Electrical components in circuit diagram

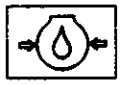
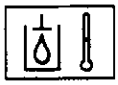
FX350 | Circuit diagram No. 350- | T 1287306 - 001 / B 1287305 - 012

Part	Quantity	Description and function	Curr. Path	Location	Part no.
W06	1,000	CABLE HARNESS, PLATFORM	20 - 1/60 -	PLATFORM PLATE	73173027
W08	1,000	CABLE BATTERY PLUS	20 - 1/70 -	SUPERSTRUCTURE	73175162
W09	1,000	CABLE HARNESS, STANDARD CAB	20 - 1/80 -	CAB	73172631
W09	1,000	PIPE CLAMP	20 - 1/80 -	CAB	73172632
W09	1,000	SELF-TAPPING SCREW	20 - 1/80 -	CAB	73172633
W15	1,000	CABLE FOR JOYSTICK	20 - 1/90 -	JOYSTICK	73172634
W15	1,000	RECEPTACLE HOUSING	20 - 1/90 -	JOYSTICK	73172635
W15	10,000	MALE CONNECTOR	20 - 1/90 -	JOYSTICK	73172636
W16	1,000	CABLE BATTERY	20 - 4/20 -	BATTERY BOX	73173029
W17	1,000	PLATFORM EARTH CABLE	20 - 4/30 -	PLATFORM	73172000
W18	3,000	HEADLIGHT EARTH CABLE	20 - 4/40 -	BOOM	73172508
W23	1,000	ENGINE EARTH	20 - 4/50 -	ENGINE COMPARTMENT	73173031
W25	3,000	POWER CABLE, WORKING LIGHT	20 - 4/60 -	BOOM	73175150
W80	1,000	CABLE - STARTER/EARTH	20 - 7/20 -	ENGINE	73175148
W81	1,000	CABLE - BATTERY MAIN SWITCH/EARTH	20 - 7/31 -	BATTERY BOX	73175264
W82	1,000	CABLE - BATTERY MINUS/BATTERIY MAIN SWITCH	20 - 7/40 -	BATTERY BOX	73177355
W90	1,000	CABLE SET FUSE COLD STARTING	20 - 7/50 -	CONTROL PANEL	73177291
X10	2,000	B + DISTRIBUTOR	- 0/ 0 -		73170164
X10	1,000	CLIP	- 0/ 0 -		73172640
X15	1,000	PLUG/SOCKET - WORKING LIGHT	- 0/ 0 -		73177315
X15.1	1,000	PLUG/SOCKET - WORKING LIGHT	- 0/ 0 -		73177315
X20	1,000	CONNECTOR SCREEN WIPER MOTOR	- 0/ 0 -		73172641
X20	3,000	PLUG-IN SLEEVE	- 0/ 0 -		73172642
X31.2	1,000	GROUND TERMINAL SIDE CONSOLE	- 0/ 0 -		73175271
XF20	1,000	PLUG/SOCKET COLD START	- 0/ 0 -		73175272
XF20	1,000	HOUSING	- 0/ 0 -		73175273
XF20	2,000	BUSHING	- 0/ 0 -		73175274
XF20	2,000	MALE CONNECTOR	- 0/ 0 -		73175275
XF6	1,000	PLUG/SOCKET TRAVEL ALARM	- 0/ 0 -		73176061
XF6	1,000	PLUG-IN SLEEVE	- 0/ 0 -		73176063
XF6	1,000	RECEPTACLE HOUSING	- 0/ 0 -		73176064
XF6	1,000	HOUSING	- 0/ 0 -		73176065
Y1.3	1,000	SOLENOID VALVE COLD START	2 - 4/85 -	ENGINE COMPARTMENT	

PREVIEW - YOUFIXTHIS.COM

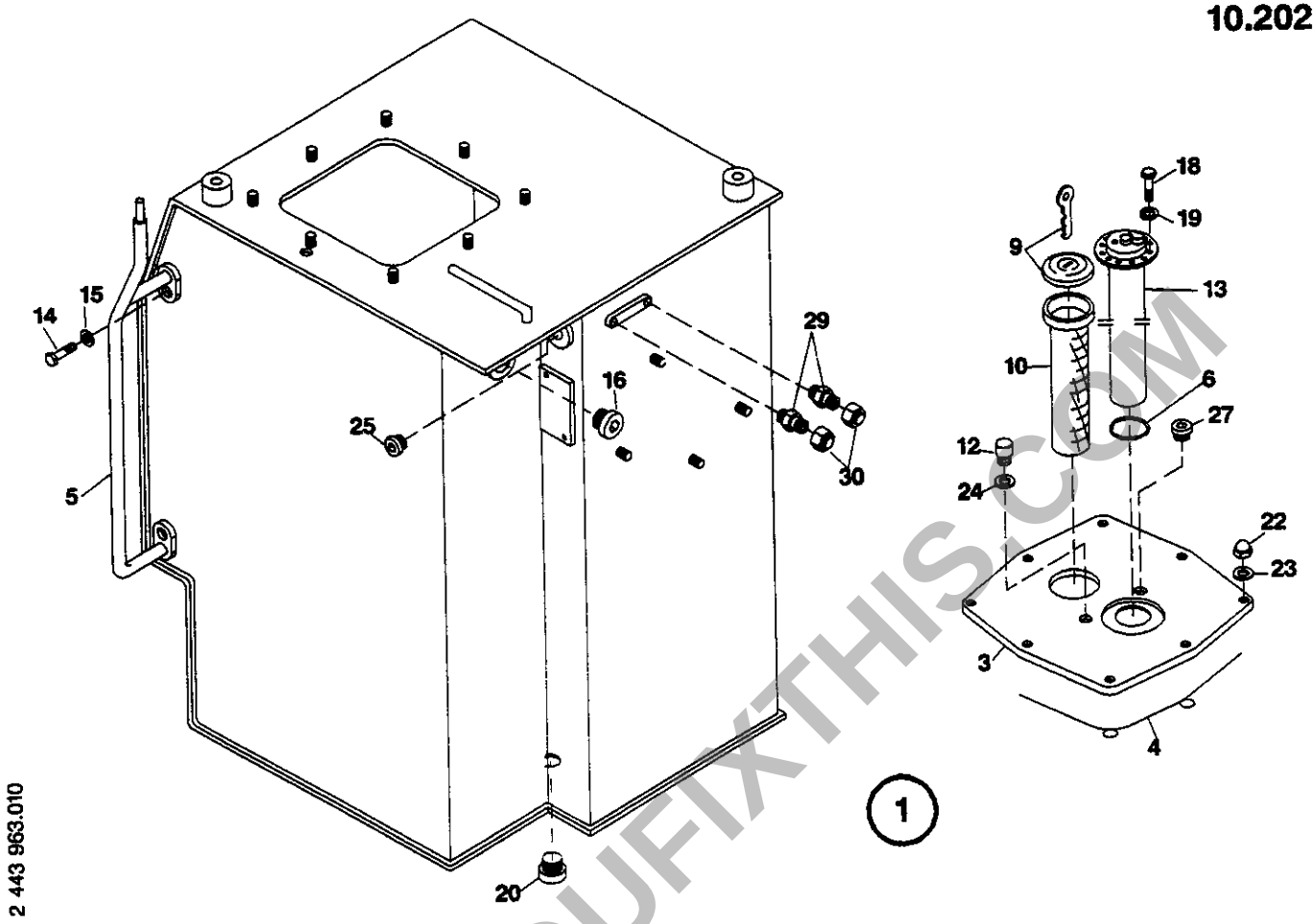
Download full manual at youfixthis.com

Control panel (Fig. 4)

No.	Element	Function	Symbol
1	**Bar-graph display** **Coolant temperature**	indicates the temperature of the coolant: indicator bar in light segment = ok indicator bar in dark segment = working speeds reduced by the POWER-system to lower the engine temperature. (**C** = cool - **H** = hot)	
2	**Indicator** **POWER-system range**	indicates the actual POWER-system mode. HEAVY ECO LIFT	
3	**Multi-functional display**	standard display: time in hours : minutes alternatively: engine revs (RPM = min^{-1}) see: "Display, function (key 18)"	
4	**Bar-graph display** **Fuel reserve**	indicates the fuel reserve. indicator bar in light segment = ok indicator bar in dark segment = refuelling required (**F** = full - **E** = empty)	
5	**Operating-hours meter**	- adds up the hours run of the machine; displays the servicing interval automatically after start-up - indicates fault codes (see: "Table of fault codes")	
6	**Warning lamp**	not used on this machine.	
7	**Warning lamp**	not used on this machine.	
8	**Indicator lamp**	not used on this machine.	
9	**Warning lamp** **Engine oil pressure**	lit up when the engine oil pressure is too low: **shut off engine.**	
10	**Warning lamp** **Hydraulic oil temperature**	lit up when the hydraulic oil temperature is too high: working speed reduced by the POWER-system to allow the hydraulic oil to cool off.	
11	**Warning lamp** **Overload warning system (optional equipment)**	lights up with the activated overload warning system on when the load lifted is too big and the stability of the machine is endangered. In this case, **the load must be reduced.**	

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com



10.202

FUEL TANK

FIATALLIS

FX350 / 64101 - .....

T 2443963 - 001
B 2443963 - 010

Item	Quan.	ME	Part No.	Description
025	1	00	**73170359**	SCREW PLUG
027	1	00	**73171665**	SCREW PLUG
029	2	00	**73170298**	SOCKET
030	2	00	**73171654**	NIPPLE

ME: 00 = Stück/piece 13 = m 26 = m^2 39 = m^3 43 = kg 50 = l (litre)

1998-09-10

PREVIEW - YOUFIXTHIS.COM
Download full manual at youfixthis.com

Item	Qty.	Description
002	1	Brake. Compl.
003	1	Locking Ring
004	1	Hub
005	11	Outer Disk
006	10	Inner Disk
007	1	Sleeve
008	1	Seal
009	1	Piston
010	1	Seal
011	14	Compression Spring
012	14	Compression Spring
013	1	Cylinder Cover
014	1	Snap Ring

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

General

2800515

Pressure checking must be done with calibrated pressure sensors in conjunction with EDS tester or with calibrated pressure gauges connected to the respective measuring points.

The two main pumps are designated P1 and P2 (Fig. 1).

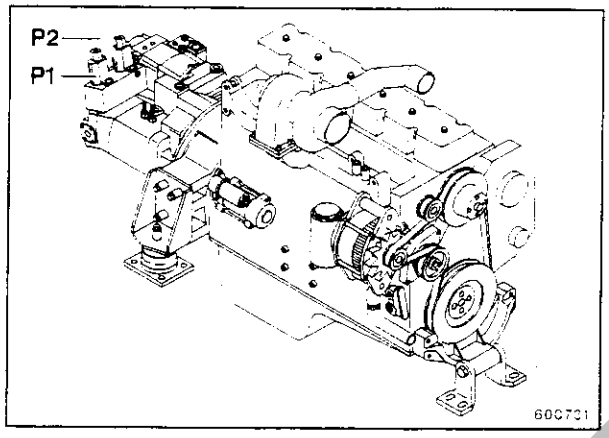


Fig. 1

When adjusting pressure relief valves, the temperature of the hydraulic oil must be at least 50°C.

Pressure settings

2796823

Designation	Unit bars
Servo control pressure	45
Primary pressure for main pumps with / without pressure cut-off	320 / 360
Secondary pressure for - boom cylinder - stick cylinder - bucket cylinder - hydraulic travel motor	380
Feed pressure for swing pump	20
Pressure cutoff for swing pump	390
Safety valve for swing pump	420
Control pressure for swinging mode	13

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

END POINT	CABLE NO.	℄ mm²	NO.	■ mm²	CABLE NO.	END POINT
X115: 5	152	0.5	1	0.38	wh	PUSH BUTTON DOWN (1)
X115: 6	153	0.5	2	0.38	br	PUSH BUTTON DOWN (4)
X117: 15	154	0.5	3	0.38	gn	PUSH BUTTON TOP (1)
X104: 12	129	0.5	4	0.38	ye	PUSH BUTTON TOP (2)
			5	0.38	gy	PUSH BUTTON TOP (4)
F8 (15)	80	0.5	6	0.38	pi	PUSH BUTTON LEFT (1)
X108: 4	116	0.5	7	0.38	bl	PUSH BUTTON LEFT (4)
X17: 9		0.5	8	0.38	rd	PUSH BUTTON LEFT (2)
X17: 8		0.5	9	0.38	bl	PUSH BUTTON RIGHT (1)
X108: 5	115	0.5	10	0.38	vi	PUSH BUTTON RIGHT (4)
X115: 7	155	0.5	11			RESERVE
X115: 8	156	0.5	12			RESERVE

CONNECTION TABLE
PLUG/SOCKET X17 PILOT CONTROL LEVER LEFT

END POINT	CABLE NO.	℄ mm²	NO.	■ mm²	CABLE NO.	END POINT
A100X2: 19	34	0.5	1	0.38	wh	PUSH BUTTON DOWN (1)
GROUND (-)	136	0.5	2	0.38	br	PUSH BUTTON DOWN (4)
A100X2: 8	23	0.5	3	0.38	gn	PUSH BUTTON TOP (1)
GROUND (-)	137	0.5	4	0.38	ye	PUSH BUTTON TOP (2)
		0.5	5	0.38	gy	PUSH BUTTON TOP (4)
F10 (15)	83	0.5	6	0.38	pi	PUSH BUTTON LEFT (1)
X104: 9	127	0.5	7	0.38	bl	PUSH BUTTON LEFT (4)
X18: 9		0.5	8	0.38	rd	PUSH BUTTON LEFT (2)
X18: 8		0.5	9	0.38	bl	PUSH BUTTON RIGHT (1)
X104: 11	128	0.5	10	0.38	vi	PUSH BUTTON RIGHT (4)
X115: 9	138	0.5	11			RESERVE
X115: 10	140	0.5	12			RESERVE

CONNECTION TABLE
PLUG/SOCKET X18 PILOT CONTROL LEVER RIGHT

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

313	31	052	50						Datum/Date	Name
								Bearb./Written	07.11.97	Semlin
Typ	BG	UBG	CH	02	AM 539	29 05 98	Sem	Gear./Checked		
FX140-270				01	AM 114	01.02.98	Sem	Norm/St. Check		
				Ind	Ind.-Nr./Change-No	Datum/Date	Name	Bearb.Abt./Written department		

Urspr./Origin

Benennung/Description
WIRING DIAGRAM
X17 - X18

Sach-Nr./Part-No 2459343-12

4 Blatt/Sheet 19
Bl.-Nr./Sheets 21

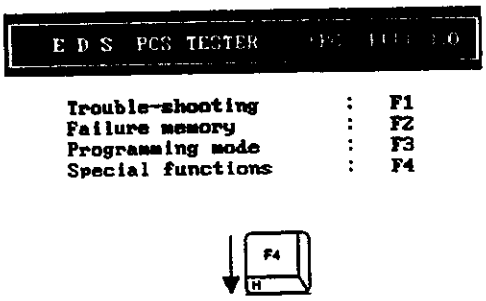
Ers. für/Substitut for

Ers. durch/Substituted

SPECIAL FUNCTIONS

Log

Main menu (starting screen)



Starting screen for all tester functions

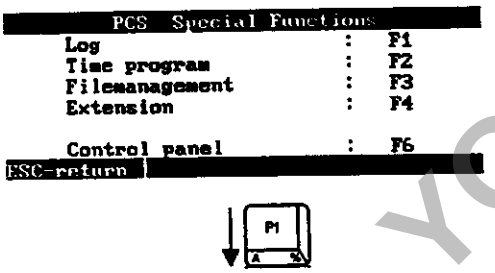
F1 Troubleshooting: display and documentation of machine and process data without modification

F2 Fault memory: reading out, printing and deleting the contents of the PCS box-internal failure memory

F3 Programming: machine data (type, no. currents configuration)

F4 Special functions: recording, timer program, file management, extension, control panel

Special functions submenu

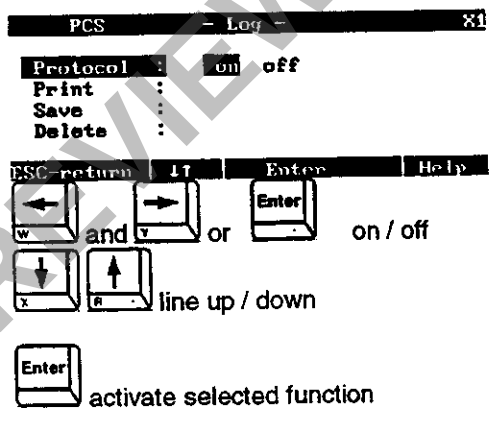


Selection of the special functions pages required for general handling of data.

Keys F1, F2, F3, F4 and F6 are used to select the individual data items of the menu in the opposite column.

Esc goes back from all data screens to the special functions submenu.

Log X1



Function: Handling of measuring value logs generated during setting or troubleshooting operations.

Hold generates the logs fom the measuring and setting displays.

Protocol: on off activated/deactivated
In the activated state, the corresponding menue displays (measuring value logs) are stored together with date and machine data (type, etc.) in a file named **Temp.-$$**. This file is stored on the RAM-Card.
Save: The Temp.-$$ file is saved with another name. The "Saving" option requires a new filename to be entered. This name can be 8 characters long with no name restrictions.
Print: prints out the measuring value log file entered (name).
Delete: deletes a measuring value log file entered (name).

Display for entering of name ????????

PREVIEW - YOUFIXTHIS.COM
Download full manual at youfixthis.com

PART 1 - INTRODUCTION

PREFACE 3

Warnings and symbols 4

DESIGNATED USE 4

Organizational measures 5

Selection and qualification of personnel - basic responsibilities 6

Safety instructions governing specific operational phases

Standard operation 6

Special work in conjunction with utilization of the machine - maintenance and repairs during operation - disposal of parts and consumables 7

Warning of special dangers

Electric energy 8

Gas, dust, steam and smoke 8

Hydraulic and pneumatic equipment 9

Noise 9

Oil, grease and other chemical substances 9

Transporting and towing - recommissioning 9

California, Proposition 65 Warning 9

SAFETY PRECAUTIONS FOR OPERATION 10

General 10

Before Operation 12

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

Bringing the machine to basic position

2411345

WARNING

Read and observe:
"Travelling - Safety instructions".

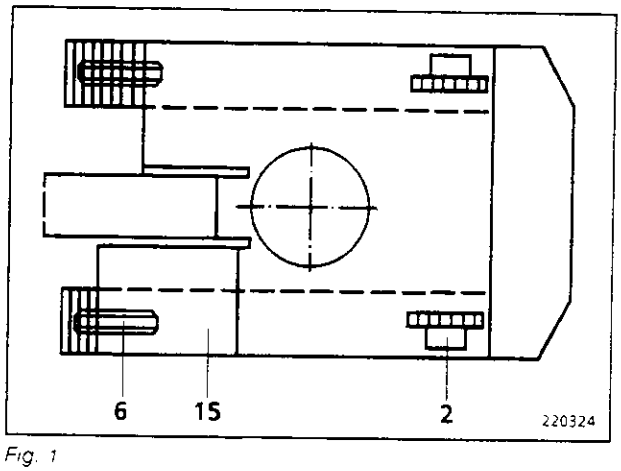


Fig. 1

The machine is in basic position when the cab (15, Fig. 1) is positioned above the lefthand front idler (6).

It is only in this basic position that selected and actual direction of travel are coordinated.

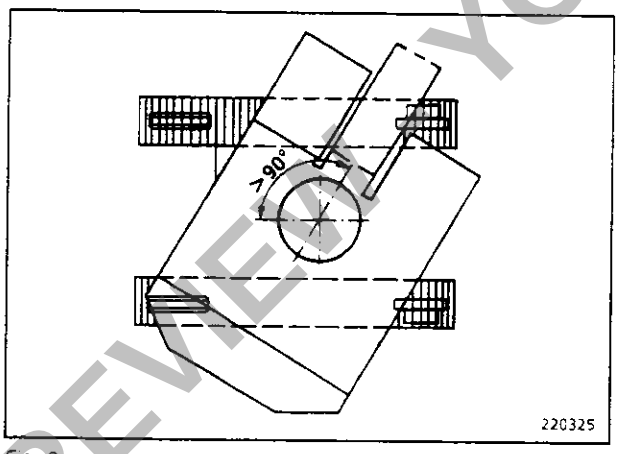


Fig. 2

If the superstructure is swivelled more than 90° from basic position (Fig. 2), the machine travels counter to the selected direction.

If the position of the superstructure in relation to the undercarriage is not exactly known, tap the accelerator lightly to see in which direction the machine moves. Only then should the travelling movement be initiated. □

Selecting direction of travel

2413729

The machine starts moving when the travel pedals (61, 63, Fig. 3) are operated.

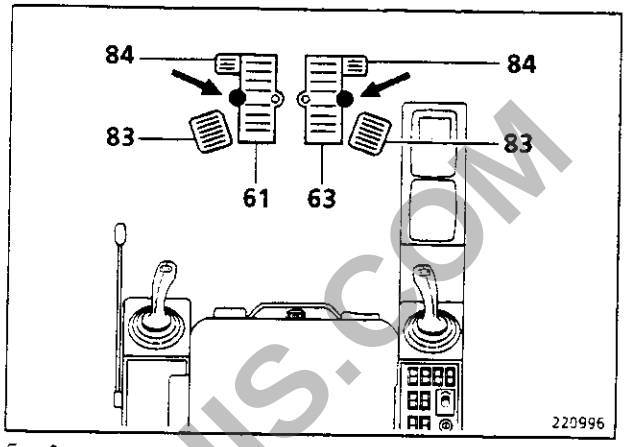


Fig. 3

The drive pedals can be operated:

- with the feet, or
- by hand if the travel levers (arrows, Fig. 3) have been inserted.

Travelling movements can be initiated sensitively if:

- the heels are placed on the foot-rests (83) and if the pedal extensions (84) are depressed with the toes
- if the travelling pedals are actuated with travelling levers.

The information on direction of travel assumes that the machine is in basic position.

- Direction of travel forwards:

  Travel pedals in direction of front idler (6, Fig. 1) = movement in direction of front idler

- Direction of travel reverse:

  Travel pedals in direction of travel gear unit (2) = movement in direction of travel gear unit. □

PREVIEW YOUFIXTHIS.COM

Download full manual at youfixthis.com

SERVICING

2411336

Draining hose for oil changes

⚠ WARNING

Collect escaping oil and evacuate it without polluting the environment.

⚠ CAUTION

Carry out oil changes when the engine is at operating temperature; warm oil drains away more easily.

The engine, hydraulic oil reservoir and gearboxes may be equipped with special oil drain valves (1, Fig. 1).
These plugs permit to perform oil changes in a clean and non-polluting way.

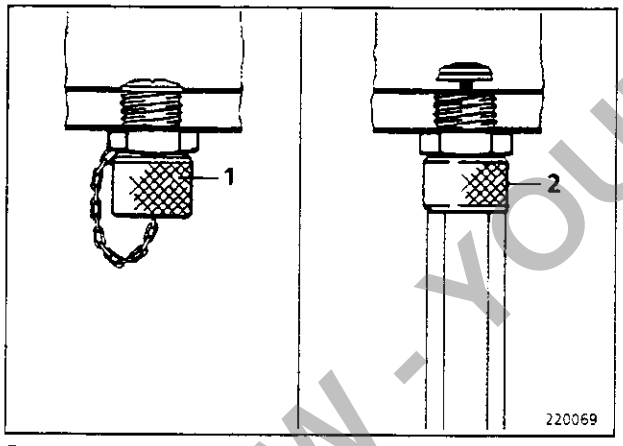


Fig. 1

Carry out oil changes as follows:

- Place a recipient for waste oil under the drain opening (for the capacity see under "Filling quantities").
- Choose the proper drain hose from the tool kit.
- Unscrew protective cap from oil drain valve.
- Screw on drain hose (2); the valve opens and the oil drains away.
- After the oil has drained away unscrew drain hose; the valve closes automatically.
- Screw protective cap back in place.

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

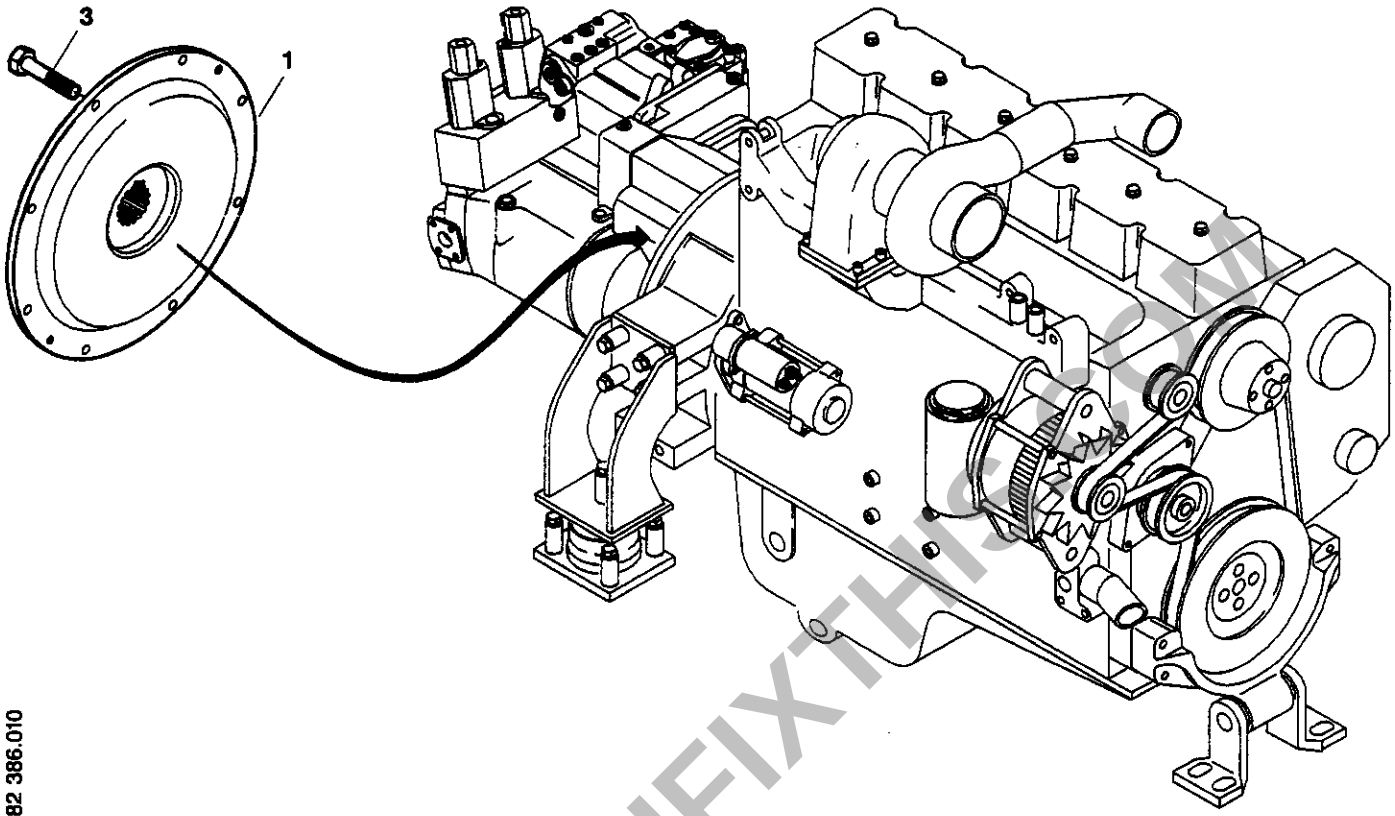
FIATALLIS®

List of machine types

PREVIEW - YOUFIXTHIS.COM

2 732 935.00 us

Download full manual at youfixthis.com



2 782 386.010

PREVIEW - YOUFIXTHIS.COM

17.100

COUPLING/CLUTCH INSTALL.MATERIAL

T 2782386 - 000
B 2782386 - 010

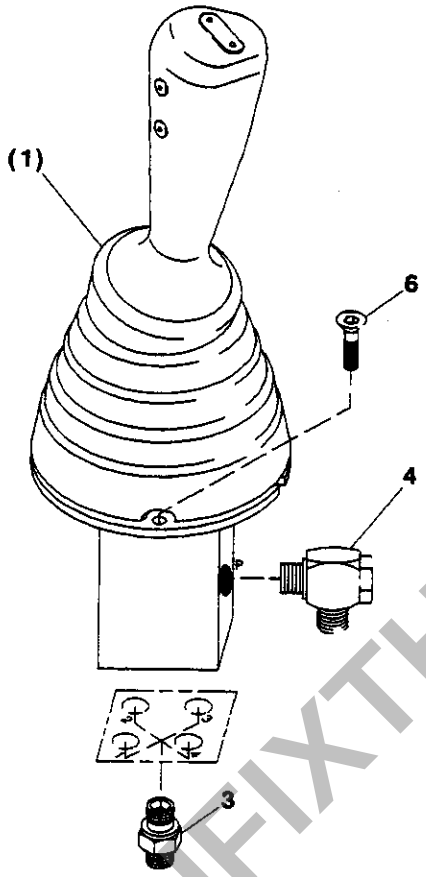
FX350 / 64101 - .....

Item	Quan.	ME	Part No.	Description
001	1	00		**17.102 2782599** COUPLING/CLUTCH
003	8	00	**73176799**	HEXAGON BOLT

ME: 00 = Stück/piece 13 = m 26 = m^2 39 = m^3 43 = kg 50 = l (litre)

1998-09-10

Download full manual at youfixthis.com



2 496 571.010

SERVO VALVE INSTALL.MATERIAL

23.270

FIATALLIS

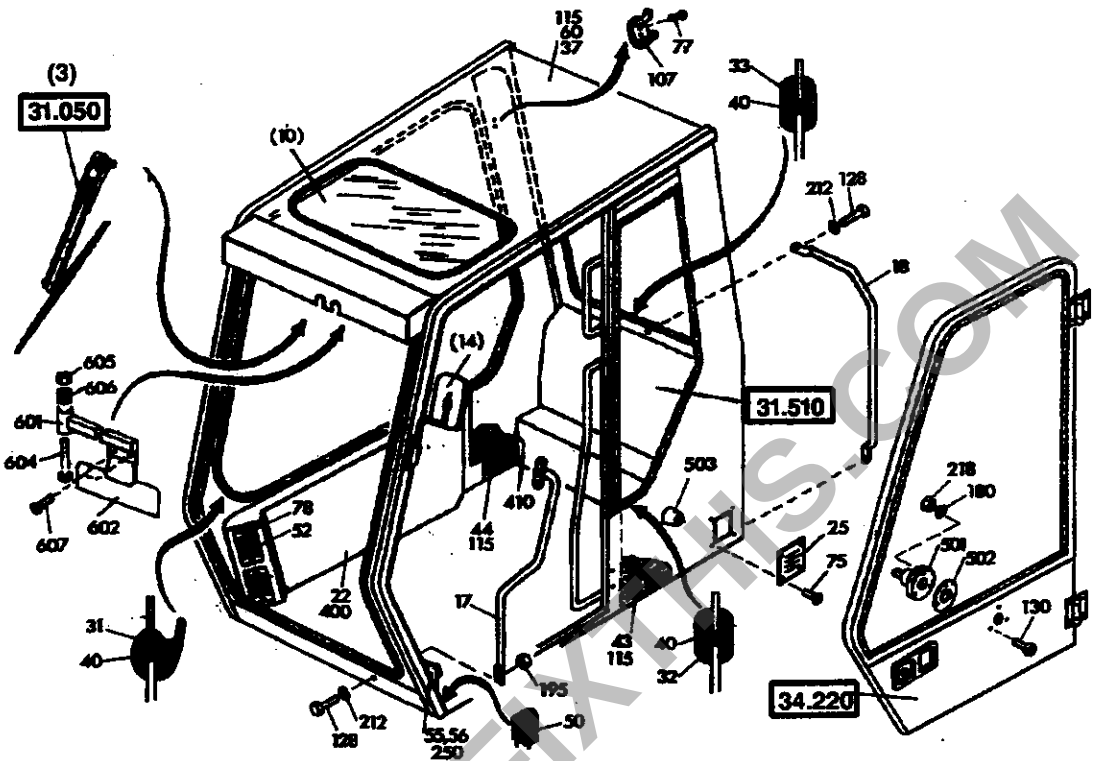
FX350 / 64101 - .....

T 2496571 - 002
B 2496571 - 010

Item	Quan.	ME	Part No.	Description
001	1	00		**23.271 2782654** SERVO VALVE MOUNTING PARTS
003	4	00	**73170380**	SOCKET
004	2	00	**73170656**	SWING FIXTURE
006	4	00	**73171233**	CONTER-SUNK SCREW

ME: 00 = Stück/piece 13 = m 26 = m^2 39 = m^3 43 = kg 50 = l (litre)

PREVIEW - YOUFIXTHIS.COM
Download full manual at youfixthis.com



2 444 904.010

OPERATOR'S CAB

FX350 / 64101 - .....

T 2444904 - 000
B 2444904 - 010

Item	Quan.	ME	Part No.	Description
010	1	00		**34.210 2443232** CAB ROOF
013	1	00		**34.630 2444916** WINDSCREEN WIPER INSTALL.MATERIAL
014	1	00		**35.060 1907741** MIRROR SUPPORT INSTALL.MATERIAL
017	1	00	**73171039**	HANDLE
018	1	00	**73172005**	HANDLE
022	1	00	**73171040**	AIR DUCT
025	1	00	**73171041**	GRID
031	1	00	**73171043**	WINDOW STRIP
032	1	00	**73171044**	WINDOW STRIP
033	1	00	**73171045**	WINDOW STRIP
037	1	00	**73171046**	PANELING
040	10,5	13	**73171047**	PROFILE
043	1	00	**73171048**	PANELING
044	1	00	**73171049**	PANELING

ME: 00 = Stück/piece 13 = m 26 = m^2 39 = m^3 43 = kg 50 = l (litre)

1998-09-10

PREVIEW - YOUFIXTHIS.COM
Download full manual at youfixthis.com

FIATALLIS

Cross reference

SURVEY | Machine type **FX350** | Machine no.

Part No.	No. of assembly	Item	Part No.	No. of assembly	Item
73170204	36.010 - 2782595	047	73170277	10.102 - 2782365	005
73170205	06.190 - 2783739	015	73170277	92.020 - 2811354	024
73170205	23.290 - 2496573	005	73170279	10.102 - 2782365	014
73170205	27.010 - 2496798	004	73170279	10.202 - 2443963	004
73170205	34.130 - 2496286	002	73170281	10.102 - 2782365	024
73170205	34.640 - 2444852	003	73170282	10.102 - 2782365	016
73170205	35.060 - 1907741	004	73170282	10.202 - 2443963	022
73170205	35.060 - 2284173	002	73170283	10.102 - 2782365	028
73170205	36.010 - 2782595	032	73170283	13.220 - 2782583	011
73170208	36.010 - 2782595	033	73170283	34.220 - 2444896	153
73170210	13.230 - 2782540	011	73170285	10.102 - 2782365	007
73170210	22.200 - 2283755	004	73170286	10.102 - 2782365	040
73170210	22.200 - 2444372	004	73170286	92.020 - 2811354	018
73170210	31.300 - 2782370	007	73170287	10.102 - 2782365	018
73170210	36.010 - 2782595	045	73170288	10.102 - 2782365	019
73170210	36.510 - 2176885	009	73170289	10.102 - 2782365	021
73170212	23.291 - 2444789	013	73170290	92.020 - 2811354	025
73170212	27.010 - 2496798	005	73170291	10.102 - 2782365	020
73170212	34.101 - 2444880	004	73170293	10.102 - 2782365	046
73170212	34.130 - 2496286	003	73170294	10.102 - 2782365	047
73170212	34.500 - 2782534	102	73170296	10.102 - 2782365	049
73170212	36.010 - 2782595	037	73170296	20.020 - 2783505	006
73170213	15.121 - 2782585	021	73170296	20.642 - 2495382	026
73170213	34.300 - 2444897	002	73170296	22.501 - 2443609	005
73170213	36.010 - 2782595	051	73170296	23.180 - 2283060	104
73170213	36.510 - 2176885	010	73170296	23.210 - 2782613	003
73170214	15.121 - 2782585	011	73170296	23.231 - 2495356	003
73170214	36.010 - 2782595	038	73170296	23.240 - 2783334	002
73170215	15.121 - 2782585	020	73170296	23.610 - 2782648	014
73170215	23.180 - 2283060	004	73170298	10.102 - 2782365	050
73170215	31.300 - 2782370	008	73170298	10.202 - 2443963	029
73170215	34.022 - 2444904	605	73170298	16.031 - 2283613	011
73170215	36.010 - 2782595	042	73170298	20.020 - 2783505	008
73170216	36.010 - 2782595	049	73170298	22.501 - 2443609	004
73170217	31.300 - 2782370	006	73170298	23.610 - 2782648	030
73170223	36.010 - 2782595	107	73170300	10.102 - 2782365	053
73170223	36.010 - 2782595	204	73170300	20.290 - 2783330	009
73170223	36.010 - 2782595	504	73170301	16.031 - 2283613	012
73170223	36.010 - 2782595	604	73170301	22.400 - 1708496	005
73170223	36.010 - 2782595	703	73170302	10.102 - 2782365	052
73170223	36.010 - 2782595	803	73170302	20.280 - 2782383	018
73170232	36.010 - 2782595	911	73170302	20.320 - 2782622	026
73170233	36.010 - 2782595	912	73170302	60.160 - 2782682	018
73170234	36.010 - 2782595	913	73170304	20.260 - 2782831	015
73170245	20.260 - 2782831	014	73170324	22.501 - 2443609	003
73170252	20.260 - 2782831	008	73170326	20.020 - 2783505	013
73170255	20.610 - 2496797	062	73170326	22.501 - 2443609	010
73170255	23.611 - 2248584	011	73170327	20.020 - 2783505	014
73170259	13.230 - 2782540	008	73170327	20.310 - 2782623	015
73170269	36.010 - 2782595	050	73170327	20.600 - 2782678	007
73170269	36.500 - 2782371	013	73170327	22.501 - 2443609	011
73170273	10.102 - 2782365	015	73170327	23.152 - 2495870	003
73170274	10.102 - 2782365	004	73170327	23.610 - 2782648	008

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

Allgemeine Hinweise

In den nachfolgenden Tabellen sind die Anziehdrehmomente für Schrauben mit metrischem Gewinde DIN 13 - 13.

Die Konstruktion kann von Fall zu Fall von der Norm abweichende Anziehdrehmomente festlegen. **Deshalb sind die in den Tabellen genannten Werte nur dann anzuwenden, wenn in der Betriebsanleitung Kapitel "Inspektion und Wartung", im Technischen Handbuch oder in der Zeichnung keine anderen Werte angegeben sind.**

Die Festlegung der Anziehdrehmomente richtet sich nicht nur nach der Schraubenqualität, sie ist auch von der Reibung im Gewinde und von der Auflage des Schraubenkopfes abhängig. Deshalb sind bei der Berechnung von Anziehdrehmomenten je nach Schraubenausführung und Zustand unterschiedliche Reibungszahlen (μ gesamt) zu verwenden.

1. Reibungszahl μ gesamt = 0.10:
   Schraube und/oder Mutter galvanisch verzinkt (Oberflächenschutz A3B).

2. Reibungszahl μ gesamt = 0.12:
   Schraube schwarzvergütet oder phoshatiert.
   Mutter blank.
   Gewinde geölt.

3. Reibungszahl μ gesamt = 0.16:
   Schrauben mit flüssiger Schraubensicherung z.B. Loctite 242, 243, entsprechend der Verarbeitungsvorschrift.
   Die entsprechenden Zeilen sind in den Tabellen zusätzlich mit einem "L" gekennzeichnet.

Die drei Zahlen sind mittlere Reibungswerte.
Die errechneten Anziehdrehmomente M_A gelten für das Anziehen der Schrauben von Hand.

Maßeinheiten
Die in den Tabellen angegebenen Anziehdrehmomente sind in Nm (Newtonmeter) angegeben. Werden Drehmomentschlüssel älterer Bauart verwendet, müssen die Nm in die früher verwendete Einheit kpm (Kilopondmeter) umgerechnet werden. Diese Umrechnung ist problemlos, da 1 kpm fast genau 10 Nm entsprechen (genauer Umrechnungsfaktor 1 kpm = 9,81 Nm). Diese geringfügige Differenz kann vernachlässigt werden, so daß bei einer Umrechnung der in Nm angegebene Wert lediglich durch 10 dividiert werden muß.

Beispiel:

$$1840\ \text{Nm} = \frac{1840}{10} = 184\ \text{kpm}$$

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

- Remove the bolts (6. Fig. 6) of ball-bearing swing bearing at the superstructure. Keep the spacers (7) for re-use. The superstructure is now detached from the undercarriage.
- Lift the superstructure carefully until the swing gearbox pinion is free. Swing the superstructure away from the undercarriage.
- Take the swing bearing into the lifting tackle (Fig. 5) by inserting three lifting eye bolts at 120 degree intervals through the drilled holes and holding them in place with nuts.
- Remove the bolts (4. Fig. 6). Keep the spacers (3) for re-use.
- Lift the swing bearing from the undercarriage.
- Check the housing (1, Fig. 1) and seal (5) of the swing bearing. Repair or replace if damaged.

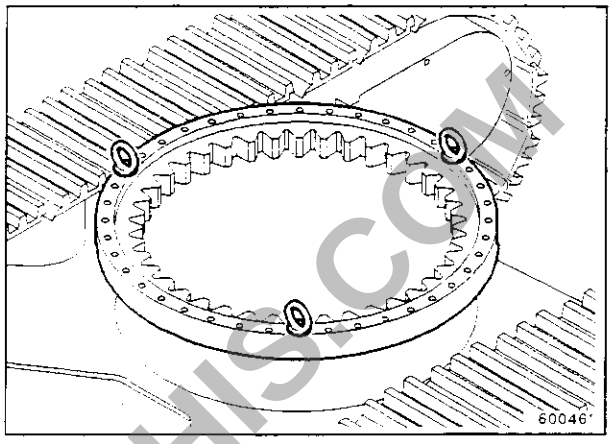


Fig. 5

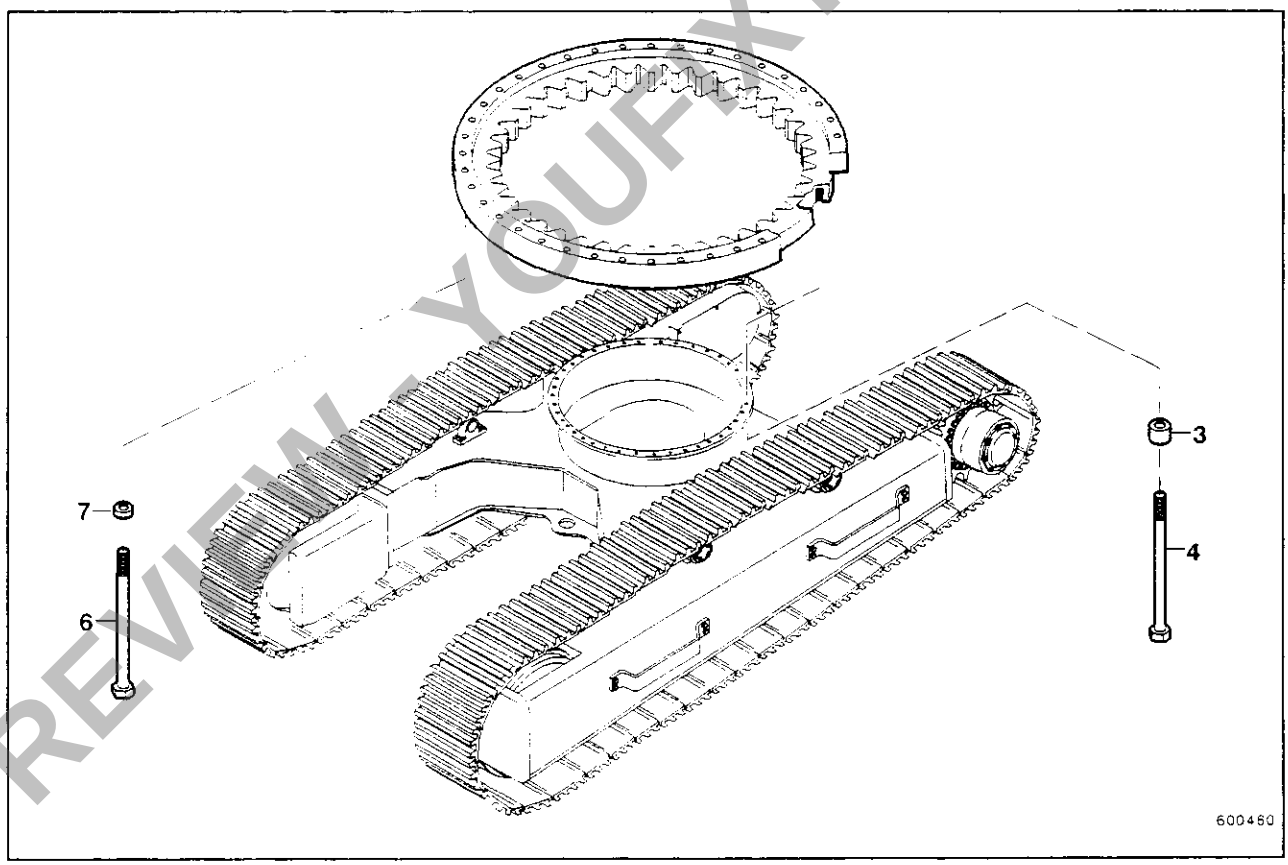


Fig. 6

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

FIATALLIS®

Technical Handbook

Swing Gearbox

Type S 5, S 10
S 13, S 16

PREVIEW - YOUFIXTHIS.COM

2 800 600.00 us

Download full manual at youfixthis.com

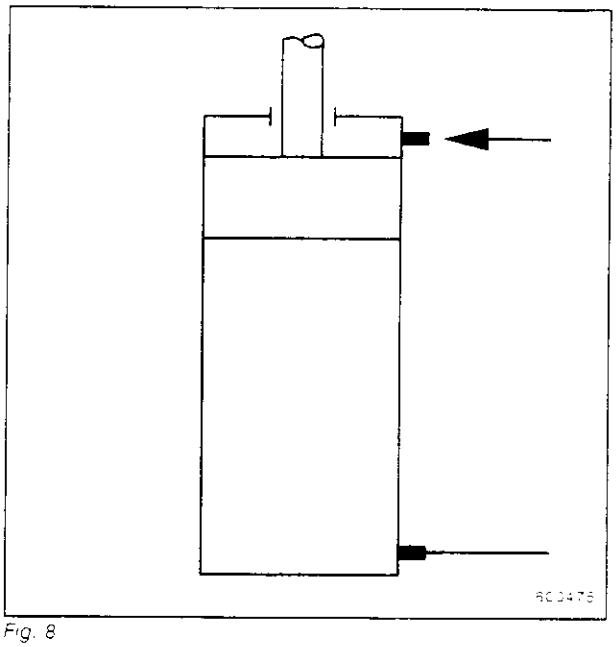


Fig. 8

- The first filling must be done with a reduced, controlled oil flow. So retract or extend piston rod as slowly as possible.
- After installation, the cylinder or group of cylinders must be retracted and extended to the limit stops at least 5 times.
- If the wearing parts of hydraulic cylinders are to be replaced, all sliding components, guide belts and sealing elements must be lubricated with oil from the hydraulic system. Never use grease for this purpose.
- During oil change, repairs or replacement of units involving the unscrewing of threaded hydraulic connections, care must be taken to ensure that the quantity of oil in the cylinders is not reduced.
  If this has proved unavoidable, the affected cylinders must subsequently be vented again.

After venting

Start up motor and check hydraulic system under load. Pay attention to any pump noise. Jerky movements are an indication of residual air pockets. These can be removed by actuating all hydraulic functions.

The system is fully vented when all functions can be performed smoothly and uniformly and the oil in the tank is foam-free. □

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

Piston rod and piston

Dismantling and checking:

- Drain hydraulic oil from the cylinder. Collect escaping oil in a suitable recipient.
- Remove bearing eye (1, Fig. 12) and guide (7).

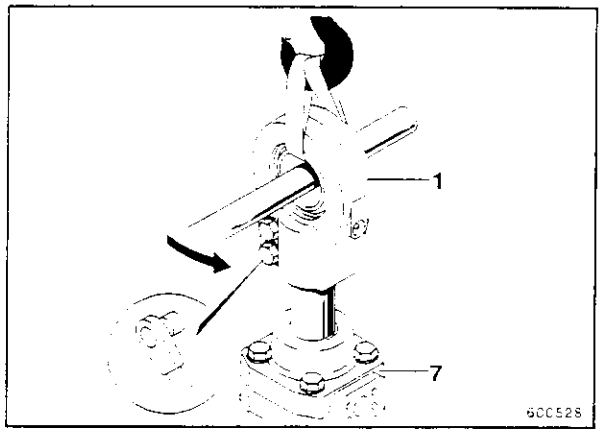


Fig. 12

- Attach piston rod (8, Fig. 13) with fitting ring (D) to lifting tackle, withdraw carefully from cylinder barrel and place on a suitable working surface.

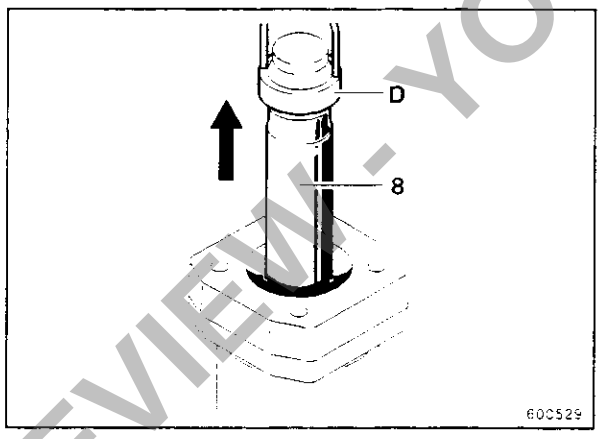


Fig. 13

- Remove the plastic guide rings (20, Fig. 14) and the OK piston seal (21).
  The cast-iron guide ring (22) often shows only slight scoring without any measurable wear (less than 0.1 mm). In such case the rings can be used again. Cast-iron guide rings are difficult to remove and there is always a high risk of damaging the piston. The rings should therefore only be removed using the specially designed spreader (Fig. 15).

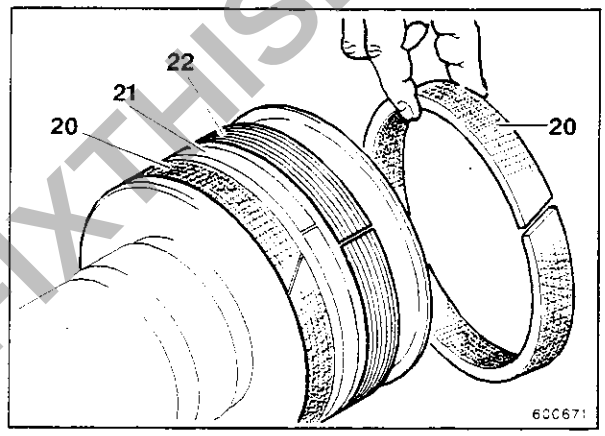


Fig. 14

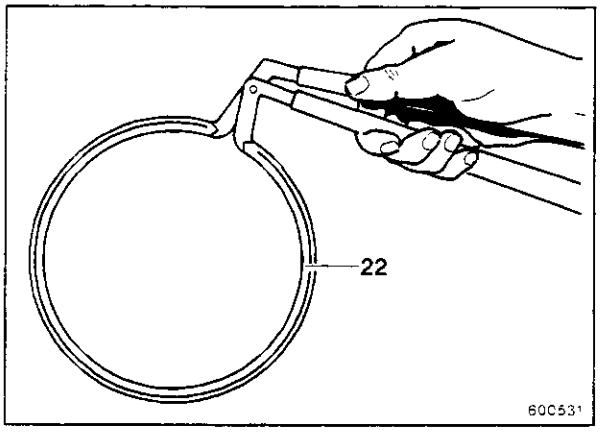


Fig. 15

- Check the piston with piston rod and dampeners and the the cylinder barrel carefully for damage and wear. Check the cylinder barrel also for signs of widening. Replace all defective parts. The plastic guide rings, the protective elements and the OK piston seal must always be replaced.

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

THE WIRING DIAGRAM

2732950

The wiring diagram is a schematic representation of the electrical system and its detailed components. The diagram shows the interconnection of electrical components and the operation of an electrical system.

The wiring diagram consists of several individual sheets (see lower right corner of the sheet shown in fig. 1) representing functional groups.

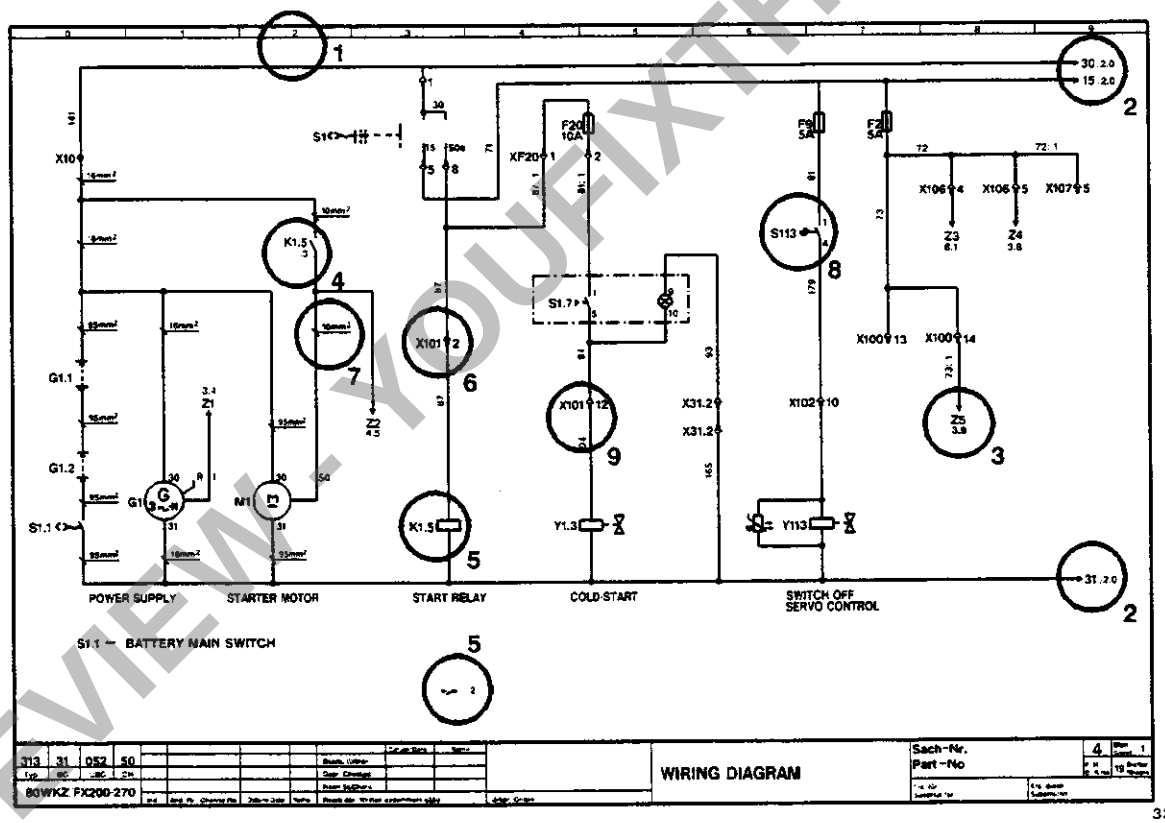
All components are shown in a no-voltage resp. no-current state and with none of the elements being actuated.

The representation makes use of symbols in acc. with DIN 40 900.

All components are identified by capital letters in acc. with DIN 40 719.

Extracts of these DIN standards can be found at the end of the present Technical Handbook.

The wiring layout plan shows the location of components and connectors of the machine.



3283331

Fig. 1

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

ODC - On-Board Diagnostic Computer

The On-Board Computer ensures permanent monitoring of the coolant temperature and the hydraulic oil temperature by means of sensors (B10.1 and R14, Fig. 4).

The ODC signals a fault when the pre-established program limit values are exceeded (Fig. 5) and stores the event in a special failure memory.

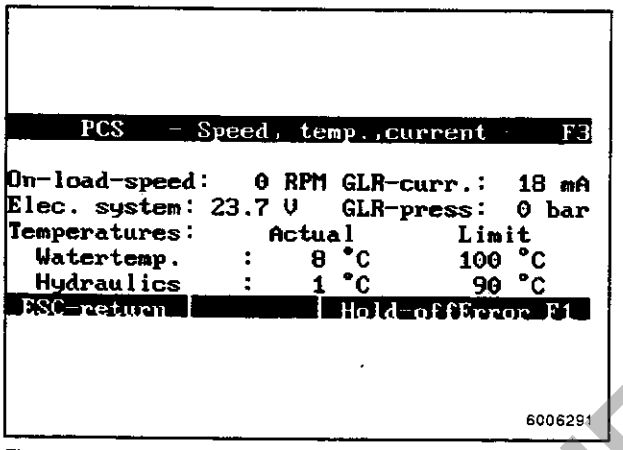


Fig. 5

The operator is informed of the fault by a special screen of the Control Panel display.
The temperature control integrated in the ODC lowers the pump output via the control flow from the proportional valve to reduce strain on the machine.

Condition: temperature too high

- Engine temperature
  stepless lowering down to minimum output
- Hydraulic oil temperature
  switching over into the LIFT mode

As a system protection measure, the ODC additionally monitors the control loop for broken cable and short-circuits (proportional valve / hydraulic oil sensor / coolant sensor)

Condition: cable broken / short-circuit

- Proportional valve
  Power limiting is not fuctional.
  Both pumps can no longer be adjusted via X3.
  In extreme cases, the diesel engine is overloaded when power is demanded.
- Hydraulic oil sensor
  In the LIFT mode, the pump output is reduced
- Coolant sensor
  In the LIFT mode, the pump output is reduced

Both conditions are sensed after a response time of 3 - 5 seconds by the ODC, automatically stored and displayed by an ERROR CODE appearing on the display screen.

Exception: Warm-up

- Hydraulic oil sensor and coolant sensor
  In this case, the response time after engine start is 5 minutes, the sensors not being able to distinguish between "Cable broken: yes / no" because of the high resistance of the sensors when the machine is cold. □

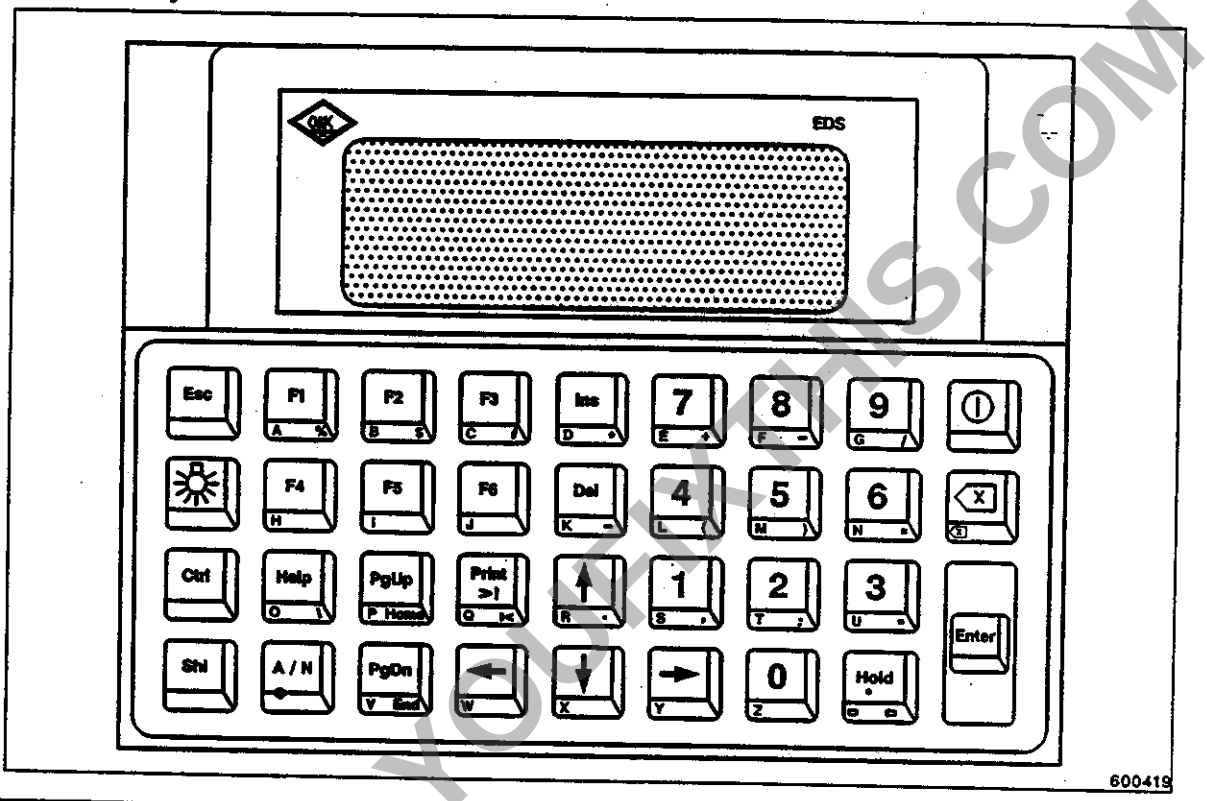
PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

OPERATION

xxxxxx

Control Keyboard



Function KeysFehler! Textmarke nicht definiert.	
F1 to F6	To call menus and options.

Control KeysFehler! Textmarke nicht definiert.	
⏻	EDS tester on/off.
Enter	To execute a command, e. g. saving the desired option.
PgUp PgDn	To turn pages between the displays in the submenus.
Hold	To freeze the current screen and to save it on the RAM card. To save measuring values and settings.
Help	To overlay a help display, e. g. the description of the explanations used.
Esc	To cancel a function or current display and to return to the previous submenu.
Ctrl plus ↑ or plus ↓	Display contrast adjustment (brighter/darker).
Shl	To call additional characters (e. g. home, %). Must be pressed in addition to the additional character key.
↑ ↓ ← →	To "scroll" (to move a mark (Cursor)) within lines and columns of the display.

Download full manual at youfixthis.com

PREVIEW - YOUFIXTHIS.COM

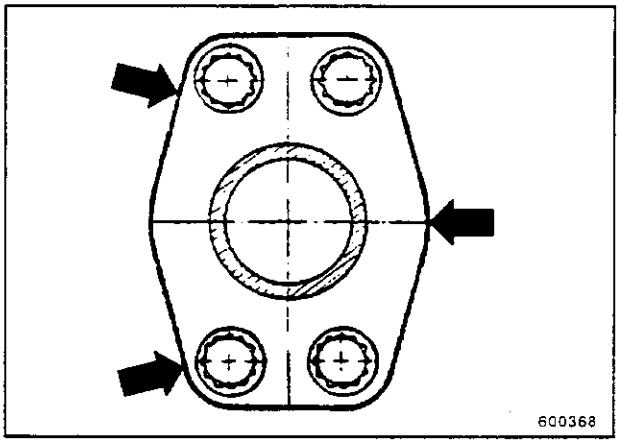


Fig. 4

Check the gap at at least 3 separate points (see arrows). Difference must not be greater than 0.3 mm.

Repeated assembly:

When a coupling is assembled a second (or further) time, the gap must be at least 0.2 mm smaller than the previous one.

Gaps must therefore be measured before couplings are loosened.

A subsequent assembly or installation is not permitted when the gap is smaller than 0.3 mm

In case of leakage:

- Leakage on seal ring (oil leaks between connection surface and flange)
  - Check that gap is parallel and smaller than 2 mm. Re-tighten otherwise.
  - If above measure does not help, check seal ring and connection surface. If necessary, change seal ring. Re-assemble coupling.
  - If coupling still leaks, change pipe, wedge ring and seal ring (gap as for first assembly: $2_{-0.5}$ mm). If gap is smaller than 0.3 mm, replace flange too.
- Leakage between wedge ring and pipe (oil leaks between flange and pipe)
  - Check that gap is parallel and smaller than 2 mm. Re-tighten otherwise.
  - If above measure does not help, tighten bolts by one stage, i.e. reduce existing gap by 0.2 mm. If leakage is only reduced, tighten up a further stage.
  - If coupling still leaks, change pipe, wedge ring and seal ring (gap as for first assembly: $2_{-0.5}$ mm). If gap is smaller than 0.3 mm, replace flange too.

Zako-system

Figs. 5 & 6 show:

1 - Connection surface
2 - Sealring
3 - Z-ring (wedge ring)
4 - Flange
5 - Double-hex bolt
6 - Pipe

Assembly:

1. Pipe prepared for assembly (see "Inserting the Z-ring")
2. Place seal ring (2) into Z-ring
3. Press pipe (6), with Z-ring (3), against the connection surface.

⚠ WARNING

Pipe (6) must be free of tension and at right-angles to surface (1).

4. Push flange (4), with bolts (5), against surface. Tighten up bolts as far as possible by hand.

⚠ WARNING

Flange (4) must be at right-angles to pipe axis and parallel to the connection surface. Permissible deviation from parallel: max. 0.3 mm

Check visually.

5. Tighten bolts (5) diagonally and evenly. Tightening torque: 250 Nm (185 lbft) (final torque).

   It is not necessary to check gap dimension.

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

4. Reinforcing of steel components

The reinforcement of components by welding can be done in the following ways:

- Covering up a damaged area after repair by reinforcing plates, with the aim of reducing the mechanical stresses σ (N/mm²) in the repair area.
- Eliminating deficiencies caused by changes in shape, e.g. the problematic case of "open sections/closed sections", shape of stiffening ribs, configuration of frame corners, etc.
- Eliminating deficiencies by means of changes in shape by build-up welding, e.g. on cast-steel parts.

The necessity of a component reinforcement should, if possible, have been proved by a simple analysis.

4.1 Reinforcing plates

4.1.1 Dimensions

- **Length of reinforcing plates**
  The ends of reinforcing plates are places where metallurgical and shape-induced notches occur which may lead to damage by the concentration of stresses (Part A, fig. 1).

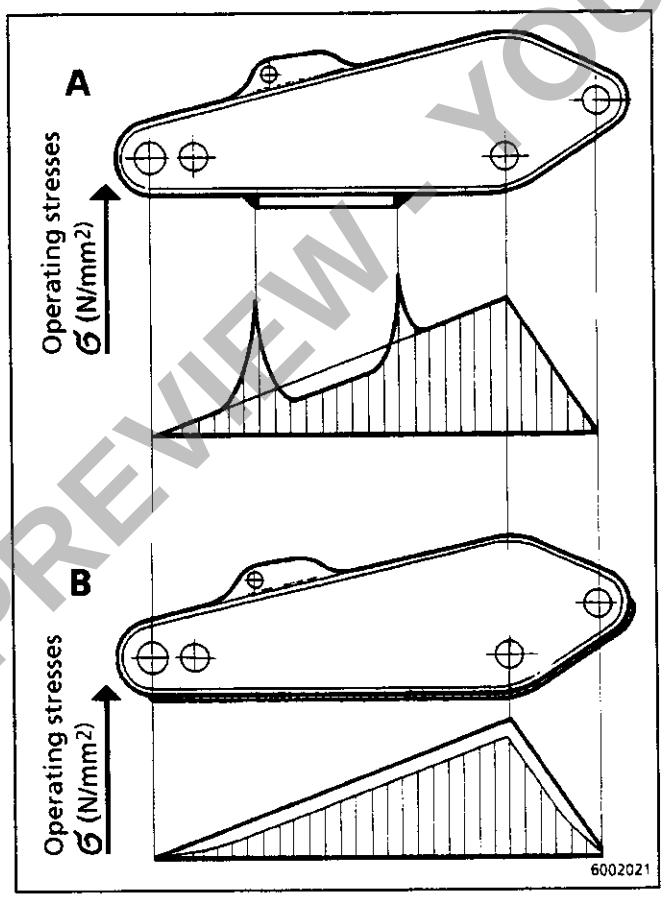


Fig. 1

Reinforcing plates should therefore be dimensioned in such a way that they end in areas with low basic stresses (Part B, fig. 1).

- **Thickness of reinforcing plates**
  The thickness of reinforcing plates should be max. 60 % of the thickness of the plate to be reinforced (fig. 2).

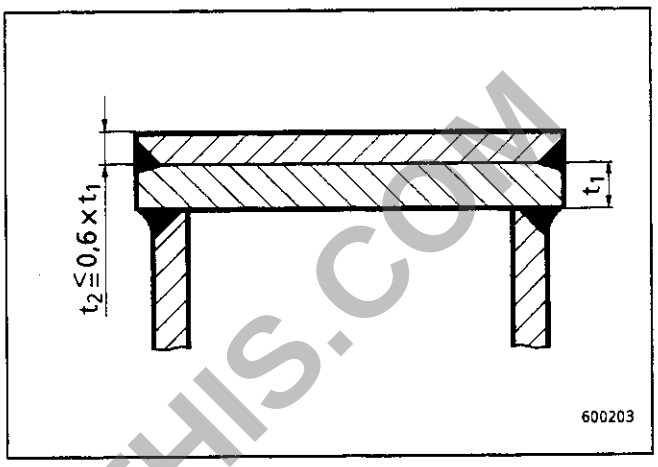


Fig. 2

An analysis shows that thicker reinforcing plates cannot be connected to the plate to be reinforced as the welding seams required would be too large. Thicker plates moreover lead to large shape-induced notches and make the component heavier than is really necessary.

- **Width of reinforcing plates**
  In steel components, stresses are often highest near the edges. The reinforcing plate should therefore be as wide as the plate to be reinforced (A, fig. 3).

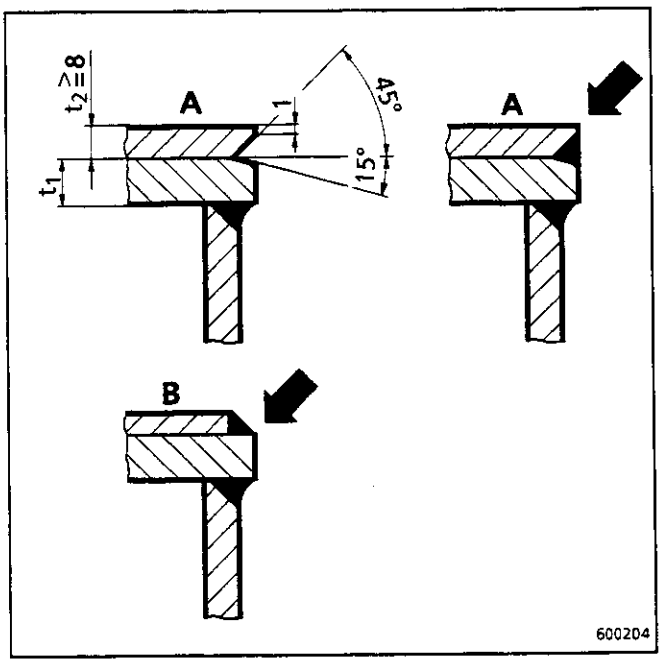


Fig. 3

For practical reasons, reinforcing plates of less than 8 mm thickness can not be chamfered. In such cases, the reinforcing plate (B, fig. 3) must be narrower to leave enough space for a fillet weld.

The upper edges (arrow, fig. 3) of the plate to be reinforced and of the reinforcing plate should not be melted away.

PREVIEW - YOUFIXTHIS.COM

Download full manual at youfixthis.com

PREVIEW ONLY

You're viewing 25 of 1221 pages

The full manual includes:

- All 1221 pages, complete
- Searchable PDF (find any keyword)
- No watermarks
- Instant download
- Print-ready quality

GET FULL MANUAL NOW

FiatAllis FX350, FX350LC Manual Set

Scan or click anywhere
youfixthis.com

Click anywhere on this page to get the full manual