FIATALLIS®

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Service Manual

AVOID ACCIDENTS

Most accidents, whether they occur in industry, on the farm, at home or on the highway, are caused by the failure of some individual to follow simple and fundamental safety rules or precautions. For this reason MOST ACCIDENTS CAN BE PREVENTED by recognizing the real cause and doing something about it before the accident occurs.

Regardless of the care used in the design and construction of any type of equipment there are conditions that cannot be completely safeguarded against without interfering with reasonable accessibility and efficient operation.

A careful operator is the best insurance against an accident.
The complete observance of one simple rule would prevent many thousand serious injuries each year.
That rule is:

Never attempt to clean, oil or adjust a machine while it is in motion.

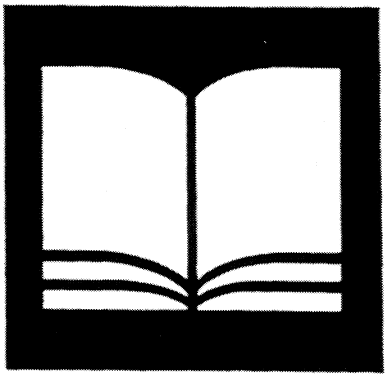
WARNING

On machines having hydraulically, mechanically, and/or cable controlled equipment (such as shovels, loaders, dozers, scrapers, etc.) be certain the equipment is lowered to the ground before servicing, adjusting and/or repairing. If it is necessary to have the hydraulically, mechanically, and/or cable controlled equipment partially or fully raised to gain access to certain items, be sure the equipment is suitably supported by means other than the hydraulic lift cylinders, cable and/or mechanical devices used for controlling the equipment.

CALIFORNIA

Proposition 65 Warning

Diesel engine exhaust and some of its constituents are known to the State of California to cause cancer, birth defects, and other reproductive harm.



Section 1 HOW TO USE

CONTENTS

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SECTION & GROUP CONTENTS

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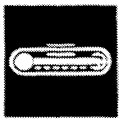
SECTION & GROUP CONTENTS



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SECTION & GROUP CONTENTS

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INTRODUCTION

1. INTRODUCTION

This service manual is for training new personnel and for reference by experienced service technician.

It works to give you both the general background as a training text and technical details of shop service and field service.

It is concise service guide for specific machine. It covers specifications construction, theory of operation, trouble shooting, removal and installation, disassembly and assembly, maintenance and repair.

Using the service manual as a guide will reduce error and costly delay. It will also assure you the best in finished service work.

All information, illustrations and specifications contained in this technical manual are based on the latest information available at the time of publication.
The right is reserved to make changes at any time without notice.

CARE OF THE HANDLING

2. REVISIONS AND SUPPLEMENTS

This loose-leaf manual can be easily kept up-to-date by inserting or exchanging the revisions and supplements.

The person in charge is responsible for updating the manual as soon as possible. Also, please dispose of the obsolete sheets to avoid confusion.

3. SYMBOLS

In this manual, the following symbols are used to indicate important place for safety and quality.

3.1 SAFETY

⚠ CAUTION: **This safety symbol is used for important safety messages. When you see this symbol, follow the safety message to avoid personal injury.**

3.2 NOTE: Special technical notice or other notice for preserving standards are necessary when performing the work.

FEATURES OF THIS MANUAL

1. CONSTRUCTION

This manual is divided into eleven sections. The section names and its contents are as below. To fully use this service manual, understand how it is organized. Spend a minute reading this now and save many minutes of searching later.

Section 1

HOW TO USE

In the beginning, read this section for effective use of this manual.

Section 2

SPECIFICATIONS

Specifications of machine and components and general service data are given in this section.

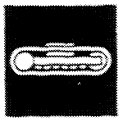
Section 3

GENERAL

Use this section not only as a reference guide to maintenance or repair but also as a text-book to train new personnel.

Section 4

SUPERSTRUCTURE



Section 5

UNDERCARRIAGE

Section 6

FRONT-END ATTACHMENTS

Refer to each of these sections according to the component you need to know.

Section 7

HYDRAULIC SYSTEM

Section 8

PNEUMATIC SYSTEM

Delete this section for not using pheumatic system.

Section 9

ELECTRICAL SYSTEM

Refer to each of these sections according to the system you need to know.

FEATURES OF THIS MANUAL

Section 10 .....

TROUBLESHOOTING

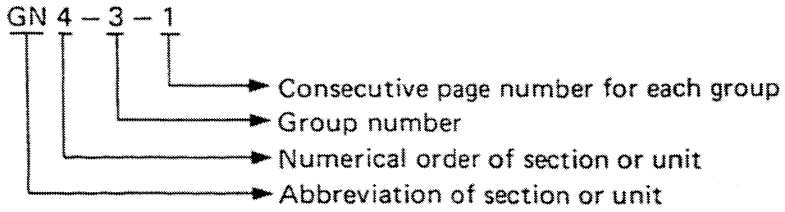
Use to find out the causes relating troubled phenomena and to remove them.

Section 11 .....

ENGINE

3. PAGE

Each page is located on the right upper and has following meanings.



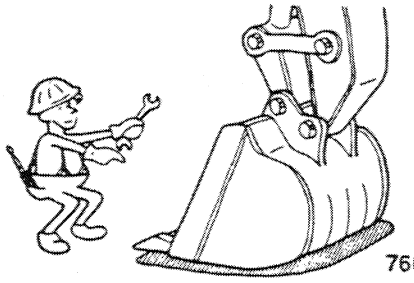
4. CONTENTS

Use the table of section & group contents to locate the information on the first section (**HOW TO USE**)

SAFETY RULES

SUPPORT RAISED EQUIPMENT

Do not work under a raised bucket. Lower the bucket to ground or onto blocks.
Do not stay under a raised track.



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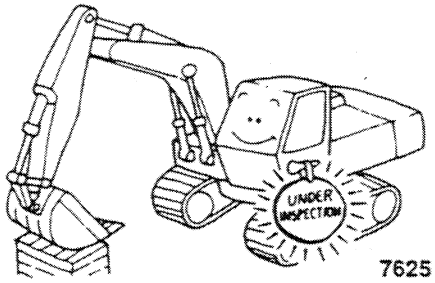
CAUTIONS FOR INSPECTION AND MAINTENANCE

Place a notice board "under inspection and maintenance" on the cab door or control lever.
Never get under the machine while it is jacked up by the boom and arm.
When inspecting or servicing the machine with raised boom and arm, always use safety blocks or safety supports.



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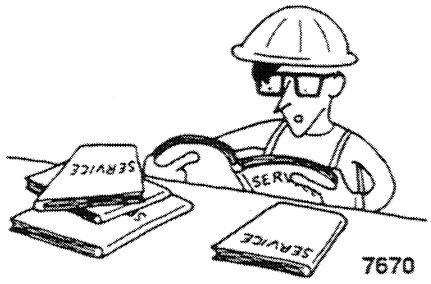
UNDERSTAND CORRECT MAINTENANCE AND OPERATION PROCEDURES

Be sure you understand all maintenance and operation procedures before working on the excavator.
Do not run the engine while you service the excavator unless the procedure is approved.
Do not start or operate the excavator unless you are in the operator's seat.
Do not lubricate or work on the excavator while it is moving.



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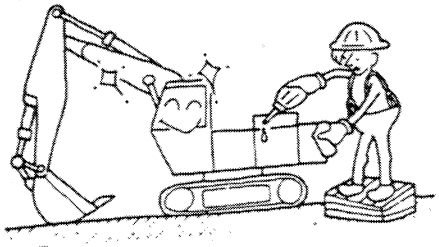
BE SURE TO STOP THE ENGINE

Place the machine on level ground. Lower the bucket to the ground, apply the swing lock.



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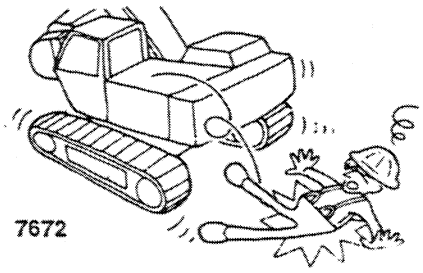
AVOID DANGEROUS SITUATIONS

Never attempt to get on or off the machine while it is operating.
When getting on or off the machine, use handles and stepping points.

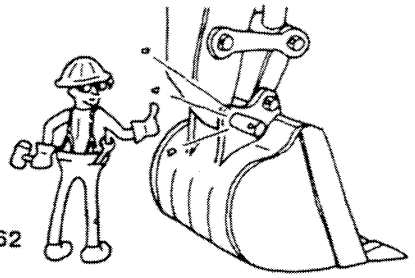


7672

SAFETY RULES

PROTECT YOUR EYES

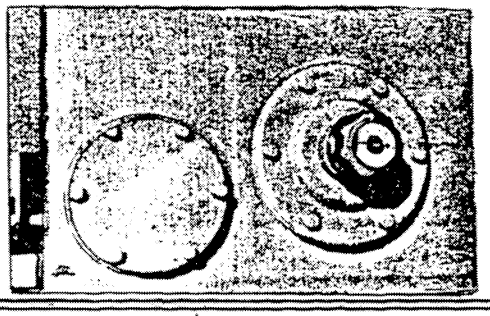
When you drive connecting pins in or out, guard against injury from flying pieces of metal.
Wear approved goggles or safety glasses.



7662

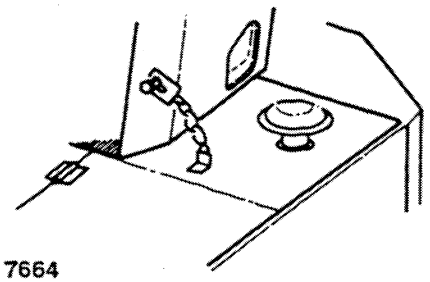
SERVICE HYDRAULIC SYSTEM SAFELY

The oil tank is always pressurized.
Before you work on the hydraulic system:
Take off the breather cap, and drain the air in the tank.
Before you use the hydraulic system, be sure all connections are tight



LOCK THE ENGINE HOOD

Lock the engine hood after opening.
Don't leave the hood open on slopes or in strong winds.



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Be careful not to touch hot surfaces or high temperature fluids.

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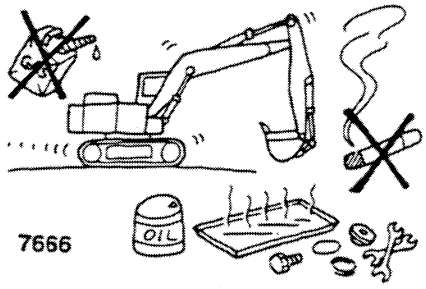
HANDLE FUEL SAFELY

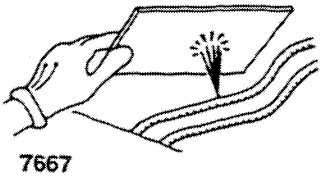
Be careful when you work with any kind of fuel.
Do not fill the fuel tank when the engine is hot or running.
Do not smoke while you fill the fuel tank or service the fuel system.



7666

AVOID HIGH PRESSURE FLUIDS

Escaping fluid under pressure can have sufficient force to penetrate the skin, causing serious injury. Before disconnecting lines, be sure to relieve pressure. Before applying pressure, be sure connections are tight and lines, pipes and hoses are not damaged. Use a piece of cardboard or wood, rather than hands, to search for suspected leaks.
If injured by escaping fluid, see a doctor at once.



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SAFETY RULES

UNDERSTAND MACHINE OPERATION

Only qualified personnel should be allowed to operate the machine.
Learn the location and purpose of all controls, instruments, indicator lights and decals.

WEAR PROTECTIVE CLOTHING

Wear fairly tight clothing ... and use safety equipment.

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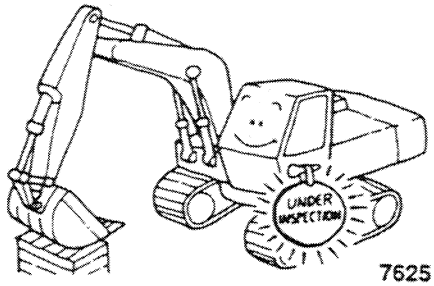
PRECAUTIONS FOR INSPECTION AND MAINTENANCE

Place a sign "Under inspection and maintenance" on the cab door or control lever.
Never get under the machine when it is self-jacked by the boom and arm.
When inspecting or servicing the machine with raised boom and arm always use safety blocks, props, stands, etc.



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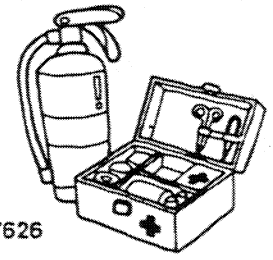
USE SAFETY EQUIPMENT

Place and fasten a first aid kit and fire extinguisher on machine. Keep the extinguisher fully charged. Learn to use it in accordance with national or local regulations.



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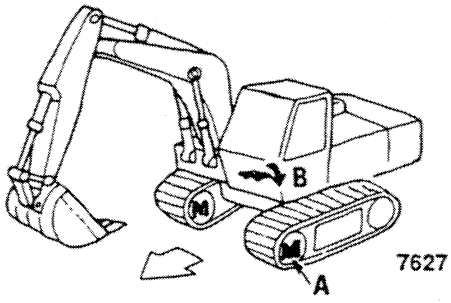
INSPECT EXCAVATOR

Inspect your excavator carefully each day before starting out on the job: use the check list provided in this Manual.
Do not start or operate the excavator unless you are in the operator's seat. When you operate the excavator do not carry any riders.
When getting on or off the machine use the hand rails, steps and grabs provided. Start the engine only in well ventilated areas to ensure the removal of deadly exhaust fumes.
Before you move the boom or arm be sure there are no persons in the working area.

SAFETY RULES

MOVE EXCAVATOR SAFELY

Do not move machine unless you first learn well how to use travel drive pedals **B** to obtain the desired direction of travel. If travel drive motors **A** are located in front of cab push down the rear of pedal **B** to move forward. Do not travel without the help of a flagman preceding the machine.
Do not travel near the edge of a ditch, gully, trench or excavation. Proceed with much care where room is limited, over rough or sloping grounds.



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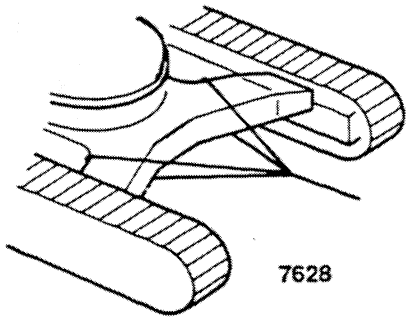
TOWING PRECAUTIONS

If the excavator needs to be towed, or is used to tow another vehicle, attach the tow ropes as shown. Only designated towing or pulling attachment points are to be used for towing or pulling. Do not start suddenly at full throttle against a tow chain or cable. Take up slack carefully.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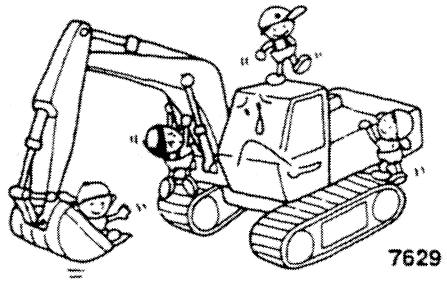
PARKING

Before you leave the cab:
Lower bucket to ground
Stop engine
Shift control lever to neutral.
When the excavator is parked on slopes, lock the tracks with suitable blocks.
Never park or stand with tracks pointing downhill.
Do not leave the lock switch key in cab: take key with you.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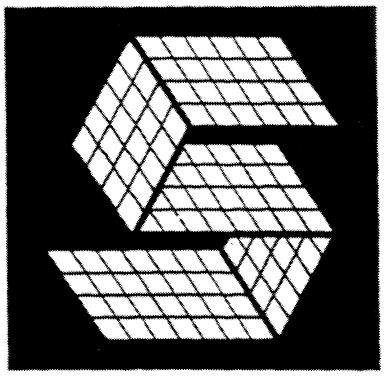

Section 2 SPECIFICATIONS

CONTENTS

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ENGINE

Type 6BTA5.9C
Turbocharged, direct injection
4-cycle Diesel and aftercooler
Number of cylinders 6
Bore ..... 102 mm
Stroke ..... 120 mm
Total displacement ..... 5880 cmc
Governed rpm 2100
Governed power (SAE J 139) ..... 169 Hp/126 Kw
Forced lubrication by gear pump
Water cooled

AUTO-IDLING DEVICE, which automatically reduces the engine rpm about 4 secs after implement controls are in neutral.

ELECTRICAL SYSTEM

Voltage ..... 24 V
Batteries/total rating ..... 2/160 amp h
Alternator ..... 30 amp
Starter motor ..... 4 Kw

HYDRAULIC SYSTEM

FIAT-HITACHI's ETS (Electronic Total Control System) can achieve maximum job efficiency and reduce fuel consumption and noise.
The system includes:
- E-P Control (Computer Aided Engine-Pump Control System).
- OHS (Optimum Hydraulic System) assures fully independent and combined operations.
- FPS (Fuel saving Pump System).
- Travel system with two speeds and high pressure for high traction force and high travel speeds.

Main pumps

2 variable displacement axial piston type
Maximum flow ..... 2 x 231 lt/min
Pilot pump ..... gear type
- maximum flow ..... 33.6 lt/min

Maximum relief valve pressures:
- boom/dipper stick and bucket ..... 285 bar
- swing system ..... 285 bar
- travel system ..... 350 bar
- pilot system ..... 40 bar

Hydraulic cylinders

The boom and dipper stick hydraulic cylinders are equipped with stroke- end cushion devices.
- boom (two) ..... 135 x 1350 mm
- dipper stick (one) ..... 145 x 1680 mm
- bucket (one) ..... 135 x 1075 mm
- positioning arm (one, triple articulation version) ..... 150 x 1220 mm

TRANSMISSION

Type ..... hydrostatic
Motors ..... axial piston type, in-shoe mounted
Brakes ..... automatic disc type, spring applied, hydraulically released
Final drive ..... oil bath, planetary reduction
Max. gradeability 35° (continuous) 70%
Travel speed:
- high ..... 0 ÷ 4 km/h
- low ..... 0 ÷ 3 km/h

TURRET SWING

One axial piston type hydraulic motor with oil bath planetary reduction. The hydraulic motor gives a high output torque. The bull gear includes a two rev. ball bearing with inner teeth, induction hardened. The bull gear and reduction pinion are grease lubricated. The swing brake is automatic, disc type, spring applied, hydraulically released.
Swing speed: ..... 12 rpm

UNDERCARRIAGE

- Sealed bulldozer type undercarriage.
- Lifetime lubricated idlers, sprockets and rollers.
- Counterbored link type track chains.
- Hydraulic track adjusters.

Quantity of carrier/support rollers per track 10/2

Shoes width available ..... 550/650 mm
..... 750/900 mm

Heavy-duty welded track frame.

DIMENSIONS (mm) Monobloc

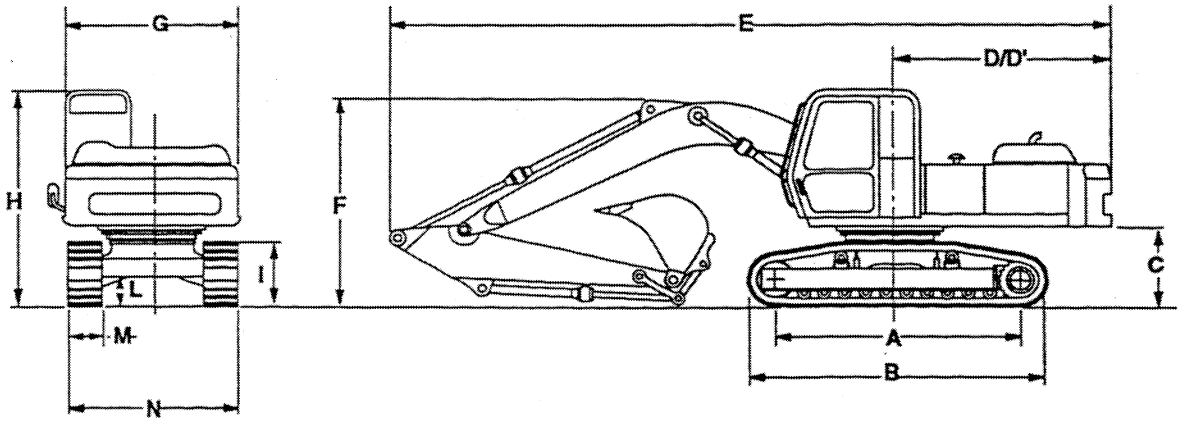

Fig. 2

A001/2

A	B	C	D	D'	E	F	G	H	I	L	M	N
3729	4605	1140	2935	2955	10210	3200	2745	2970	1000	517	550	3000
											650	3100
											750	3200
											900	3350

DIGGING DATA (mm) - with 5680 mm monobloc

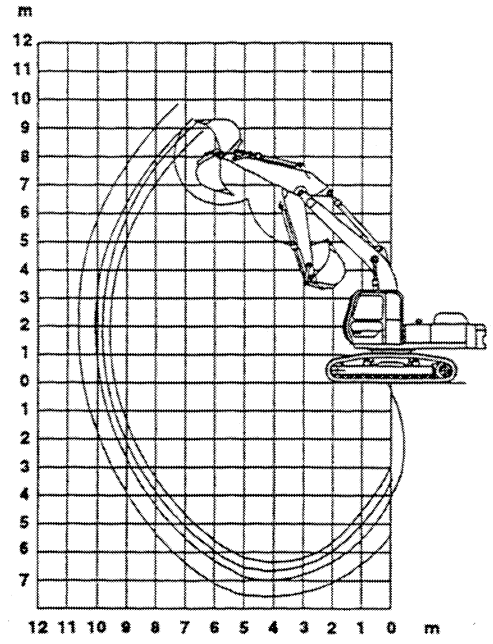

Fig. 3

Dipperstick	mm.	2100	2480	2950	3600
A	mm.	9740	9890	10310	10900
A'	mm.	9540	9690	10130	10730
B	mm.	6040	6400	6860	7650
B'	mm.	5810	6170	6670	7890
C	mm.	9740	9270	9480	9710
D	mm.	6710	6420	6610	6850
E	mm.	4110	4190	4080	4070
Bucket force	daN	13000	13000	13000	13000
Digging force	daN	13000	12150	10100	8850

DIMENSIONS (mm) - Triple Articulation

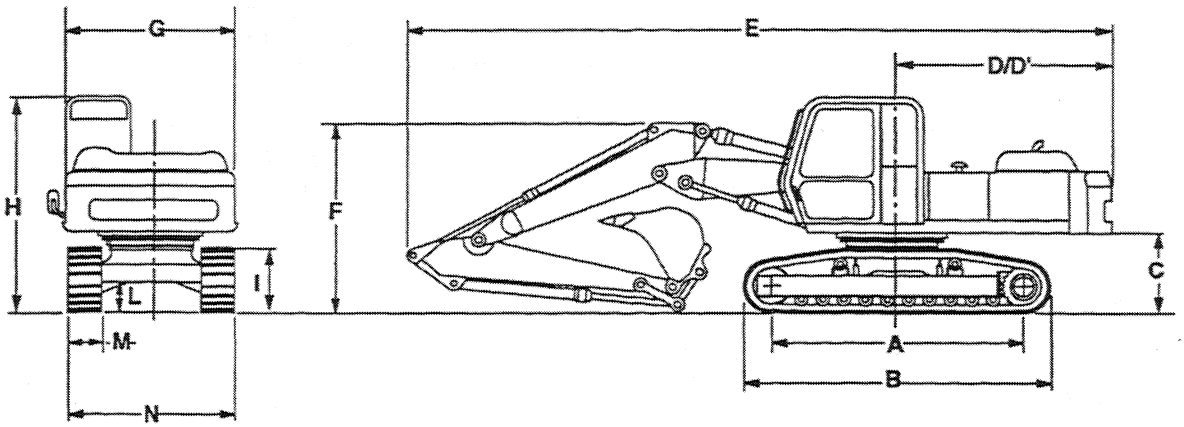

Fig. 4

A003/2

A	B	C	D	D'	E	F	G	H	I	L	M	N
3729	4605	1140	2935	2955	10200	3160	2745	2970	1000	517	550	3000
											650	3100
											750	3200
											900	3350

DIGGING DATA (mm) - Triple Articulation

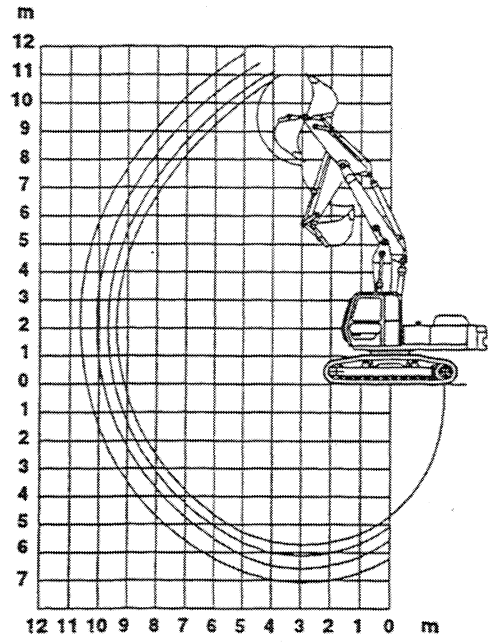

Fig. 5

Dipperstick	mm.	2100	2480	2950	3600
A	mm.	9610	9800	10250	10870
A'	mm.	9410	9600	10070	10700
B	mm.	5750	6010	6470	7100
B'	mm.	5520	5780	6280	6940
C	mm.	11150	11110	11470	11930
D	mm.	8090	8030	8380	8840
E	mm.	3160	3130	2730	2910
Bucket force	daN	13000	13000	13000	13000
Digging force	daN	13000	12150	10100	8850

HYDRAULIC SYSTEM

This machine has adopted an "optimum hydraulic system (OHS)" which facilitates the speeding up of the actuators, swing operation and a variety of combined operations required of an hydraulic shovel. A large-capacity safety valve is provided in the control valve, with many additional safety valves on each hydraulic circuit to prevent over pressure and clogging of filters and consequent damage to the hydraulic system and components. The travel parking brake is so designed that it is put ON and OFF automatically by the travel motor drive pressure. It is released by operating the travel drive lever, and is applied when hand pressure is released. The swing parking brake is interlocked with the swing lever and is put ON and OFF automatically. It is released by operating the swing lever, and is applied automatically after putting back the lever in hold position. The lock brake operating upperstructure swing system is interlocked with swing control lever operation and is put ON/OFF automatically. It is released by operating the travel control lever and is applied again putting the lever in hold position. This machine is equipped with an accumulator which allows to move the front-end attachment for some time after the engine has stopped. As it contains high pressure gas, the accumulator must never be separated from the machine, dismantled or thrown into a fire. All the hydraulic components, including the pump and main control valve have been adjusted at the time of factory delivery. Do not dismantle these components nor tamper with the adjustment screws; once dismantled, they are no longer readjustable. In case of any abnormality, contact the nearest Service Center.

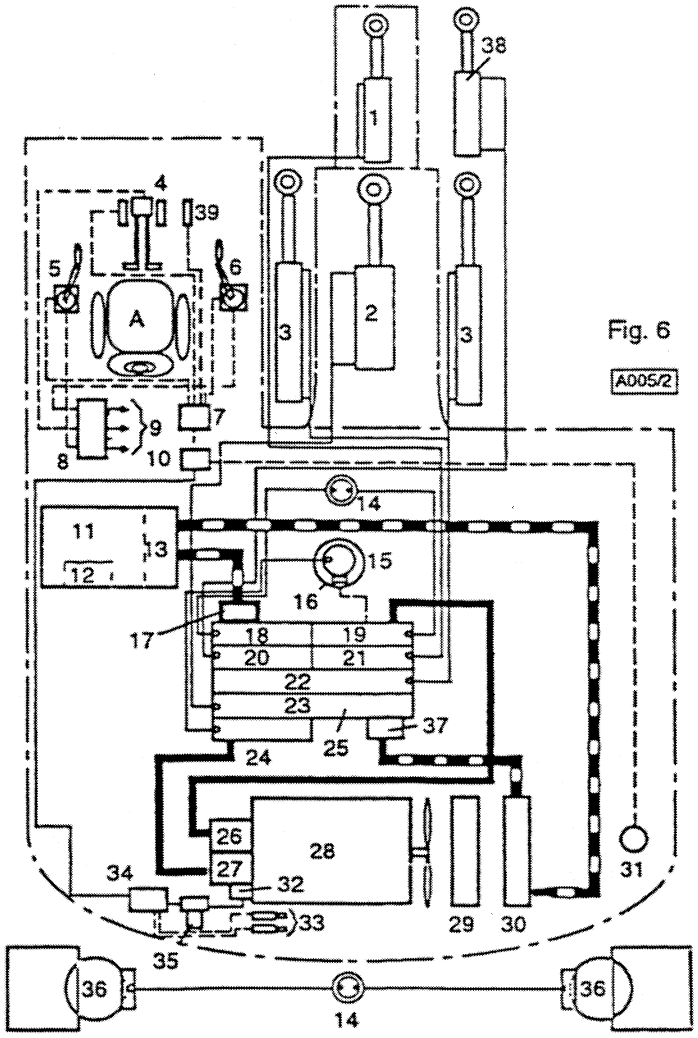

Fig. 6

A005/2

A) Operator's compartment
1) Bucket cylinder
2) Arm (dipper) cylinder
3) Lifting boom cylinders
4) Travel drive pilot valve
5) Left pilot valve
6) Right pilot valve
7) Control neutralizer valve
8) Anti-shock valve
9) To main control valve
10) Check valve
11) Hydraulic oil tank
12) Suction strainer
13) Full flow filter
14) Rotary distributor
15) Swing motor
16) Parking brake selection valve
17) By-pass check valve
18) Travel drive (left track)
19) Travel drive (right track)
20) Positioning arm
21) Bucket
22) Boom
23) Arm (dipper)
24) Swing
25) Main control valve
26) Front pump
27) Rear pump
28) Engine
29) Radiator
30) Hydraulic oil cooler
31) Accumulator
32) Pilot control pump
33) Mode selection cylinder
34) Solenoid valve
35) Pilot control system filter
36) Travel drive motor
37) Restriction valve
38) Posit. cylinder (triple articulation version)
39) Posit. control pedal (triple articulation version)

STANDARD EQUIPMENTS

Note: Standard and optional equipment may vary by country. Consult your Dealer for specific.

- Anti-freeze
- Auto-Idling device
- Cab with tinted glass and radio predisposition
- Dry air cleaner
- Electrical system, 24 V
- Electronic Data Monitor
  Gauges
  - Water temperature
  - Fuel
  - Hourmetr
  - Digital clock
  Warning lamps (red)
  - Battery charge
  - Engine oil pressure
  - Air filter clogging
  - Engine overheat
  - Minimum fuel level
  Warning lamps (green)
  - Headlight (ON)
  - Engine oil level
  - Engine coolant level
  - Hydraulic oil level
  - Auto-Idling
  - Low-Speed travel
  - High-Speed travel
  Switches
  - Oil level check
  - Buzzer release
- Electronic total control System:
  - E-P (Mode selection)
  - OHS (Optimum Hydraulic System)
  - FPS (Fuel Pump Saving)
- Horn
- Hydraulic line with O-ring seal
- Hydraulic system: tank, double variable displacement pumps, control valve 5+4 spools, cylinders with stroke-end cushion mechanism
- Hydraulic track adjustment
- In-shoe type travel motors
- Internal and external sound suppression
- Large sized tool box
- Maintenance free batteries
- One piece boom or triple articulation
- Pedal travel control (with additional levers for hand control)
- Knobs with adjustable control levers
- Sealed pins for boom and bucket linkage
- Sealed track
- Suspension seat
- Swing circle grease bath
- Track shoes:
  .....
  .....
  .....
- Travel and swing motors with automatic disc brakes

OPTIONAL EQUIPMENTS

- Anticavitation valve
- Buckets
- Dipper stick 2100 mm
- Dipper stick 2480 mm
- Dipper stick 2950 mm
- Dipper stick 3600 mm
- Hydraulic hammer predisposition
- FOPS
- FPGS
- Rotating beacon
- Track shoes
  550
  650
  750
  900

Buckets			
SAE Capacity	**CECE Capacity**	**Width**	**Weight**
0.58 m3	0.53 m3	750 mm	587 kg
0.68 m3	0.62 m3	850 mm	650 kg
0.85 m3	0.76 m3	1000 mm	708 kg
1.06 m3	0.95 m3	1200 mm	810 kg
1.18 m3	1.05 m3	1300 mm	830 kg
1.40 m3	1.25 m3	1500 mm	920 kg

LIFTING CAPACITY (TON.7) - Dipper stick 2100 mm

Lifting values change when changing the type of boom.
Lifting values are to be considered with excavator on firm, even and level ground.
These values change when the type of ground changes.
Bucket capacity: 0,68 m³, weight: 650 kg

	m / m	RADIUS OF LOAD												
		3.0		4.5		6.0		7.5		9.0		At max reach		
														Reach
		Front	Side	Front	Side	Front	Side	Front	Side	Front	Side	Front	Side	
Articulated arm	Height													
	+6.0			8.4*	8.4*	6.5*	5.9	5.3*	3.9			5.3*	3.7	7.6
	+4.5			10.1*	9.0	7.0*	5.6	5.4*	3.8			4.9*	3.1	8.3
	+3.0			11.5*	8.1	8.0*	5.2	5.7*	3.6			4.8	2.8	8.6
	+1.5			12.0*	7.3	8.5	4.8	6.0*	3.4			4.8	2.7	8.7
	0			11.4*	7.1	8.3	4.6	5.9*	3.3			4.9	2.8	8.4
	-1.5	9.4*	9.4*	9.9*	7.0	7.6*	4.6	5.5*	3.3			4.8*	3.1	7.9
	-3.0			7.4*	7.3	5.7*	4.7					4.0*	3.7	7.1
	-4.5													
Monobloc	Height													
	+6.0					5.2*	5.2*					5.2*	4.0	7.5
	+4.5			7.2*	7.2*	6.0*	5.7	5.4*	3.9			5.4*	3.3	8.1
	+3.0			9.5*	8.3	7.0*	5.4	5.9*	3.8			5.1	3.0	8.5
	+1.5			11.4*	7.6	8.0*	5.0	6.1	3.6			5.0	2.9	8.5
	0			12.3*	7.4	8.4	4.8	6.0	3.5			5.1	3.0	8.3
	-1.5	10.6*	10.6*	12.2*	7.3	8.3	4.8	5.9	3.4			5.6	3.3	7.8
	-3.0	16.2*	15.0	11.4*	7.5	8.4*	4.8					6.8	3.9	6.9
	-4.5	13.1*	13.1*	9.4*	7.8							7.3*	5.8	5.5

The values with (*) refer to hydraulic limitation.
The values are in compliance with rules ISO 10567. The excavator is prearranged for the installation of safety valves on lifting and digging cylinder, to be supplied upon demand.

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LIFTING CAPACITY (TON.7) - Dipper stick 2480 mm

Lifting values change when changing the type of boom.
Lifting values are to be considered with excavator on firm, even and level ground.
These values change when the type of ground changes.
Bucket capacity: 0,68 m³, weight: 650 kg

	m / m	RADIUS OF LOAD												
		3.0		4.5		6.0		7.5		9.0		At max reach		
		Front	Side	Front	Side	Front	Side	Front	Side	Front	Side	Front	Side	Reach
Articulated arm	Height													
	+6.0			8.0*	8.0*	6.2*	6.0*	5.0*	3.9			4.9*	3.7	7.7
	+4.5	14.2*	14.2*	9.4*	9.2	6.7*	5.6	5.2*	3.8			4.6*	3.1	8.3
	+3.0			11.1*	8.1	7.6*	5.2	5.5*	3.6			4.5*	2.8	8.6
	+1.5			11.9*	7.3	8.5	4.8	5.8*	3.4			4.6*	2.6	8.7
	0			11.5*	6.9	8.2*	4.5	5.8*	3.2			4.8	2.6	8.5
	-1.5	11.5*	11.5*	10.2*	6.9	7.7*	4.4	5.7*	3.2			5.1*	2.9	8.0
	-3.0			8.0*	7.0	6.1*	4.5					4.5*	3.5	7.1
	-4.5													
Monobloc	Height													
	+6.0											4.8*	4.0	7.5
	+4.5					5.6*	5.6*	5.1*	3.9			5.0*	3.3	8.1
	+3.0			8.9*	8.3	6.6*	5.3	5.6*	3.7			5.4	3.0	8.5
	+1.5			10.9*	7.6	6.0	5.0	6.0	3.5			4.9	2.8	8.5
	0	7.2*	7.2*	11.9*	7.2	5.9	4.7	5.9	3.4			5.0	2.9	8.3
	-1.5	12.5*	12.5*	12.1*	7.2	8.2	4.6	5.8	3.3			5.5	3.1	7.8
	-3.0	16.7*	14.6*	11.5*	7.2	8.3	4.7					6.6	3.8	6.9
	-4.5	14.0*	14.0*	9.8*	7.5							7.8	5.5	5.5

The values with (*) refer to hydraulic limitation.
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LIFTING CAPACITY (TON.7) - Dipper stick 2950 mm

Lifting values change when changing the type of boom.
Lifting values are to be considered with excavator on firm, even and level ground.
These values change when the type of ground changes.
Bucket capacity: 0,68 m³, weight: 650 kg

	m / m	RADIUS OF LOAD												
		3.0		4.5		6.0		7.5		9.0		At max reach		
		Front	Side	Front	Side	Front	Side	Front	Side	Front	Side	Front	Side	Reach
Articulated arm	Height													
	+6.0					5.9*	5.9*	4.8*	4.0			3.7*	3.3	8.2
	+4.5	10.4*	10.4*	8.6*	8.6*	6.3*	5.8	4.9*	3.9			3.7*	2.8	8.8
	+3.0	13.1*	13.1*	10.6	8.4	7.2*	5.3	5.2*	3.6			3.9*	2.8	9.1
	+1.5			11.7*	7.5	8.3*	4.8	5.6*	3.4	4.1*	2.6	4.1*	2.5	9.1
	0	6.9*	6.9*	11.7*	7.0	8.2	4.5	5.8	3.2	4.1*	2.5	4.4	2.4	8.9
	-1.5	10.6*	10.6*	10.7*	6.8	7.9*	4.4	5.7	3.1			4.7	2.6	8.5
	-3.0	11.1*	11.1*	8.7*	6.9	6.6	4.4	4.6*	3.2			4.4	3.1	7.7
	-4.5													
Monobloc	Height													
	+6.0							4.3*	4.1			3.8*	3.6	8.0
	+4.5					5.1*	5.1*	4.7*	4.0			3.9	3.0	8.6
	+3.0	13.7*	13.7	8.1*	8.1	6.2	5.4	5.3*	3.7			4.1	2.7	8.9
	+1.5	5.9*	5.9*	10.3*	7.7	7.3*	5.0	5.9*	3.5			4.5	2.6	9.0
	0	7.9	7.9	11.6	7.3	8.2	4.7	5.9	3.4			4.6	2.6	8.8
	-1.5	11.5*	11.5*	12.1*	7.1	8.2*	4.6	5.8	3.3			5.0	2.8	8.3
	-3.0	16.3*	14.4	11.8*	7.2	8.2*	4.6					5.8	3.3	7.5
	-4.5	15.2*	14.8*	10.5*	7.4	7.6*	4.8					7.3	4.6	6.2

The values with (*) refer to hydraulic limitation.
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LIFTING CAPACITY (TON.7) - Dipper stick 3600 mm

Lifting values change when changing the type of boom.
Lifting values are to be considered with excavator on firm, even and level ground.
These values change when the type of ground changes.
Bucket capacity: 0,68 m³, weight: 650 kg

	m / m	RADIUS OF LOAD												
		3.0		4.5		6.0		7.5		9.0		At max reach		
		Front	Side	Front	Side	Front	Side	Front	Side	Front	Side	Front	Side	Reach
Articulated arm	Height													
	+6.0					5.3*	5.3*	4.4*	4.1			2.8*	2.8*	8.9
	+4.5			6.2*	6.2*	5.8*	5.8*	4.6*	3.9	3.7*	2.7	2.9*	2.4	9.4
	+3.0	15.3*	15.3*	9.8*	8.8	6.6*	5.5	4.9*	3.7	3.8*	2.6	3.0*	2.2	9.7
	+1.5	7.8*	7.8*	11.3*	7.8	7.7*	5.0	5.3*	3.4	4.0*	2.5	3.2*	2.1	9.8
	0	7.4*	7.4*	11.8	7.1	8.3	4.6	5.8*	3.2	4.2*	2.4	3.6*	2.1	9.6
	-1.5	9.8*	9.8*	11.2*	6.8	8.1	4.4	5.6	3.1	4.2	2.3	4.1	2.2	9.1
	-3.0	13.4*	13.3	9.8*	6.8	7.2	4.3	5.3*	3.1			4.2*	2.6	8.4
	-4.5			7.2*	7.0	5.3*	4.4					3.6*	3.3	7.3
Monobloc	Height													
	+6.0							3.7*	3.7*			2.9*	2.9*	8.7
	+4.5							4.1*	4.0	3.7*	2.8	3.0*	2.7	9.2
	+3.0	10.7*	10.7*	6.9*	6.9*	5.5*	5.4	4.8*	3.8	4.4*	2.7	3.1*	2.4	9.5
	+1.5	9.2*	9.2*	9.4*	8.0	6.8*	5.1	5.5*	3.6	4.5	2.6	3.5*	2.3	9.6
	0	8.3*	8.3*	11.1*	7.4	7.8	4.8	5.9	3.4	4.4	2.5	4.0*	2.3	9.4
	-1.5	10.6*	10.6*	12.0*	7.1	8.2	4.6	5.7	3.3			4.4	2.5	8.9
	-3.0	14.2*	13.8	12.0*	7.1	8.1	4.5	5.7	3.2			5.0	2.8	8.2
	-4.5	16.6*	14.6	11.2*	7.2	8.1*	4.6					6.4	3.6	7.0

The values with (*) refer to hydraulic limitation.
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Section 3 GENERAL

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