system) for optimal use of engine power.

3 regulation modes:

"FINE": For jobs requiring high precision.

"ECO": For normal jobs.

"MAX": In this position, the operator has the full power of the machine at his disposal.

Engine automatically reverts to idle speed if the operator wishes.

(788 and 788 "Plus")

	788	788 "Plus"
Working pressure	350 bar	
Capacity of hydraulic reservoir	115 L	
Total system capacity	184 L	187 L

Double body pump:

Variable displacement body for travel and attachment functions.

Flow	210 L/min	214 L/min

Fixed displacement body for upperstructure swing function.

Flow	44 L/min	41.7 L/min
Installed hydraulic power	60 kW (81.5 hp)	73.5 kW (100 hp)

(988 and 988 "Plus")

	988	988 "Plus"
Working pressure	350 bar	
Capacity of hydraulic reservoir	180 L	
Total system capacity	288 L	

Pumps:

One double-body variable displacement pump for supplying travel motors and attachments.

Flow	320 L/min

A fixed displacement pump for supplying the upperstructure swing function.

Flow	56 L/min	54.9 L/min
Installed hydraulic power	81 kW (110 hp)	86.3 kW (117 hp)

(788, 788 "Plus", 988 and 988 "Plus")

Fixed pumps for pilot systems.
Parallel, closed centre type attachment and travel control valves.
Flow rates per function, independent of pressures.

Oil cooler with air cooling from engine.
Multispiral high pressure hoses with minimum safety factor of 2 to 4 times the working pressure
Self-lubricating hydraulic swivel.

Electrical system

Circuit voltage circuit ..... 24 volt, negative earth
Batteries .....two low-maintenance 12 volt batteries
All electrical system safety functions are grouped in an electrical cabinet with a printed circuit.
Instrument panel with printed circuit.
Automatic instrument panel lamp testing.
Two-stage alarm system.
Upperstructure electrical power connection (24 V, 15 Amp.).
Battery master switch.

Upperstructure

All welded frame

Modular structure.
Transverse walkway giving access to the various components.
Sound-proofed, lockable cowling meeting all current regulations.
Tool box with tool set.

Swing

Hydraulic motor with reduction gear and automatic static brake.

	788, 788 "Plus", 988 "Plus"	**988**
Rotational speed	7.7 rpm	8.8 rpm
Turntable	Alternating rollers and internal teeth	

Centralised bearing surface and tooth lubrication

Cab

Removable, sound-proofed, on flexible mounting blocks.
Up and over windshield.
Tinted windshield.
Pre-fitted for radio installation.
Transparent roof hatch ..... optional equipment
Sliding door window.....standard since November 1999
Polycarbonate windows..... optional equipment
Cab safety guards .....available on request
Elevated cab.....available on request
Ant-vandal cab..... optional equipment

Operation

De-luxe seat with armrests and multi-position adjustment (vibration level III/ISO 7096).
Hydraulically assisted controls.
Attachment and swing ..... 2 control levers
Travel..... 2 pedals
Speed programmer which also automatically changes speed range on the two-speed version.
Single-speed windshield wiper, plus intermittent action, windshield washer, heating, de-frosting, two-speed ventilation, cab light, cigarette lighter, sun shield.
Working lights:
- On upperstructure .....2 x 70/75 W
- On attachment ..... 70 W
- Front and rear (on cab) ..... optional equipment
- Rear (on cab) ..... 70 W

Air conditioning ..... optional equipment
Cab sun-shield..... optional equipment
Cab blower ..... optional equipment

Undercarriage (depending on version)

One-piece undercarriage chassis with welded components.
Lifetime lubricated rollers.
Tractor type tracks; grease cylinder type track tension; shock absorber for shock absorption.
Removable sprocket tooth rings.
Front chain guide (optional rear).

Safety devices

In the event of engine failure, the attachment can be lowered, under control, to the ground.
Cancellation of controls by lifting the left-hand control arm.
Tinted safety glass, horn.
Cab safety guards ..... available on request
Safety valves ..... optional equipment
Overload indicator ..... optional equipment
Roller type seat belt ..... optional equipment
Fire extinguisher ..... optional equipment
Rotary light ..... special for certain countries

Indicators

Engine coolant solution temperature, hydraulic fluid temperature, fuel level and hourmeter.

Warning and indicator lamps

Engine oil pressure, battery charge, hydraulic and engine air filter start of restriction indicator.
Warning/indicator lamp test.

Attachments

Sealed linkages, greasing of all linkages possible from the ground, double acting cylinders fitted with end-of-stroke shock absorbers.
Bucket linkage with side-play compensation system **(988 Series only)**.

Noise level

Certified by the manufacturer.
In accordance with European directive 86/662/EEC.

	788	**788 "Plus"**	**988**	**988 "Plus"**
Inside operator's compartment (LpA)	79	76	81	78 decibels
Outside machine (LwA)	105	103	108	103 decibels

Vibration level in operator's compartment

Upper members ..... level lower than 2.5 m/s^2
Body ..... level lower than 0.5 m/s^2

Ground pressure

(788 and 788 "Plus")

	788	788 "Plus"
With attachment: 4.30 m boom, 2.10 m dipper and 560 L bucket		
Machine with 0.50 m track width	0.455 bar	0.466 bar
Machine with 0.60 m track width	0.385 bar	0.395 bar
Machine with 0.70 m track width	0.335 bar	0.344 bar
Machine with 0.85 m track width	0.280 bar	0.289 bar

(988 and 988 "Plus")

	988	988 "Plus"
With attachment: 4.80 m boom, 2.10 m dipper and 760 L bucket		
Machine with 0.50 m track width	0.505 bar	0.520 bar
Machine with 0.60 m track width	0.425 bar	0.425 bar
Machine with 0.70 m track width	0.370 bar	0.370 bar
Machine with 0.90 m track width	0.295 bar	0.305 bar

Travel

Sprockets driven by hydraulic motors.
Independent drive to each track.
Manual controlled travel block providing precise adjustment of travel speed regardless of pressure exerted on travel pedals.
Braked motors (automatic static brake).
Hydraulic speed limiter, automatic when descending slopes.

(788 and 788 "Plus")

Travel speeds:
- (single speed machine), max. speed ..... from 0 to 3.6 kph
- (two-speed machine), max. speed ..... First speed: from 0 to 3.6 kph
  Second speed: from 0 to 5.5 kph

Gradeability 74%
Tractive force ..... 10,310 daN

(988 and 988 "Plus")

Travel speeds:
- (single speed machine), max. speed ..... from 0 to 3.3 kph
- (two-speed machine), max. speed ..... First speed: from 0 to 3.3 kph
  Second speed: from 0 to 5.5 kph

Gradeability 77%
Tractive force ..... 13,500 daN

WEIGHTS

Machine

(788 CK)

Boom	Dipper	Track pads			
		0.50 m	0.60 m	0.70 m	0.85 m
Monoblock	1.50 m	14 090	14 300	14 510	14 830
	2.10 m	14 110	14 320	14 530	14 850
	2.65 m	14 165	14 375	14 585	14 905
Adjustable	1.50 m	14 315	14 525	14 735	15 055
	2.10 m	14 335	14 545	14 755	15 175
	2.65 m	14 390	14 600	14 810	15 130
Backhoe offset	1.50 m	14 440	14 650	14 860	15 180
	2.10 m	14 460	14 670	14 880	15 200
	2.65 m	14 515	14 725	14 935	15 255
Articulated	1.50 m	14 425	14 635	14 845	15 165
	2.10 m	14 445	14 655	14 865	15 185
	2.65 m	14 500	14 710	14 920	15 240

NOTE: *These values are given in kg, with 560 L backhoe bucket.*

(788 CK "Plus")

Boom	Dipper	Track pads			
		0.50 m	0.60 m	0.70 m	0.85 m
Monoblock	1.50 m	14 490	14 720	14 945	15 280
	2.10 m	14 505	14 730	14 955	15 295
	2.65 m	14 560	14 785	15 010	15 350
Adjustable	1.50 m	14 725	14 950	15 175	15 515
	2.10 m	14 740	14 965	15 190	15 525
	2.65 m	14 795	15 020	15 245	15 580
Backhoe offset	1.50 m	14 855	15 080	15 305	15 640
	2.10 m	14 865	15 090	15 320	15 655
	2.65 m	14 920	15 145	15 375	15 710
Articulated	1.50 m	14 825	15 050	15 275	15 615
	2.10 m	14 840	15 065	15 290	15 625
	2.65 m	14 895	15 120	15 345	15 680

NOTE: *These values are given in kg, with 560 L backhoe bucket*

(788 LC "Plus")

Boom	Dipper	Track pads			
		0.50 m	0.60 m	0.70 m	0.90 m
Monoblock	1.50 m	15 415	15 655	15 895	16 375
	2.10 m	15 425	15 665	15 910	16 390
	2.65 m	15 480	15 720	15 965	16 445
Adjustable	1.50 m	15 645	15 885	16 130	16 610
	2.10 m	15 660	15 900	16 140	16 625
	2.65 m	15 715	15 955	16 195	16 680
Backhoe offset	1.50 m	15 775	16 015	16 255	16 740
	2.10 m	15 785	16 025	16 270	16 750
	2.65 m	15 840	16 080	16 325	16 805
Articulated	1.50 m	15 745	15 985	16 230	16 710
	2.10 m	15 760	16 000	16 240	16 725
	2.65 m	15 815	16 055	16 295	16 780

NOTE: *These values are given in kg, with 760 L backhoe bucket*

(988 CK)

Boom	Dipper	Track pads			
		0.50 m	0.60 m	0.70 m	0.90 m
Monoblock	1.60 m	16 925	17 150	17 375	17 825
	2.10 m	16 970	17 195	17 420	17 870
	2.70 m	17 095	17 320	17 545	17 995
Adjustable	1.60 m	17 260	17 485	17 710	18 160
	2.10 m	17 305	17 530	17 755	18 205
	2.70 m	17 430	17 655	17 880	18 330
Backhoe offset	1.60 m	17 435	17 660	17 885	18 335
	2.10 m	17 480	17 705	17 930	18 380
Articulated	1.60 m	17 505	17 730	17 955	18 405
	2.10 m	17 550	17 775	18 000	18 450
	2.70 m	17 675	17 900	18 125	18 575

NOTE: *These values are given in kg, with 760 L backhoe bucket.*

Boom	Dipper	Track pads			
		0.50 m	0.60 m	0.70 m	0.90 m
Handling	4.50 m	17 025	17 250	17 475	17 925

(988 CK "Plus")

Boom	Dipper	Track pads			
		0.50 m	0.60 m	0.70 m	0.90 m
Monoblock	1.60 m	17 490	17 715	17 940	18 390
	2.10 m	17 535	17 760	17 985	18 435
	2.70 m	17 655	17 880	18 105	18 560
	3.10 m	17 690	17 915	18 140	18 595
Backhoe offset	1.60 m	17 955	18 180	18 405	18 860
	2.10 m	18 000	18 225	18 450	18 905
Articulated	1.60 m	18 080	18 305	18 530	18 985
	2.10 m	18 130	18 355	18 580	19 030
	2.70 m	18 250	18 475	18 700	19 150
	3.10 m	18 285	18 510	18 735	19 185

NOTE: *These values are given in kg, with 760 L backhoe bucket.*

Boom	Dipper	Track pads			
		0.50 m	0.60 m	0.70 m	0.90 m
Handling	4.50 m	17 025	17 250	17 475	17 925

(988 CKE "Plus")

Boom	Dipper	Track pads		
		0.50 m	0.60 m	0.70 m
Monoblock 5.20 m	1.50 m	17 460	17 685	17 910
	2.10 m	17 505	17 730	17 955
	2.70 m	17 625	17 850	18 075
	3.10 m	17 690	17 885	18 110
Backhoe offset	1.60 m	17 925	18 150	18 375
	2.10 m	17 975	18 200	18 425
Articulated	1.60 m	18 055	18 280	18 505
	2.10 m	18 100	18 325	18 550
	2.70 m	18 220	18 445	18 670
	3.10 m	18 255	18 480	18 705

NOTE: *These values are given in kg, with 760 L backhoe bucket.*

Boom	Dipper	Track pads		
		0.50 m	0.60 m	0.70 m
Handling	4.50 m	16 995	17 220	17 445