75C-90C
(English)

Service Manual

01-0018E

Reprinted

CASE

THIS SAFETY ALERT SYMBOL INDICATES IMPORTANT SAFETY MESSAGES IN THIS MANUAL. WHEN YOU SEE THIS SYMBOL, CAREFULLY READ THE MESSAGE THAT FOLLOWS AND BE ALERT TO THE POSSIBILITY OF PERSONAL INJURY OR DEATH.

M171B

If Safety Decals on this machine use the words **Danger, Warning or Caution,** which are defined as follows:

- **DANGER:** Indicates an immediate hazardous situation which if not avoided, will result in death or serious injury. The color associated with Danger is RED.
- **WARNING:** Indicates an potentially hazardous situation which if not avoided, will result in serious injury. The color associated with Warning is ORANGE.
- **CAUTION:** Indicates an potentially hazardous situation which if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices. The color associated with Caution is YELLOW.

If Safety Decals on this machine are ISO two panel Pictorial, decals are defined as follows:

- The first panel indicates the nature of the hazard.
- The second panel indicates the appropriate avoidance of the hazard.
- Background color is YELLOW.
- Prohibition symbols such as  and 

if used, are RED.

WARNING

IMPROPER OPERATION OF THIS MACHINE CAN CAUSE INJURY OR DEATH. BEFORE USING THIS MACHINE, MAKE CERTAIN THAT EVERY OPERATOR:

- Is instructed in safe and proper use of the machine.
- Reads and understands the Manual(s) pertaining to the machine.
- Reads and understands ALL Safety Decals on the machine.
- Clears the area of other persons.
- Learns and practices safe use of machine controls in a safe, clear area before operating this machine on a job site.

It is your responsibility to observe pertinent laws and regulations and follow Case Corporation instructions on machine operation and maintenance.

Bur 0-00000
issued November, 1994

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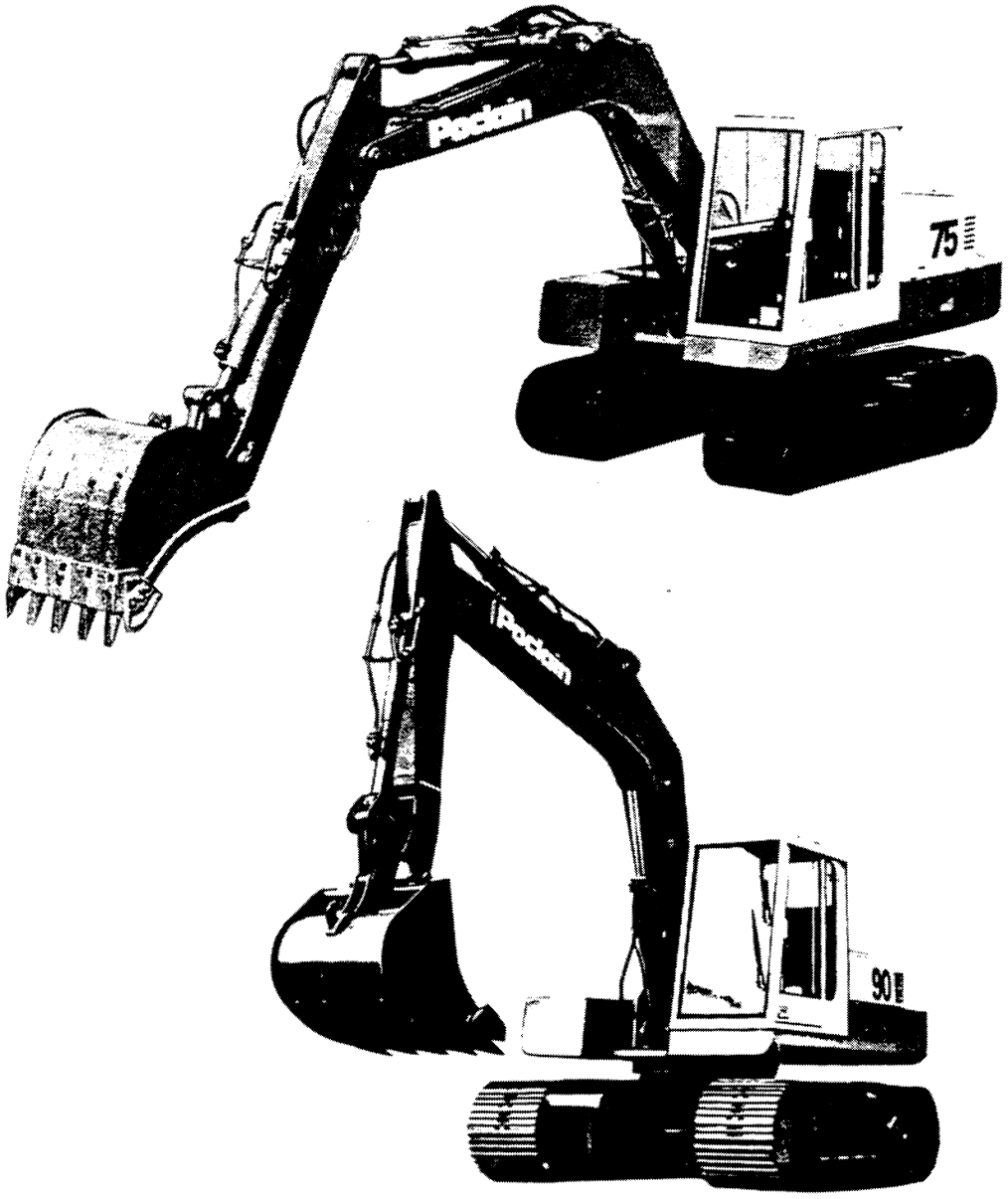
The 75C and 90C are track-mounted hydraulic excavators.
They are designed for earthmoving operation on all kinds of terrain.
These machines benefit from the experience acquired from other models in the Poclain range, and incorporate the latest advances as regards both technique and comfort.
Thanks to Poclain's Variodyn hydraulic circuit, optimum use is made of the power available, and as a result a high output can be obtained from these machines.
Owing to the wide range of attachments which can be mounted, the 75C and 90C are versatile machines, well suited for earthmoving, rehandling, winning, boring, ditch-cleaning, etc...



These machines consist of two main assemblies :
- a carrier frame
- an upperstructure

These two assemblies are connected by a swing gear.

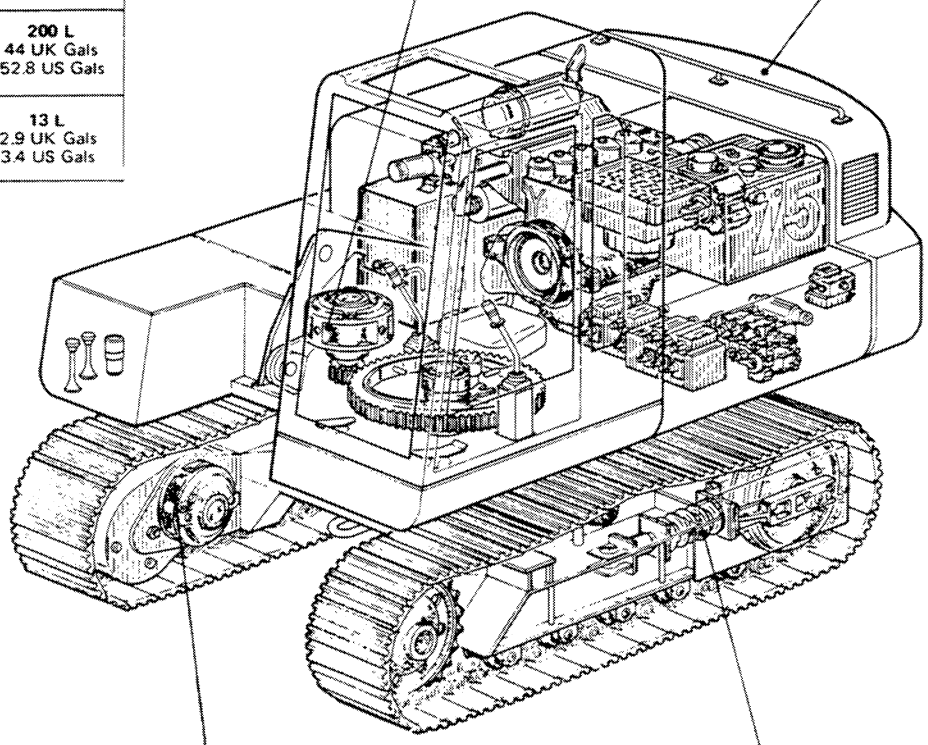
	DEUTZ F 5 L 912
DIN	79 ch CV PS 77.9 HP 58,1 kW
SAE	88 ch CV PS 86.8 HP 64,8 kW
TR/MN - RPM - U/MIN	2150 t/mn rpm U/mn
	5
	Air Aire Luft
	24 Volts Voltios Volt
	12 L 2.6 UK Gals 3.2 US Gals
	200 L 44 UK Gals 52.8 US Gals
	13 L 2.9 UK Gals 3.4 US Gals

	130 L 28.6 UK Gals 34.3 US Gals
	190 L 41.8 UK Gals 50.2 US Gals

Pompe Bomba Pumpe Pump	H.POC 4 x 17,5 4 x 3P SIH C
TR/MN - RPM - U/MIN	2150 t/mn rpm U/mn
	4 x 38 L/mn 4 x 8.4 UK gpm 4 x 10 US gpm
	320 bar - bares - atü 4650 PSI
	400 bar - bares - atü 5800 PSI

1100 cm3 67 cu.in	En option : Moteur freiné Opcional : Motor con freno Wahlweise : Bremsbarer Hydromotor Optional : Motor with brake

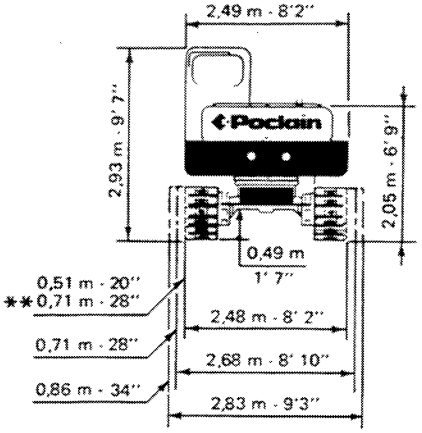
Châssis tourelle insonorisé
Torreta insonorizada
Schallgedämpfter Oberwagen
Sound proofed upperstructure

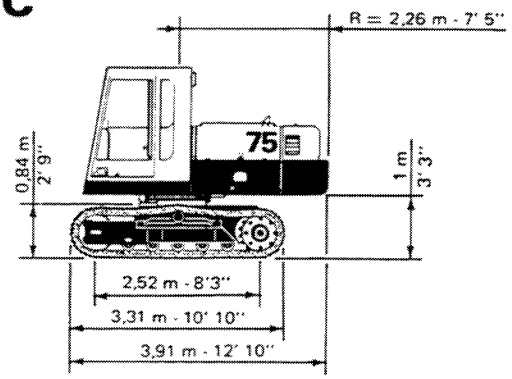


75 C	1100 cm3 67 cu.in	**En option : Moteurs de translation freinés, deux cylindrées** Opcional : Motores de traslación con freno, dos cilindradas Wahlweise : Bremsbare Fahrwerkmotoren, 2 Geschwindigkeiten Optional : Braking-type track motors, dual displacement
75 CL	1250 cm3 76 cu.in	**En option : Moteurs de translation freinés, deux cylindrées** Opcional : Motores de traslación con freno, dos cilindradas Wahlweise : Bremsbare Fahrwerkmotoren, 2 Geschwindigkeiten Optional : Braking-type track motors, dual displacement

Tension hydraulique des chenilles
Mecanismo tensor hidráulico de orugas
Hydraulische Spannung der Raupenketten
Hydraulic track tension mechanism

75 c





69%	36 % **en continu** 36 % en continuo 36 % beständig 36 % steady climb
	9,1 t 20,020 lbs
	0 → 1,20 km/h 0 → 0.74 mph **0 → 1,75 km/h** 0 → 1.08 mph **0 → 2,35 km/h** 0 → 1.45 mph

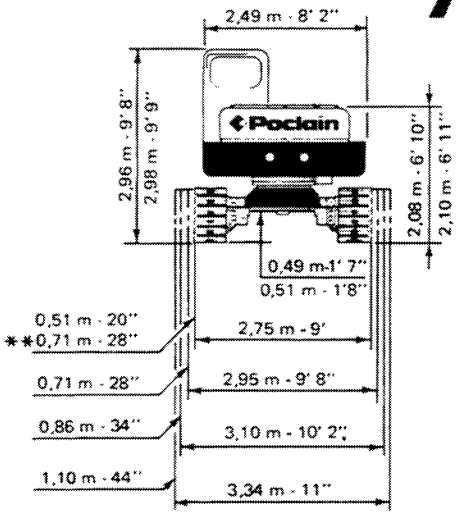
**Déportées
Descentradas
Versetzte
Offset

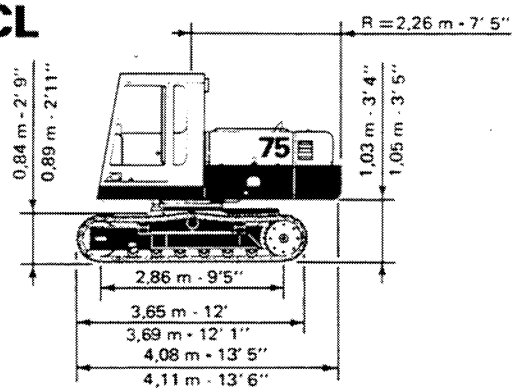
* 4,40 m - 2,10 m - 620 L
14' 5" - 6' 11" - 3/4 cu.yd

41 Tuiles 41 Tejas 41 Bodenplatten 41 Pads	*	
20"	**13,5 t** 29,700 lbs	**475 g/cm2** 6.75 PSI
28"	**14 t** 30,800 lbs	**350 g/cm2** 4.97 PSI
** 28"	**14 t** 30,800 lbs	**350 g/cm2** 4.97 PSI
34"	**14,2 t** 31,240 lbs	**295 g/cm2** 4.19 PSI

En option Opcional Wahlweise Optional	1100/550 cm3 67/33.5 cu.in		**0 → 1,20 km/h** 0 → 0.74 mph **0 → 1,75 km/h** 0 → 1.08 mph **0 → 2,35 km/h** 0 → 1.45 mph **0 → 4,70 km/h** 0 → 2.91 mph

75 CL





* 4,40 m - 2,10 m - 620 L
14' 5" - 6' 11" - 3/4 cu.yd

**Déportées
Descentradas
Versetzte
Offset

77 %	36 % **en continu** 36 % en continuo 36 % beständig 36 % steady climb
	10,2 t 22,440 lbs
	0 → 1,05 km/h 0 → 0.65 mph **0 → 1,55 km/h** 0 → 0.96 mph **0 → 2,10 km/h** 0 → 1.30 mph **0 → 4,20 km/h** 0 → 2.60 mph

En option Opcional Wahlweise Optional	1250/625 cm3 76/38 cu.in		

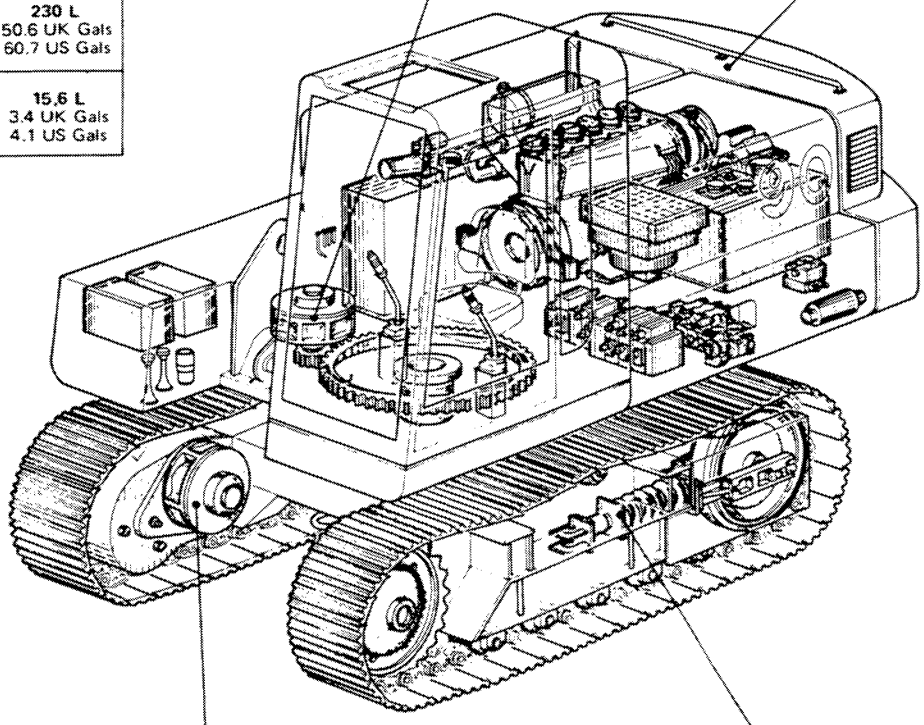
45 Tuiles 45 Tejas 45 Bodenplatten 45 Pads	*		
20"	**14,1 t** 31,020 lbs	**440 g/cm2** 6.25 PSI
28"	**14,6 t** 32,120 lbs	**325 g/cm2** 462 PSI
** 28"	**14,6 t** 32,120 lbs	**325 g/cm2** 4.62 PSI
34"	**15 t** 33,000 lbs	**275 g/cm2** 3.91 PSI
44"	**14,8 t** 32,560 lbs	**210 g/cm2** 2.98 PSI

75 CM

	DEUTZ F 6 L 912
DIN	95 ch CV PS 93.7 HP 69,9 kW
SAE	105 ch CV PS 103.5 HP 77,3 kW
TR.MN - RPM - U/MIN	2150 t/mn rpm U/mn
	6
	Air Aire Luft
	24 Volts Voltios Volt
	17 L 3.7 UK Gals 4.5 US Gals
	230 L 50.6 UK Gals 60.7 US Gals
	15,6 L 3.4 UK Gals 4.1 US Gals

	165 L 36.3 UK Gals 43.5 US Gals
	250 L 55 UK Gals 66 US Gals

Pompe Bomba Pumpe Pump	H.POC 4 x 22 4 x 3P SIH C
TR.MN - RPM - U/MIN	2150 t/mn rpm U/mn
	4 x 47 L/mn 4 x 10.3 UK gpm 4 x 12.4 US gpm
	320 bar - bares - atü 4650 PSI
	400 bar - bares - atü 5800 PSI



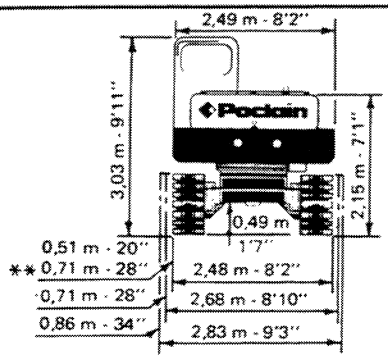
1250 cm3 76 cu.in	**En option : Moteur freiné** Opcional : Motor con freno Wahlweise : Bremsbarer Hydromotor Optional : Motor with brake

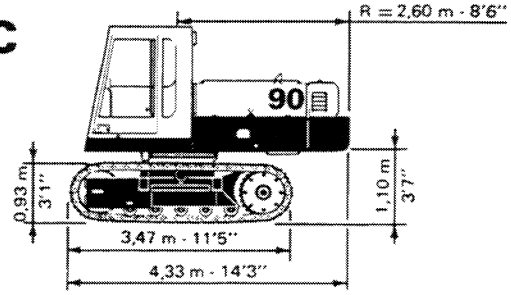
Châssis tourelle insonorisé
Torreta insonorizada
Schallgedämpfter Oberwagen
Sound proofed upperstructure

90 C	1250 cm3 76 cu.in	**En option : Moteurs de translation freinés, deux cylindrées** Opcional : Motores de traslación con freno, dos cilindradas Wahlweise : Bremsbare Fahrwerkmotoren, 2 Geschwindigkeiten Optional : Braking-type track motors, dual displacement
90 CK 90 CL	2000 cm3 122 cu.in	**En option : Moteurs de translation freinés, deux cylindrées** Opcional : Motores de traslación con freno, dos cilindradas Wahlweise : Bremsbare Fahrwerkmotoren, 2 Geschwindigkeiten Optional : Braking-type track motors, dual displacement

Tension hydraulique des chenilles
Mecanismo tensor hidráulico de orugas
Hydraulische Spannung der Raupenketten
Hydraulic track tension mechanism

90 C





** Déportées / Descentradas / Versetzte / Offset

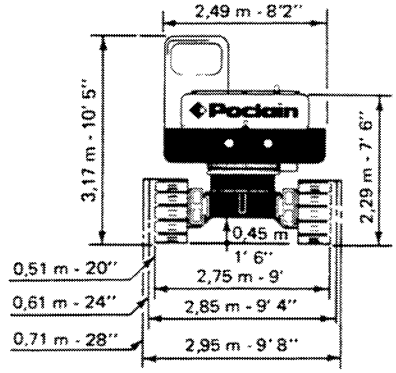
* 4,80 m - 2,30 m - 765 L / 15' 9" - 7' 7" - 1 cu.yd

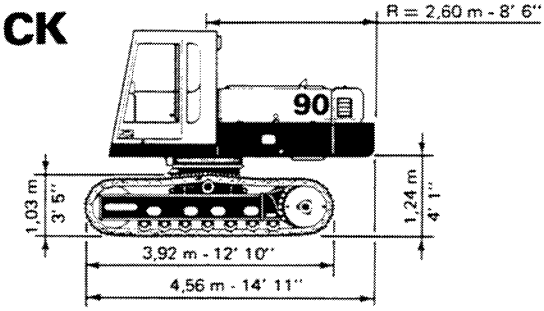
64 %	53 % en continu 53 % en continuo 53 % beständig 53 % steady climb	
	10,7 t 23,540 lbs	
	0 → 1,25 km/h 0 → 0.77 mph 0 → 1,90 km/h 0 → 1.17 mph 0 → 2,50 km/h 0 → 1.55 mph	0 → 1,25 km/h 0 → 0.77 mph 0 → 5,00 km/h 0 → 3.10 mph

En option / Opcional / Wahlweise / Optional: 1250/625 cm3 (76/38 cu.in)

44 Tuiles 44 Tejas 44 Bodenplatten 44 Pads	*	
20"	16,1 t 35,420 lbs	550 g/cm2 7.82 PSI
28"	16,6 t 36,520 lbs	405 g/cm2 5.75 PSI
** 28"	16,6 t 36,520 lbs	405 g/cm2 5.75 PSI
34"	16,9 t 37,180 lbs	340 g/cm2 4.83 PSI

90 CK





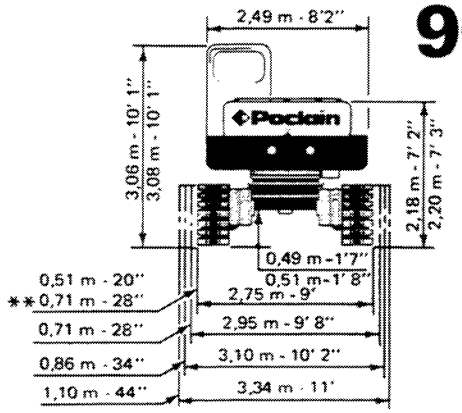
* 3 m - 2,20 m - 950 L / 9' 10" - 7' 3" - 1 1/4 cu.yd

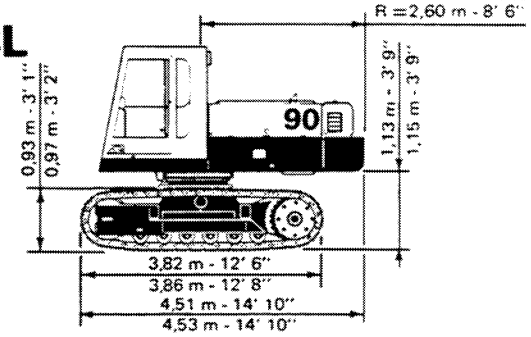
65 %	53 % en continu 53 % en continuo 53 % beständig 53 % steady climb	
	12 t 26,400 lbs	
	0 → 1,10 km/h 0 → 0.68 mph 0 → 1,70 km/h 0 → 1.05 mph 0 → 2,25 km/h 0 → 1,39 mph	0 → 1,10 km/h 0 → 0.68 mph 0 → 4,50 km/h 0 → 2,79 mph

En option / Opcional / Wahlweise / Optional: 2000/1000 cm3 (122/61 cu.in)

49 Tuiles 49 Tejas 49 Bodenplatten 49 Pads	*	
20"	19 t 41,800 lbs	560 g/cm2 7.96 PSI
24"	19,3 t 42,460 lbs	475 g/cm2 6.75 PSI
28"	19,6 t 43,120 lbs	415 g/cm2 5.90 PSI

90 CL





** Déportées / Descentradas / Versetzte / Offset

* 4,80 m - 2,30 m - 765 L / 15' 9" - 7' 7" - 1 cu.yd

70%	53 % en continu 53 % en continuo 53 % beständig 53 % steady climb	
	12 t 26,400 lbs	
	0 → 1,10 km/h 0 → 0.68 mph 0 → 1,70 km/h 0 → 1.05 mph 0 → 2,25 km/h 0 → 1.39 mph	0 → 1,10 km/h 0 → 0.68 mph 0 → 4,50 km/h 0 → 2.79 mph

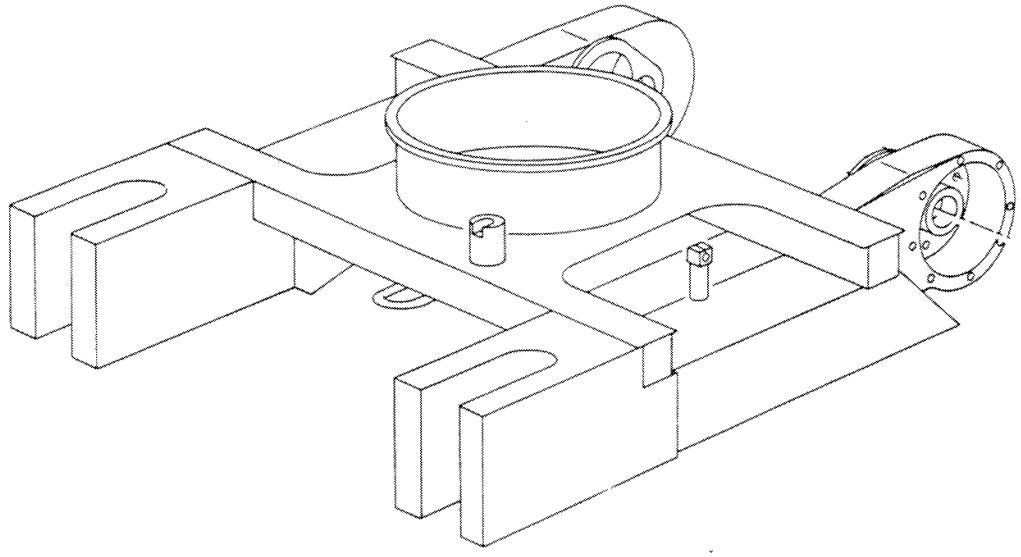
En option / Opcional / Wahlweise / Optional: 2000/1000 cm3 (122/61 cu.in)

48 Tuiles 48 Tejas 48 Bodenplatten 48 Pads	*	
20"	17,5 t 38,500 lbs	535 g/cm2 7.60 PSI
28"	18,1 t 39,820 lbs	395 g/cm2 5.61 PSI
** 28"	18,1 t 39,820 lbs	395 g/cm2 5.61 PSI
34"	18,4 t 40,480 lbs	330 g/cm2 4.69 PSI
90 CM 44"	18,2 t 40,040 lbs	250 g/cm2 3.55 PSI

CARRIER FRAME

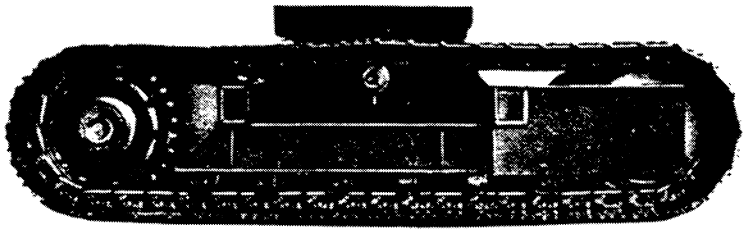
FUNCTION
- It supports the upperstructure centered on the swing gear.
- It ensures stability of the assembly when working.
- It incorporates the track group, which makes for all-terrain travel.

DESCRIPTION.
The carrier frame consists entirely of welded components.



It comprises :
- two box-type side-members which support the track group.
- two moulded steel bearings, located at the rear of the side-members, which support the sprocket wheels and hydraulic drive motors.
- a wide H-shaped cross-member which connects the side-members.
- a central tubular frame which supports the swing gear.

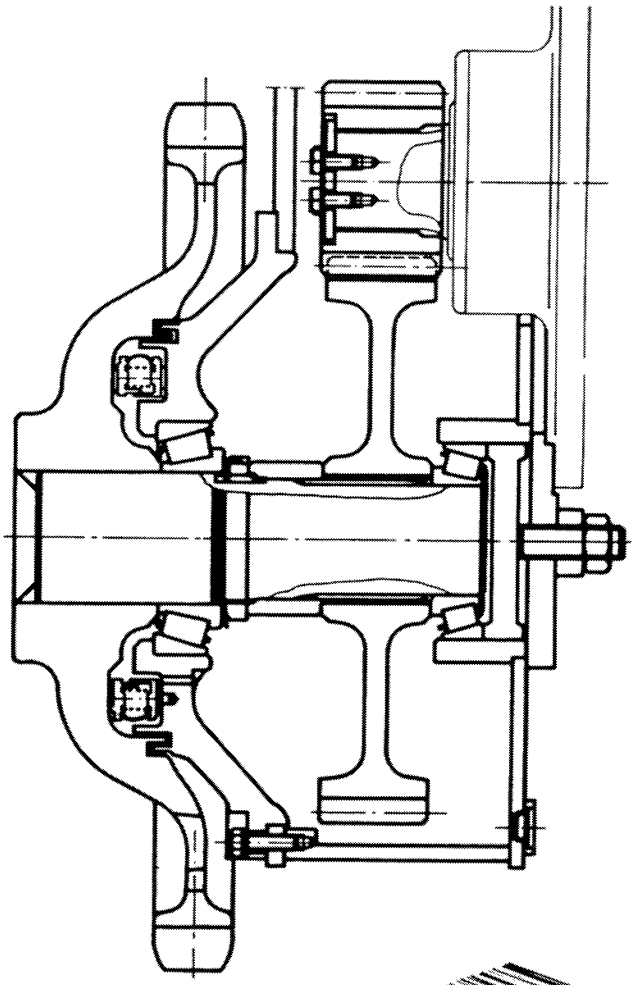
TRACK GROUP
It ensures machine travel in both drive directions.



Each track is driven independently by a hydraulic motor.
This design enables the right and left-hand tracks to turn in opposite directions (rotation on the spot)
A grease cylinder enables track tension to be adjusted.
A spring type shock absorber dampens the impact caused by obstacles during machine travel.
Track rollers are lubricated for life.

PINION–TYPE REDUCTION GEAR

FUNCTION :
Reduce the speed transmitted by the hydraulic motor, and accordingly increase the torque in the reduction gear ratio.



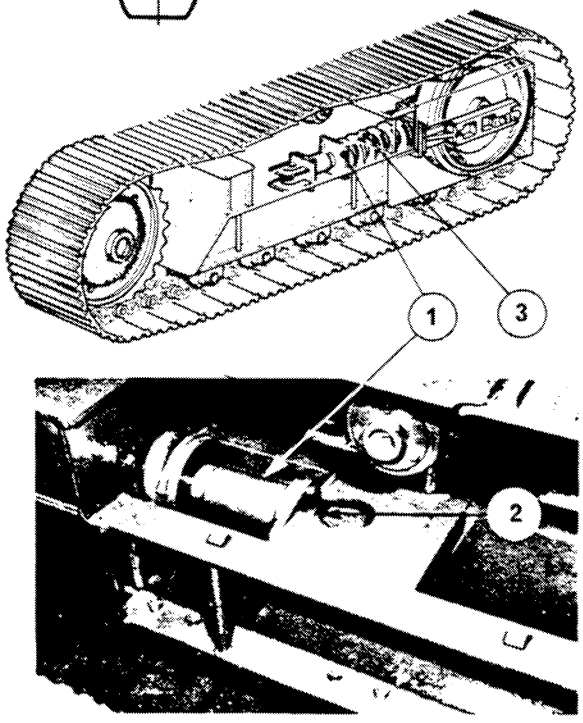
	75C	75CL	90C	90CL	90CK
Hyd. mot.	1100cm3	1250cm3	1250cm3	2000cm3	2000cm3
No. of teeth PINION	17	17	15	20	28
WHEEL	56	56	63	59	50
MODULE	7	7	8	8	10
Reduction ratio	0,303	0,303	0,238	0,339	0,560
Theoretical torque at sprocket wheel at 320 bars (m.daN)	1749	2013	2563	2831	1714

TRACK TENSIONER WITH SHOCK ABSORBER

Track tension is effected by a grease cylinder (1)

To slacken the track, unscrew grease fitting (2) to allow the grease to flow out of the cylinder,

A spiral spring (3) dampens impacts which may be encountered by the track.



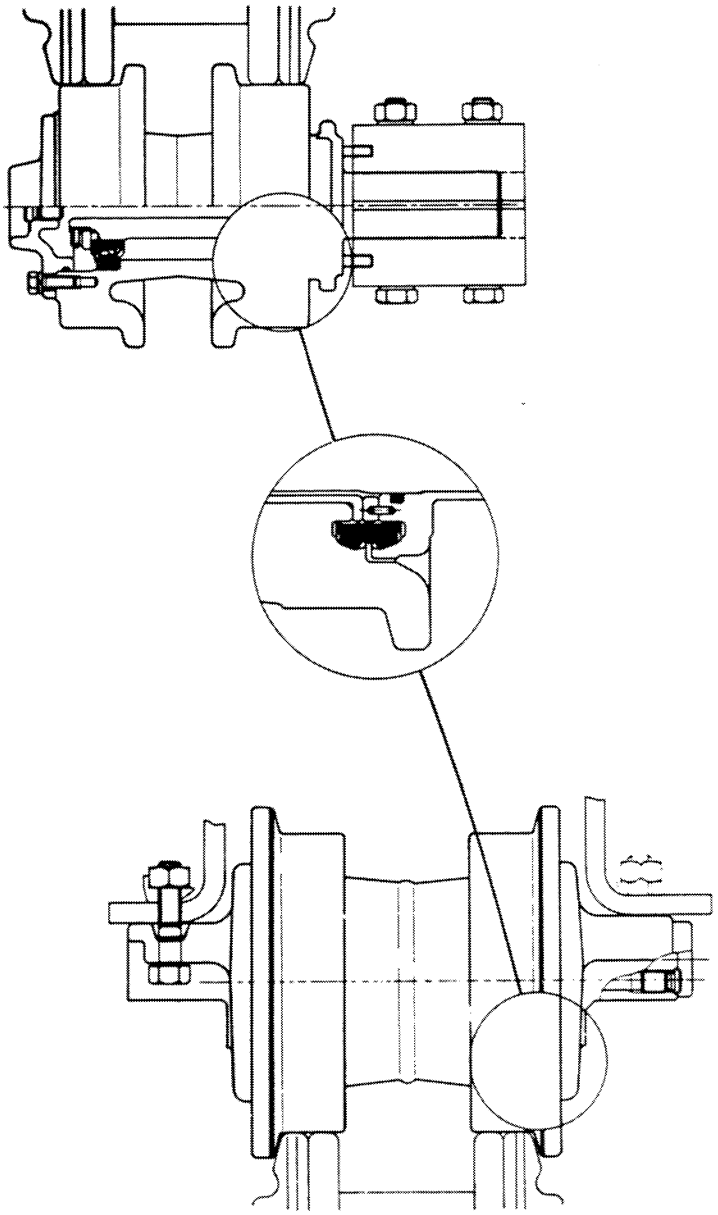
ROLLERS

The travel function of track-mounted machines is ensured by two rows of bearing rollers.
A supporting roller is mounted, to prevent the track from rubbing against the upper part of the side-memeber.
Each roller is lubricated for life.

ROLLERS	75C	75CL	90C	90CL	90CK
TYPE	D4	D4	D4R*	D4R*	D6
NUMBER/track	5	6	5	6	7

*R : reinforced roller.

Supporting roller.



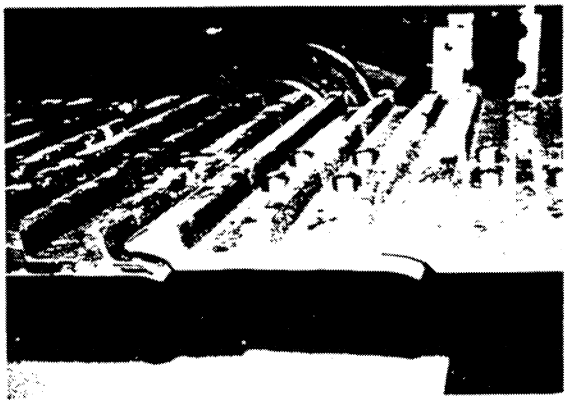
Bearing roller.

TRACKS – PADS

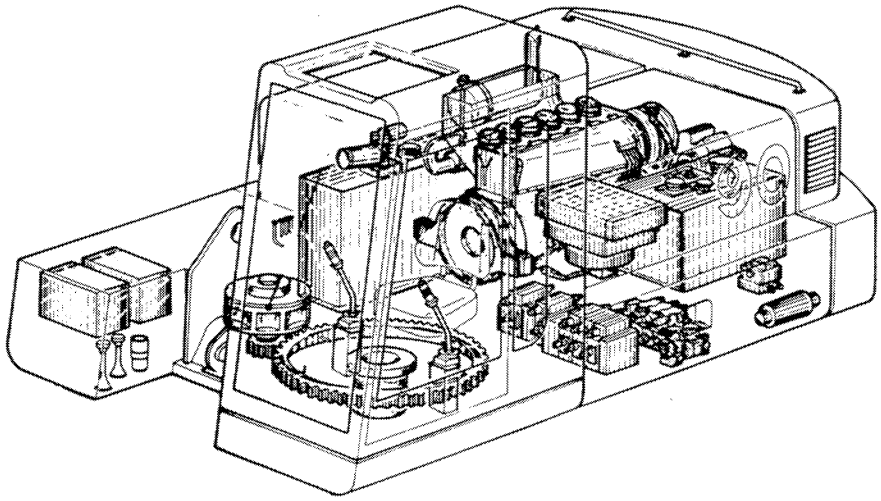
The choice of pads depends on the terrain on which the machine is working.
Irrespective of the machine model, all pads are triple-ribbed; only the width varies (this is expressed in inches).
Machines working or travelling on marshy ground are equipped with special hollow pads (44" wide) which reduce the ground bearing pressure (expressed in g/cm2).

	75C	75CL	90C	90CL	90CK
TRACK TYPE	D4	D4	D4R	D4R	D6
Number of LINKS	41	45	44	48	49
PAD TYPE					
20"	(X)	X	(X)	X	(X)
24"	X	X	X	X	X
28"	X	(X)	X	(X)	X
28"D	X	X	X	X	
34"		X	X	X	
34"PD4	X	X	X		
44"Marsh-type		75CM		X	

(X) Standard version
* 28"D : offset pad.
* 34"PD4 : reinforced pad.



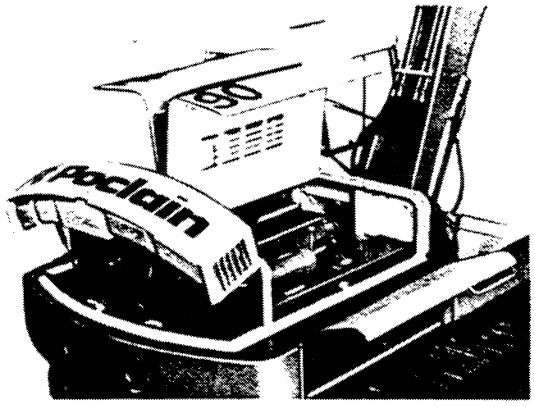
UPPERSTRUCTURE



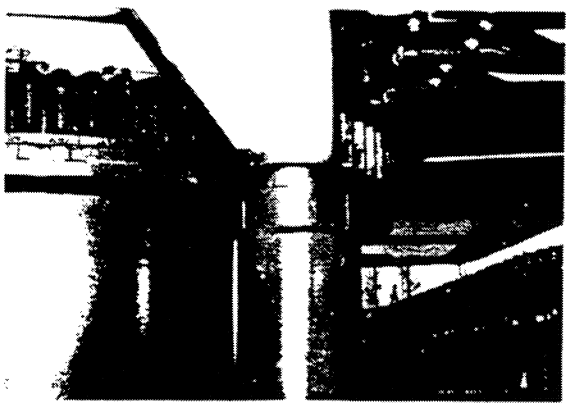
The upperstructure frame consists entirely of welded components in high tensile steel, ensuring ruggedness of the assembly.
The upperstructure consists of two main parts :

– A central frame which supports:
- the attachments
- the counterweight
- the engine.
- transmission components
- the hydraulic swing motor.

– Box-type sections on either side which support :
- the hydraulic components.
- the cab.
- the control linkage.
- fuel and hydraulic oil tanks.



– Cowlings and side panels can be opened fully, providing easy access to the various components and facilitating servicing, checking and repairs.
The cowlings are lined with soundproofing material (80 dB at 7 metres).



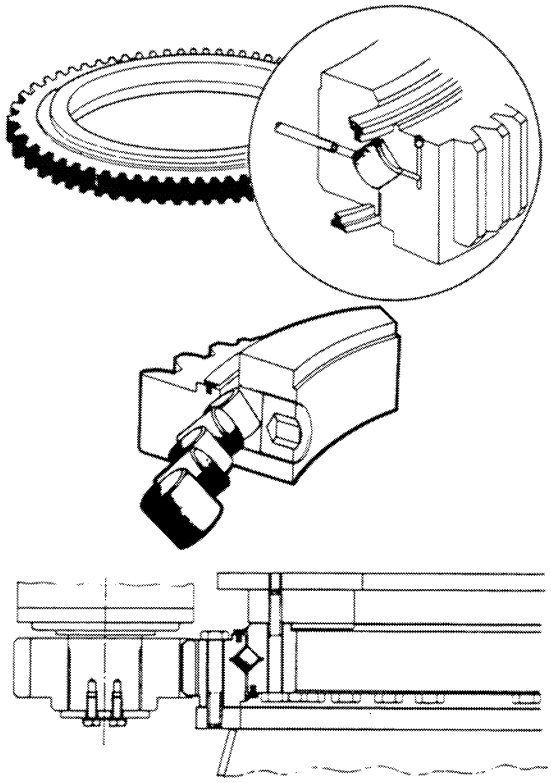
During carriage, upperstructure swing motion is immobilized by a pin controlled from the cab.

SWING GEAR

The swing gear provides the connection between the carrier frame and the upperstructure, and enables the latter to describe a complete revolution.

It consists of two parts, connected by a row of alternate rollers.

- One part is bolted and centered on the upperstructure.
- The other part takes the form a gearwheel, and is fixed to the carrier frame.
  (94 module 10 teeth on machine 75C)
  (102 module 11 teeth on the 90C).
- The hydraulic motor which ensures upperstructure swing motion is fitted with a pinion :
  (17 module 10 teeth on machine 75C)
  (17 module 11 teeth on machine 90C)



Reduction ratio :

75C : $\frac{17}{94} = 0.180$

90C : $\frac{17}{102} = 0.166$

LUBRICATION OF SWING GEAR :

There are four grease points, distributed angularly, each of which is connected to a grease fitting by independent piping.

The four grease fittings are grouped as follows : (10).

- Close to boom foot on machine 75C (fig.1).
- On right-hand side of boom foot on machine 90C (fig.2).

Fig. 1

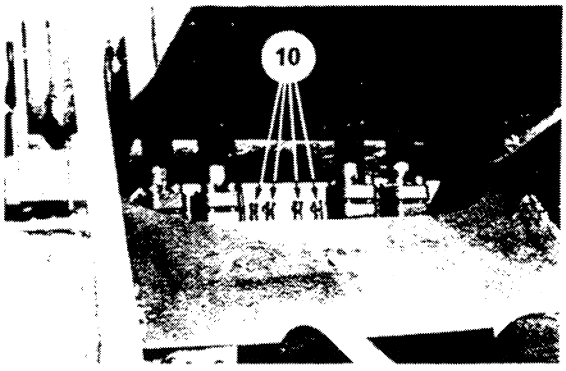
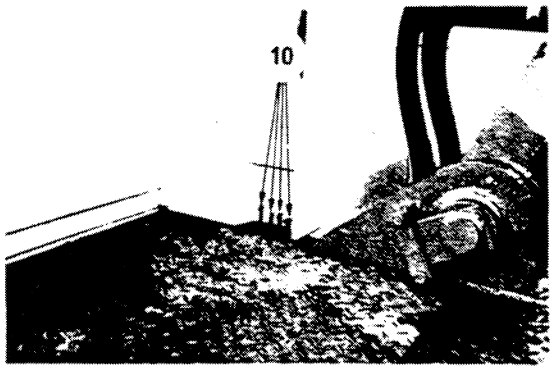


Fig. 2



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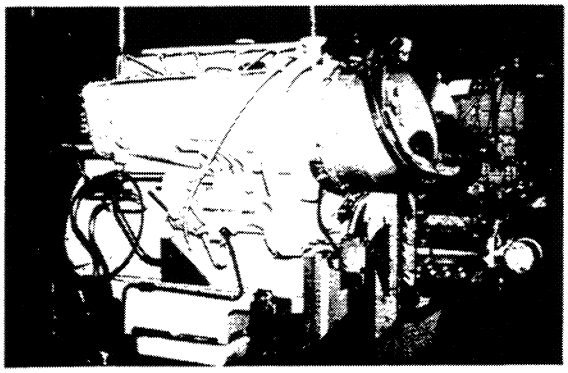
to download the complete manual.

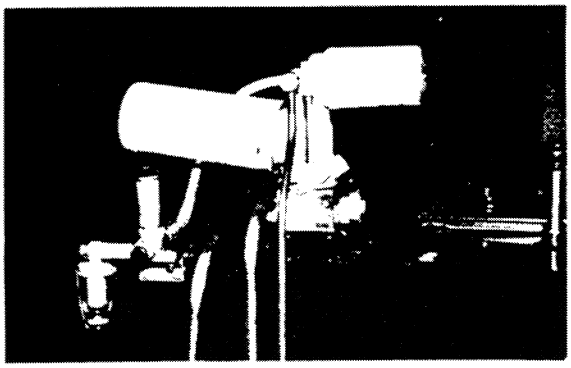
Thank you so much for reading

ENGINE

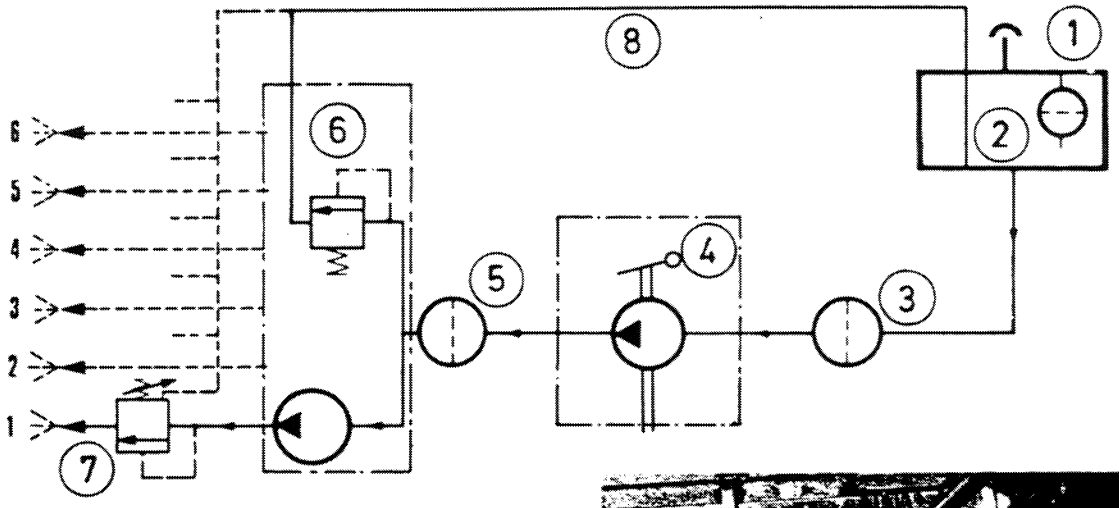
The engine supplies the energy required by the hydraulic circuit.

Characteristics :	75C	90C
Make	Deutz	Deutz
Type	F5L912	F6L912
Number of in-line cylinders :	5	6
Cooling system	air	air
Horsepower DIN HP	79	95
Horsepower SAE HP	88	105
Total capacity cm3	4710	5652
Bore (mm)	100	100
Stroke (mm)	120	120
Direct injection	yes	yes
Speed (rpm)	2150	2150
Hydraulic oil tank capacity (litres)	13.5	17
Fuel tank capacity (litres)	200	230
Average consumption litres/hour.	14	16.4
Electric startup (volts)	24	24
Electric heating	yes	yes
Weight in Kg. (approx.)	410	543





FUEL CIRCUIT (90C)



Filtration at (1) when filling tank (2).
Filtration (3) before entering feed pump (4) (the pump can be activated manually to prime the circuit).
Filtration (5) before injection pump (6) comprising valve which discharges overflow from (4) in return line to tank (8).
Five injectors (7) on the 75C and six injectors on 90C with leak return towards tank.