

## Workshopmanual 1704 / 1804



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Service manual for the

# **TEREX-ATLAS**

# **Model 1704 -1804**

**Backhoe and industrial rehandler range.**  
Including Mobile and Tracked variants.  
Built from 1993 onwards

1. 935 series operators cabin
2. Deutz - Engine
3. Lubrication
4. 1704 - 1804. 372, 282 series
5. 1704 - 1804. 373, 283 series
6. 1704 - 1804. 374, 284 series
7. Welding
8. Electric - Electronic
9. Theory



**This manual has been produced from various resources to aid the serviceman and mechanic in carrying out maintenance and repair of the:-**

**TEREX - ATLAS, Model 1704 - 1804.**

**372, 373, 374, 282, 283, and 284 series**

produced from 1993 onwards.

**During this period the basic model has undergone 2 major design changes. These changes are covered in 3 separate series sections.**

Please refer to relevant manufactures manuals for the repair and overhaul procedure of components. Engine, Deutz. Pumps & Motors, Linde. etc.

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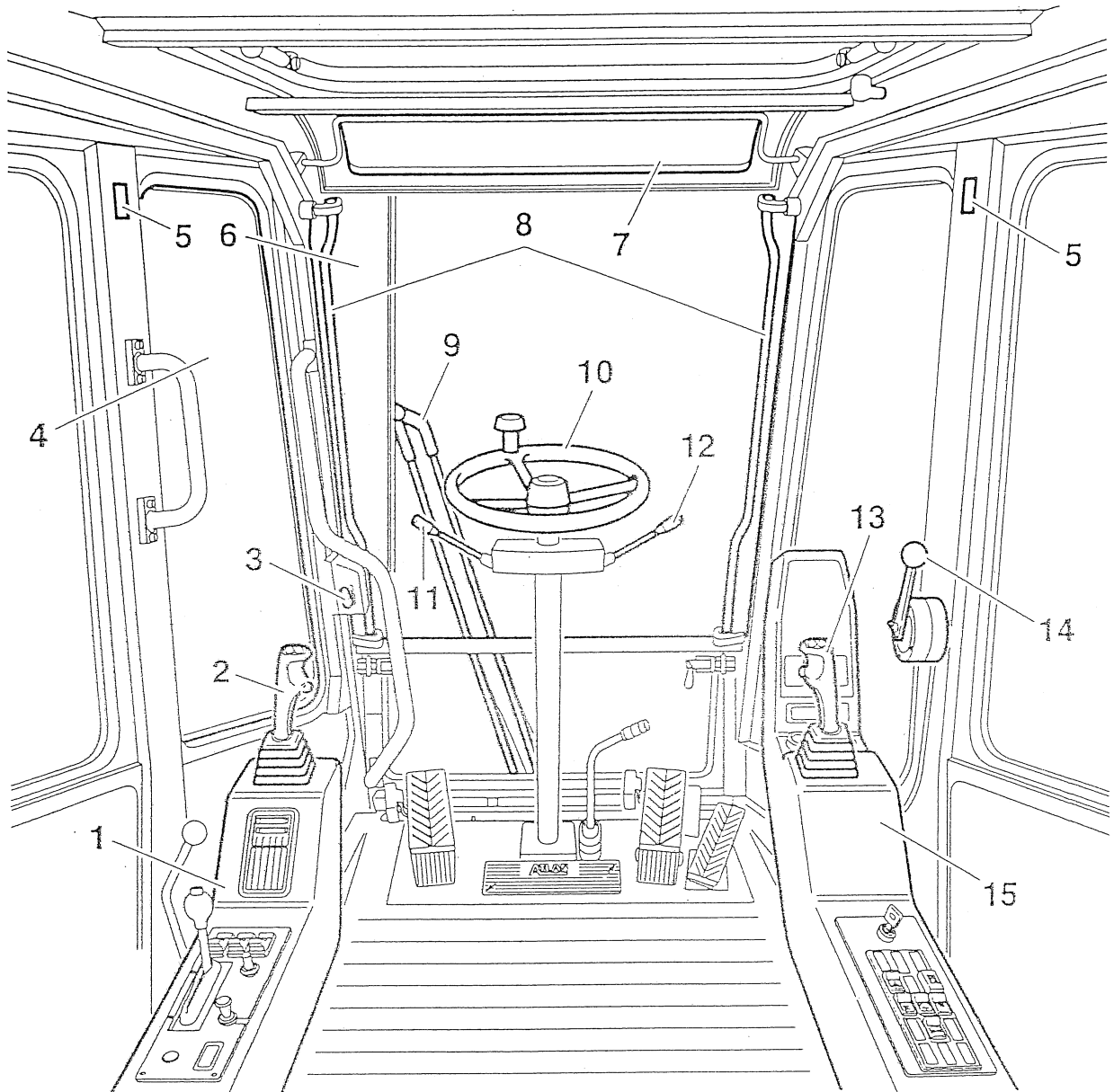


# GENERAL VIEW OF CAB

Tafel:

Name: Ro.

Datum: 07.97



- |  |  |
|--|--|
| 1 Left console   | 12 Right multifunction lever for:<br>Low and high beam headlights<br>Horn<br>Flashing direction indicators |
| 2 Control lever for:<br>Jib<br>Slewing   | 13 Control lever for:<br>Lifting<br>Lowering<br>Bucket/grab  |
| 3 Lever for cab door   | 14 Engine speed control lever  |
| 4 Cab door   | 15 Right console   |
| 5 Interior lights  |  |
| 6 Windshield   |  |
| 7 Sun visor  |  |
| 8 Windshield locking rods, left/right  |  |
| 9 Windshield wiper   |  |
| 10 Steering wheel  |  |
| 11 Left multifunction lever for:<br>Inching<br>Intermittent wipe<br>Windshield washer<br>Preselecting travel direction |  |

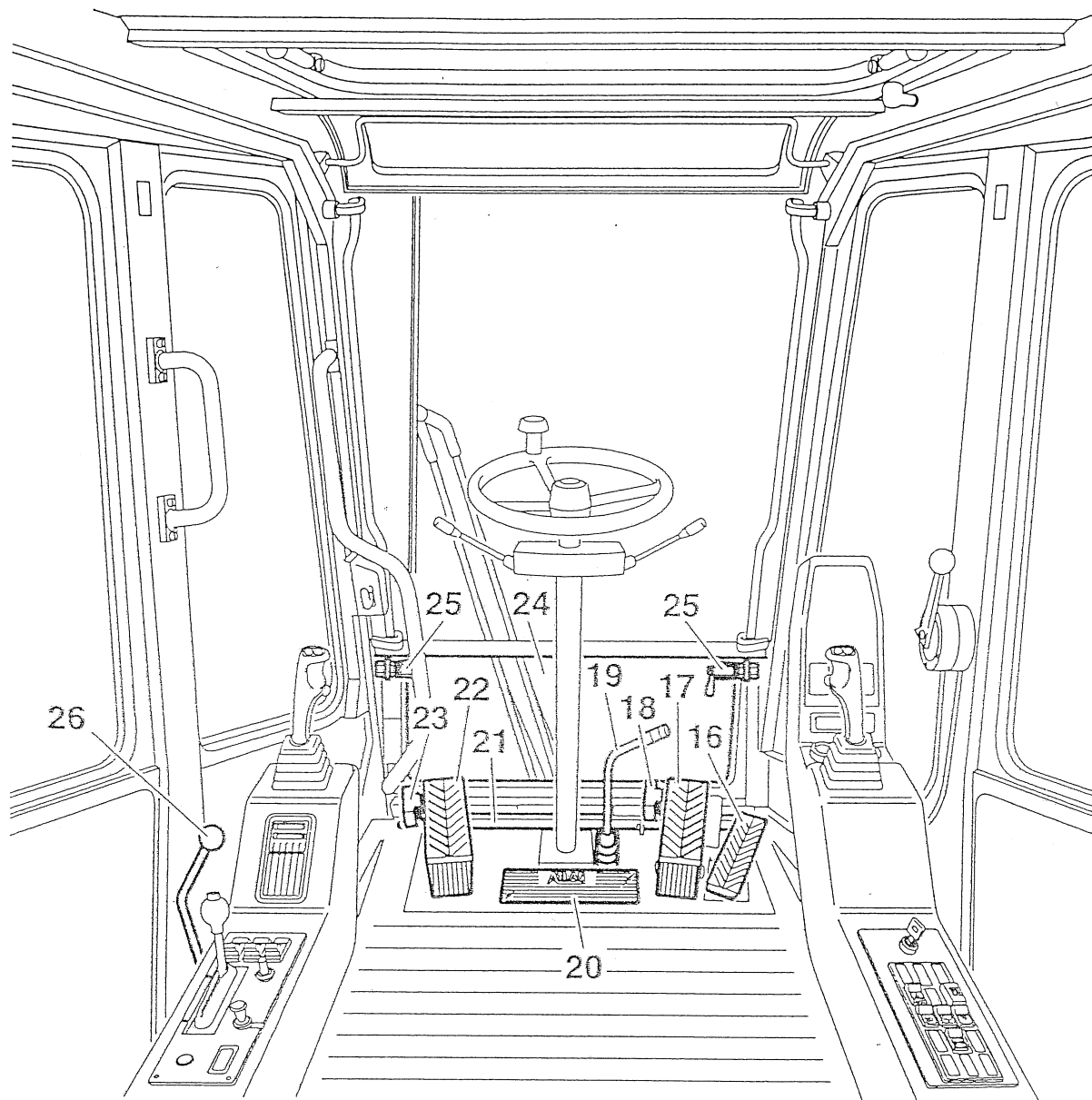


# GENERAL VIEW OF CAB

Tafel:

Name: Ro.

Datum: 07.97



- 16 Accelerator pedal
- 17 Brake pedal-driving
- 18 Brake pedal lock-driving
- 19 Lever for dozer blade
- 20 Boom luffing pedal
- 21 Windshield vent outlet
- 22 Slewing brake pedal
- 23 Slewing brake pedal lock
- 24 Plug-in window
- 25 Plug-in window catch
- 26 Hydraulic pilot control circuit shutdown





# GENERAL VIEW OF CAB

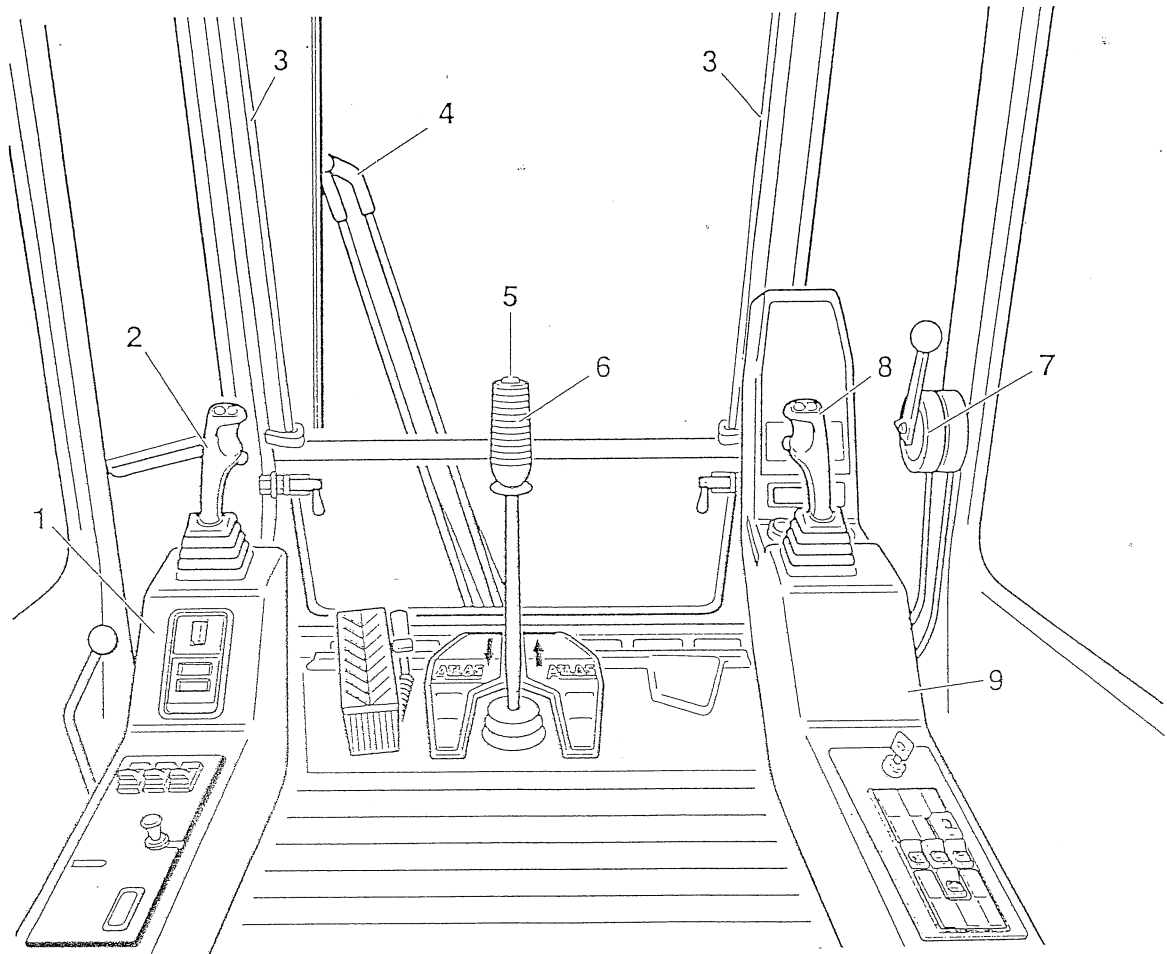
Schulungszentrum

P3

Tafel:

Name: Ro.

Datum: 07.97



- 1 Left console
- 2 Control lever for:  
Jib  
Slewing
- 3 Windshield locking rods, left/right
- 4 Windshield wiper
- 5 Speed selector switch
- 6 Control lever for travel
- 7 Engine speed control lever
- 8 Control lever for:  
Lifting  
Lowering  
Bucket/grab
- 9 Right console



# GENERAL VIEW OF CAB

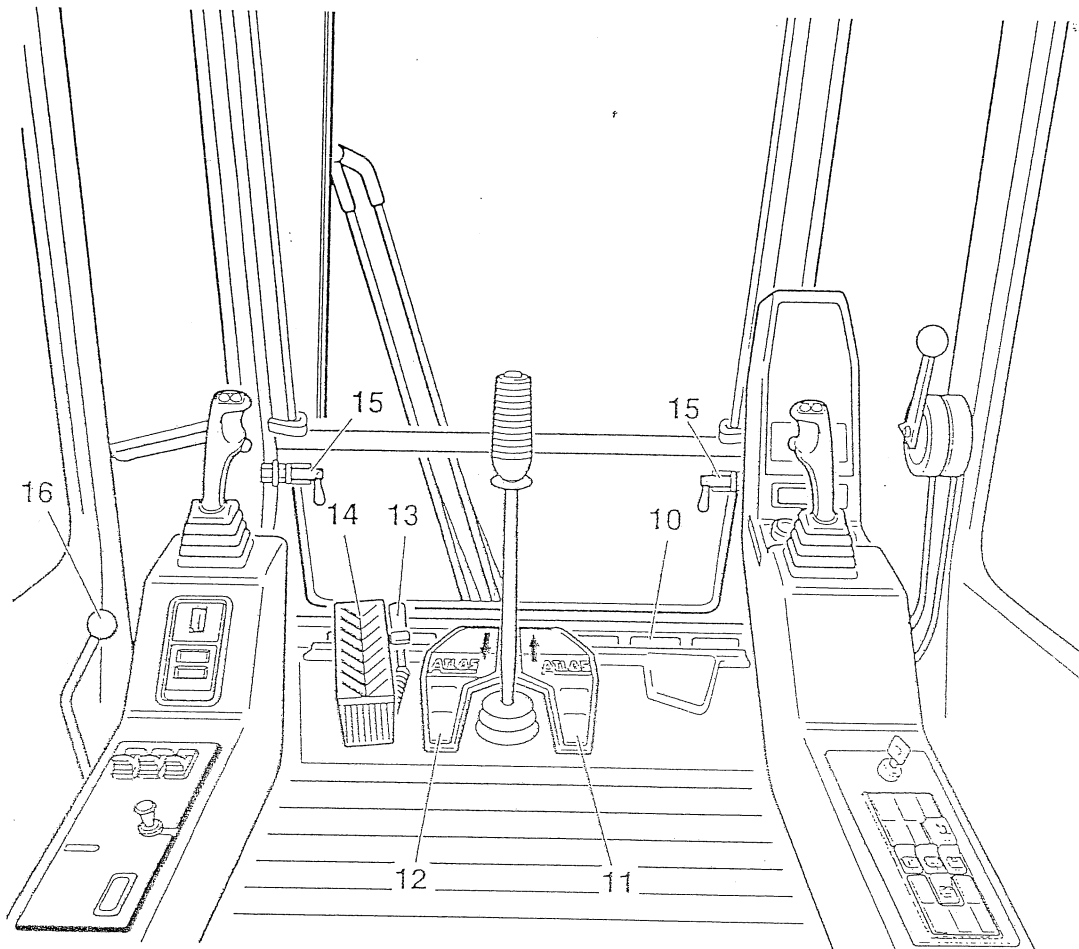
Schulungszentrum

P4

Tafel:

Name: Ro.

Datum: 07.97



- 10 Windshield vent outlet
- 11 Pedal for:  
forward travel  
extending boom
- 12 Pedal for:  
reversing  
retracting boom
- 13 Slewing brake pedal lock
- 14 Slewing brake pedal
- 15 Plug-in window catch
- 16 Hydraulic pilot control circuit  
shutdown





## GENERAL VIEW OF CAB

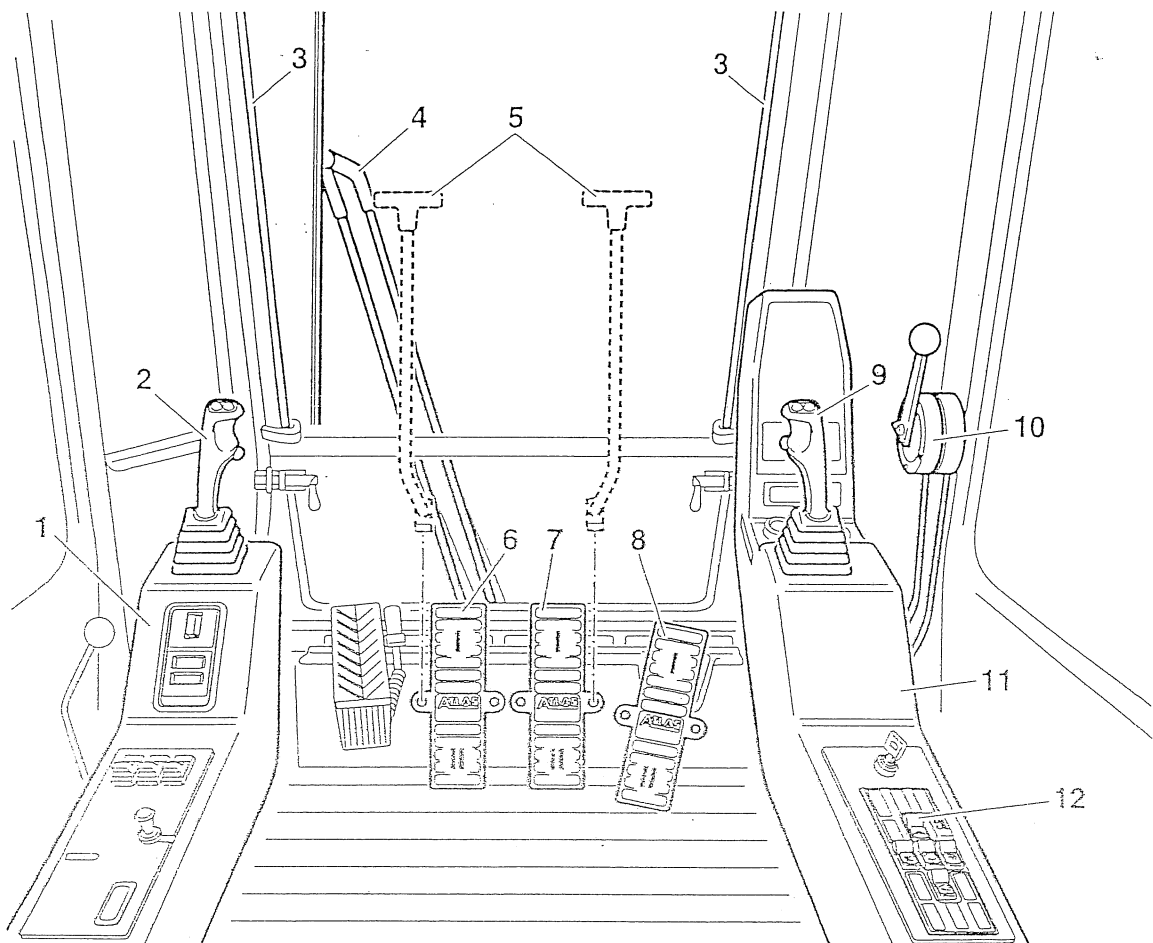
Schulungszentrum

P5

Tafel:

Name: Ro.

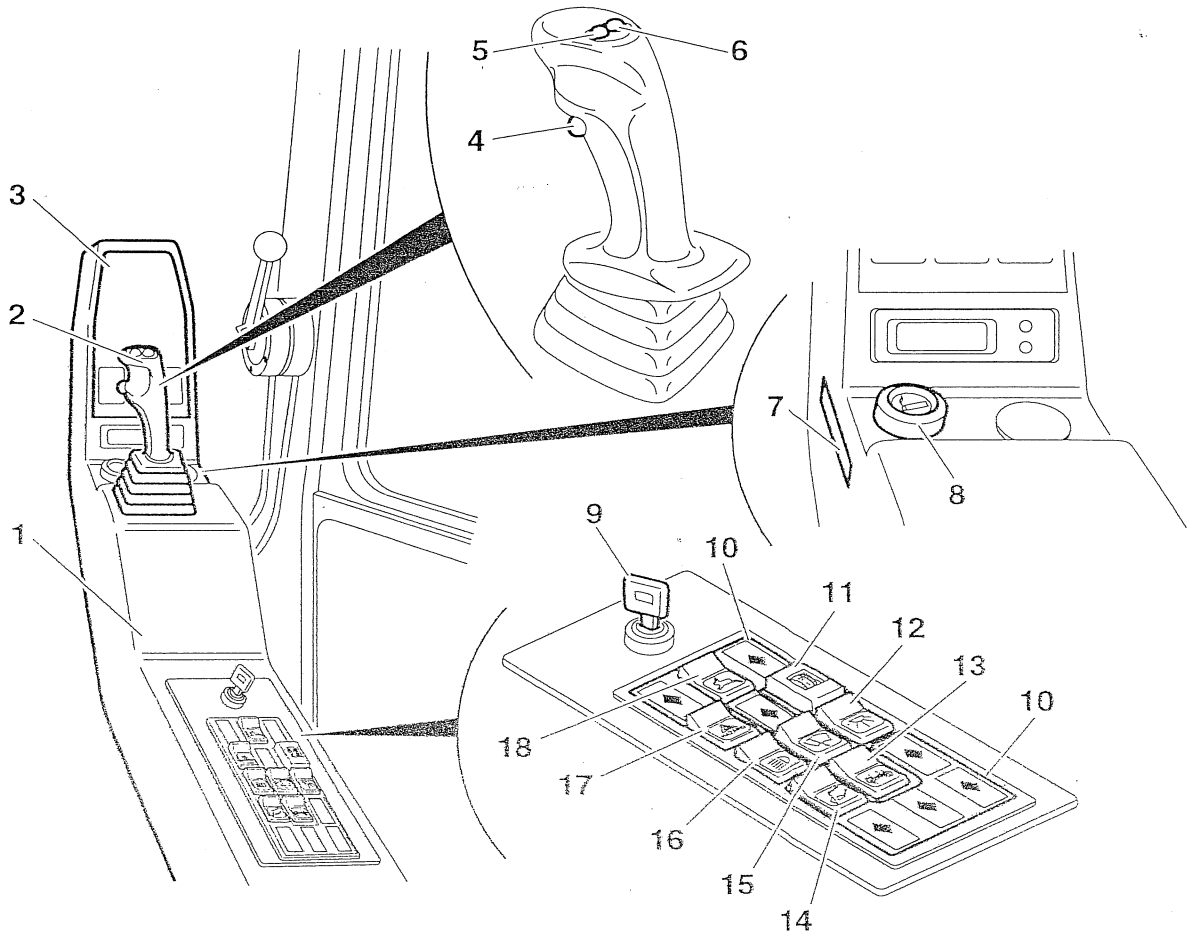
Datum: 07.97



- 1 Left console
- 2 Control lever for:  
Jib  
Slewing
- 3 Windshield locking rods, left/right
- 4 Windshield wiper
- 5 Levers for precision control of the pedals (6 and 7)  
Note  
The levers (5) are in a holder underneath the seat.
- 6 Pedal for travel:  
I L.h. crawler track forwards  
II L.h. crawler track reverse
- 7 Pedal for travel:  
I R.h. crawler track forwards  
II R.h. crawler track reverse
- 8 Pedal for operating boom:  
I Extend boom  
II Retract boom
- 9 Control lever for:  
Lifting  
Lowering  
Bucket/grab
- 10 Engine speed control lever
- 11 Right console
- 12 Crawler speed switch

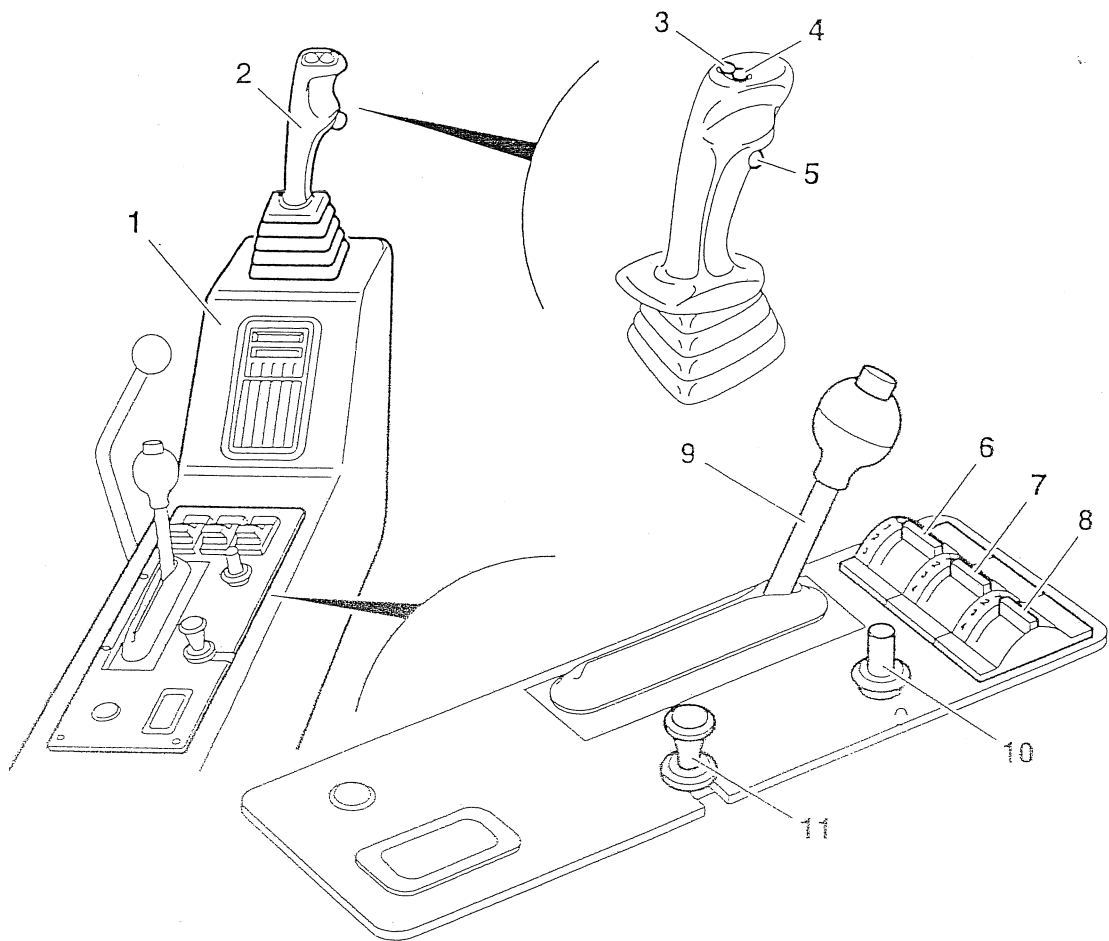


# RIGHT SWITCH PANAL

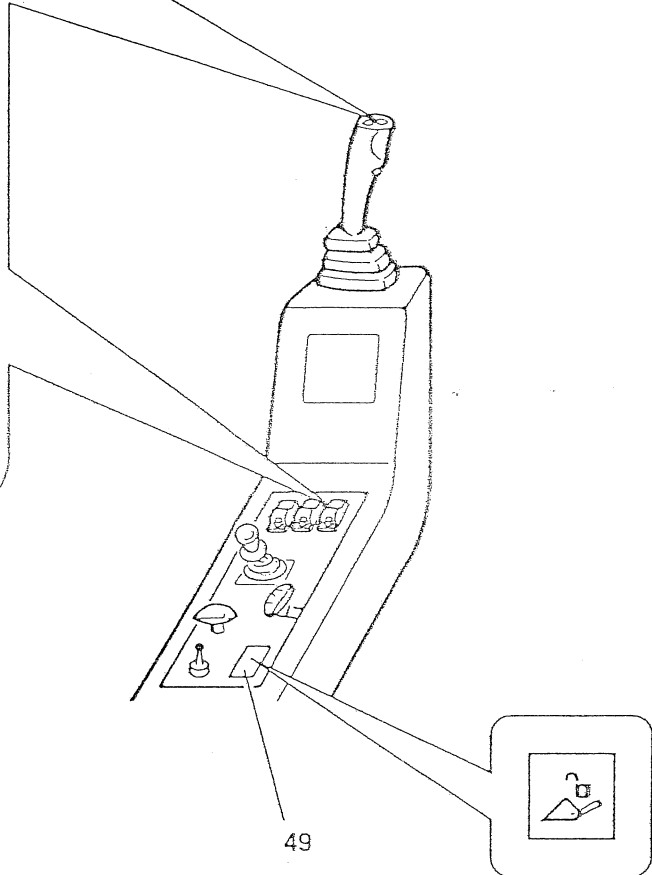
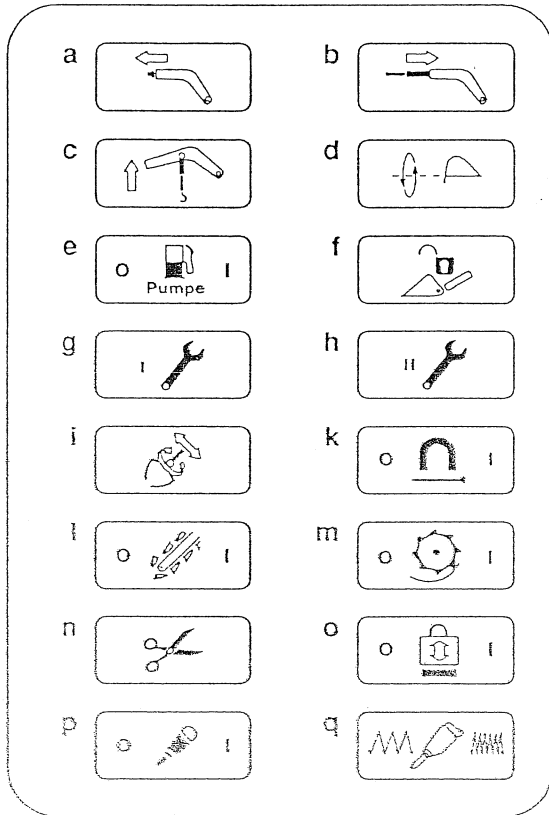


## Right switch panel

- 1 Right console
- 2 Control lever for:  
Lifting  
Lowering  
Bucket/grab
- 3 Display panel with control and warning lights
- 4 Pushbutton to cancel precision control
- 5 Pushbutton to rotate grab to left
- 6 Pushbutton to rotate grab to right
- 7 Operating hour meter
- 8 Cigarette lighter/electric power socket
- 9 Ignition key
- 10 Spare, for optional extra (♦)
- 11 Continuously variable potentiometer for precision control
- 12 Interior lights switch
- 13 Swing axle lock switch
- 14 Switch to cancel jib cut-off
- 15 Windshield wiper switch
- 16 Switch for parking and driving lights
- 17 Hazard warning flasher switch
- 18 Switch for external oil summation and separation control



- 1 Left console
  - 2 Control lever for:  
Folding jib  
Slewing
  - 3 Left pushbutton for additional working attachments
  - 4 Right pushbutton for additional working attachments
  - 5 Pushbutton for horn
  - 6 Blower switch (speeds 1 to 3)
  - 7 Preselector switch for left pushbutton (3), (positions 0 to 4)
  - 8 Preselector switch for right pushbutton (4), (positions 0 to 4)
- The functions of preselector switches (7) and (8) vary, depending on the optional extras fitted to the excavator. Refer to the plate with "Preselect" symbols on the cab wall to establish which additional attachments or functions can be selected.
- 9 Parking brake lever
  - 10 Gear shift switch to select either on-road or off-road ratio
  - 11 Pull switch for heating



Available functions  
in switch block on left

- |   |  |   |  |
|---|--|---|--|
| a | Extend telescopic boom   | g | Tool 1                                 |
| b | Retract telescopic boom  | h | Tool 2                                 |
| c | Pulling ram  | i | Sorting grab                           |
| d | Slew bucket  | k | Magnet attachment                      |
| e | Refuelling pump<br>(Operation see page 105)  | l | Trench cutter                          |
| f | Rapid changeover device<br>(Operation is effected via<br>"grab rotating", see page 70) | m | Mowing attachment                      |
|   |  | n | Scrap cutter                           |
|   |  | o | Pile driver                            |
|   |  | p | Hand-held hydraulic hammer             |
|   |  | q | Hydraulic hammer<br>(frequency switch) |

49 Rapid changeover device



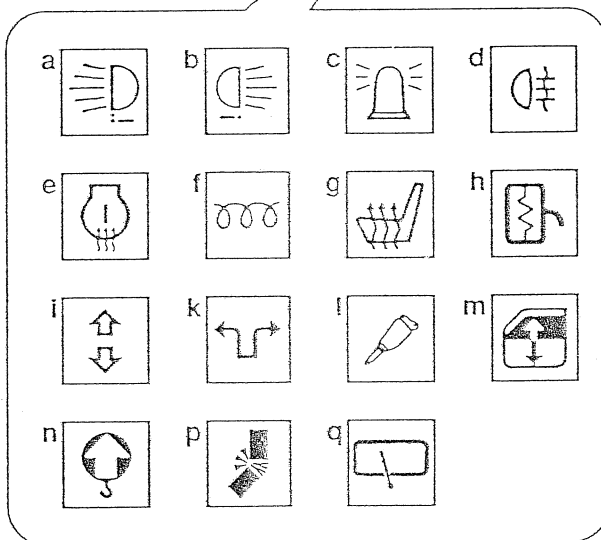
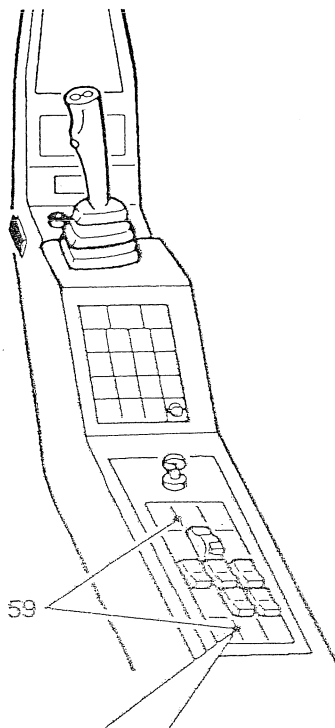
# AVAILABLE FUNCTIONS

in switch block right

## Special equipments ✦

### Available functions (59) in switch block on right

- a Headlight on roof, front (orange)
- b Headlight on roof, rear (orange)
- c Rotary beacon (yellow)
- d Rear fog light (green)
- e Fuel preheating (yellow)
- f Hydraulic oil heating (green)
- g Seat heating (yellow)
- n Mirror heating (yellow)
- l Cab lift up / down (green)  
Vario cab up / down (green)
- k Vario cab forward / back (red)
- l Hydraulic hammer (blue)
- m Electric window lift (green)
- n Overload warning device (yellow)
- p Reverse safety function (red)
- q Rear window wiper (green)

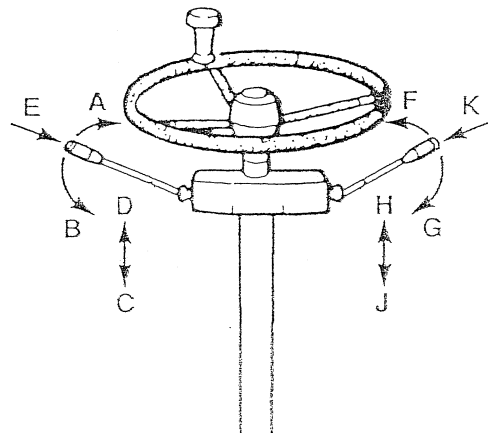




Multifunction levers

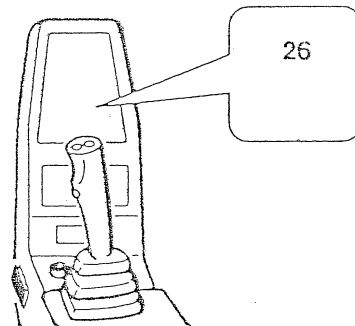
Left multifunction lever

- A Preselection - direction forwards .....
- B Preselection - direction reverse .....
- C Inching speed - on .....
- D Inching speed - off .....
- E Windshield wiper - intermittent action, .....  
windshield washer ↕  
Telltale light (26) comes on.



Right multifunction lever

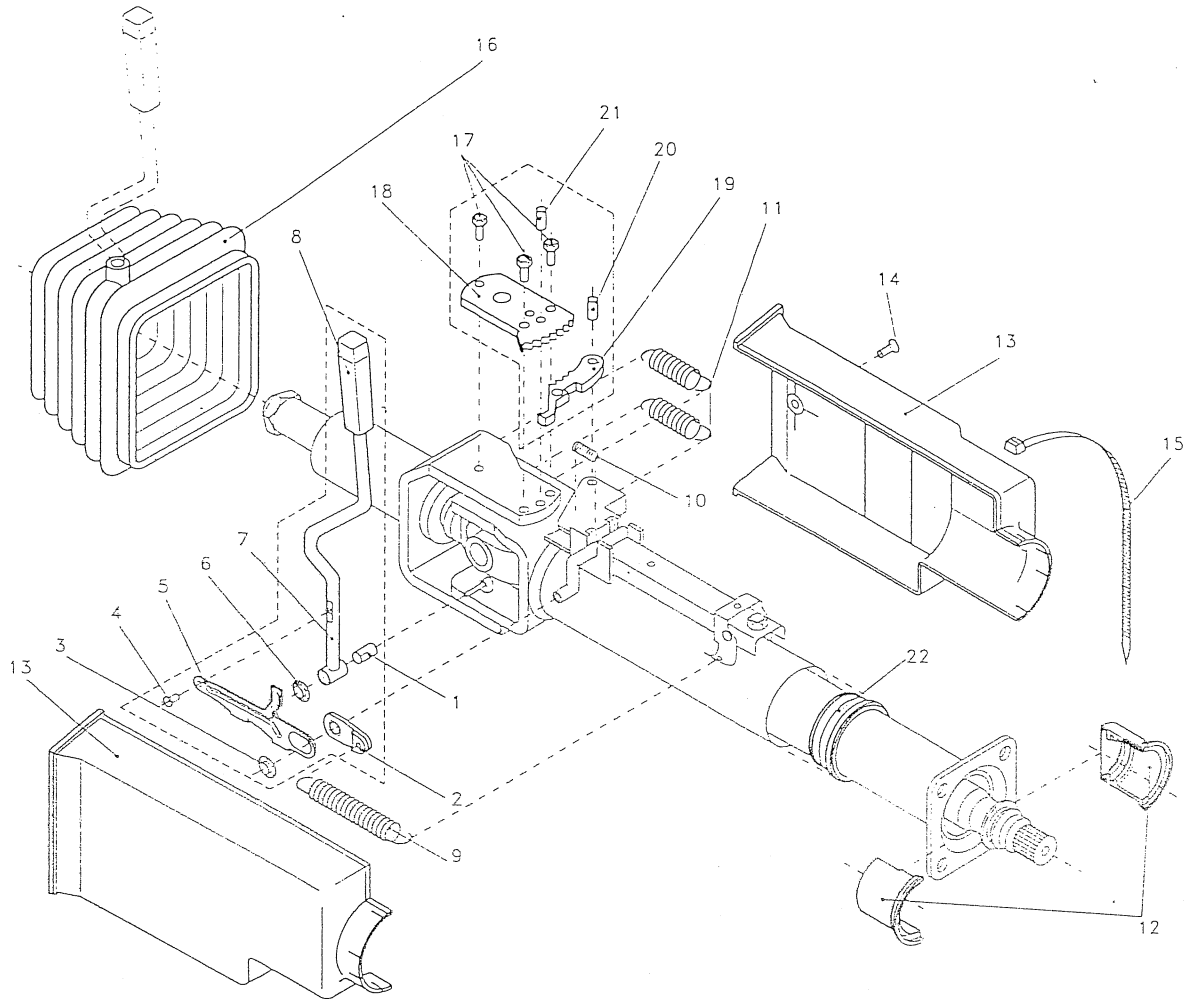
- F -- } Flashing turn indicators ...
- G -- } No function of the
- H -- } 1804 wheeled excavator
- J -- } Low and high headlight beams .....
- K Horn .....





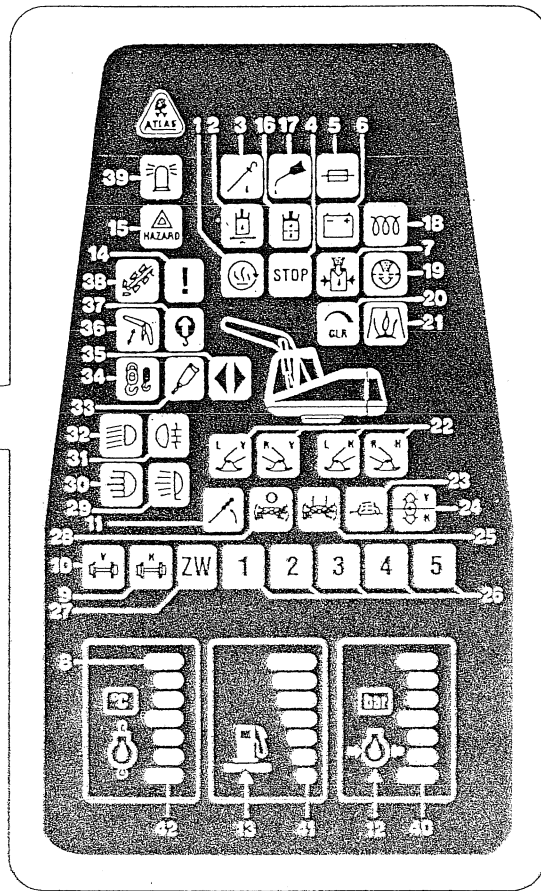
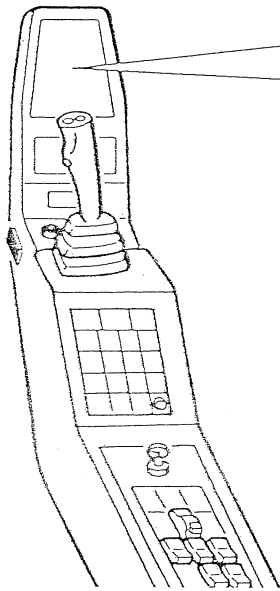
# STEERING COLUMN

for cab 935 and 980



- |    |                    |    |                   |
|----|--------------------|----|-------------------|
| 1  | Bush               | 12 | Bush              |
| 2  | Bore/shift lever   | 13 | Cover             |
| 3  | Locking disk       | 14 | Screw             |
| 4  | Rivet              | 15 | Cable string      |
| 5  | Shift lever        | 16 | Siphon            |
| 6  | Locking disk       | 17 | Screw             |
| 7  | Lever              | 18 | Toothshed segment |
| 8  | Lever with knobbed | 19 | Blocking lever    |
| 9  | Spring             | 20 | Pin               |
| 10 | Spring             | 21 | Pin               |
| 11 | Spring             | 22 | Bush              |





### Warning lights (red, yellow)

- 1 Cylinder head temperature and hydraulic fluid temperature (red) .....
- 2 Hydraulic fluid level (red) .....
- 3 Engine oil level (red)
- 4 Stop engine (red) .....
- faulty V-belt
- overheating
- 5 Fuse monitor (red) .....
- 6 Alternator (red)
- charge telltale .....
- 7 Pilot pressure (red) .....
- hydraulic fluid tank
- 8 Engine oil overheated (red) ..
- 9 Track roller pressure, rear (red) (road/rail excavator)
- 10 Track roller pressure, front (red) (road/rail excavator)
- 11 Parking brake (red) .....
- 12 Engine oil pressure (red) .....
- 13 Fuel level (red) .....
- minimum
- 14 Caution (yellow) .....
- electrical/electronic fault
- 15 Hazard warning flashers (red)

### Telltale lights (yellow, green, orange, blue)

- 16 Hydraulic oil filter (yellow) .....
- 17 Central lubrication (green) ...
- 18 Auxiliary heater (green)
- 19 Air cleaner (yellow) .....
- 20 Load limit control (orange) ...
- fault
- 21 Preheating (orange) .....
- 22 Preselection - support pads (green) .....
- LV = front left
- RV = front right
- LH = rear left
- RH = rear right
- 23 Inching speed (green) .....
- 24 Preselection - direction (yellow) .....
- V = forwards
- H = reverse
- 25 Separate swing axle lock (orange) .....
- 26 Reserve (orange)
- 1 to 5 special functions
- 27 Road/rail excavator (yellow)
- 28 Swing axle lock (yellow) .....
- 29 Headlight on roof (orange)
- 30 High-beam headlights (blue)
- 31 Rear fog light (green)
- 32 Side and driving lights (green) ..
- 33 Hydraulic hammer (orange) .....
- 34 Pressure boost stage (yellow)
- 35 Indicators (green)
- 36 Lifting/lowering limit function (yellow) .....
- 37 Overload warning device (yellow) .....
- 38 Trench cutter (orange)
- 39 Rotating beacon (yellow)

### Bar displays (green)

- 40 Engine oil pressure .....
- 41 Fuel level .....
- 42 Engine oil temperature .....



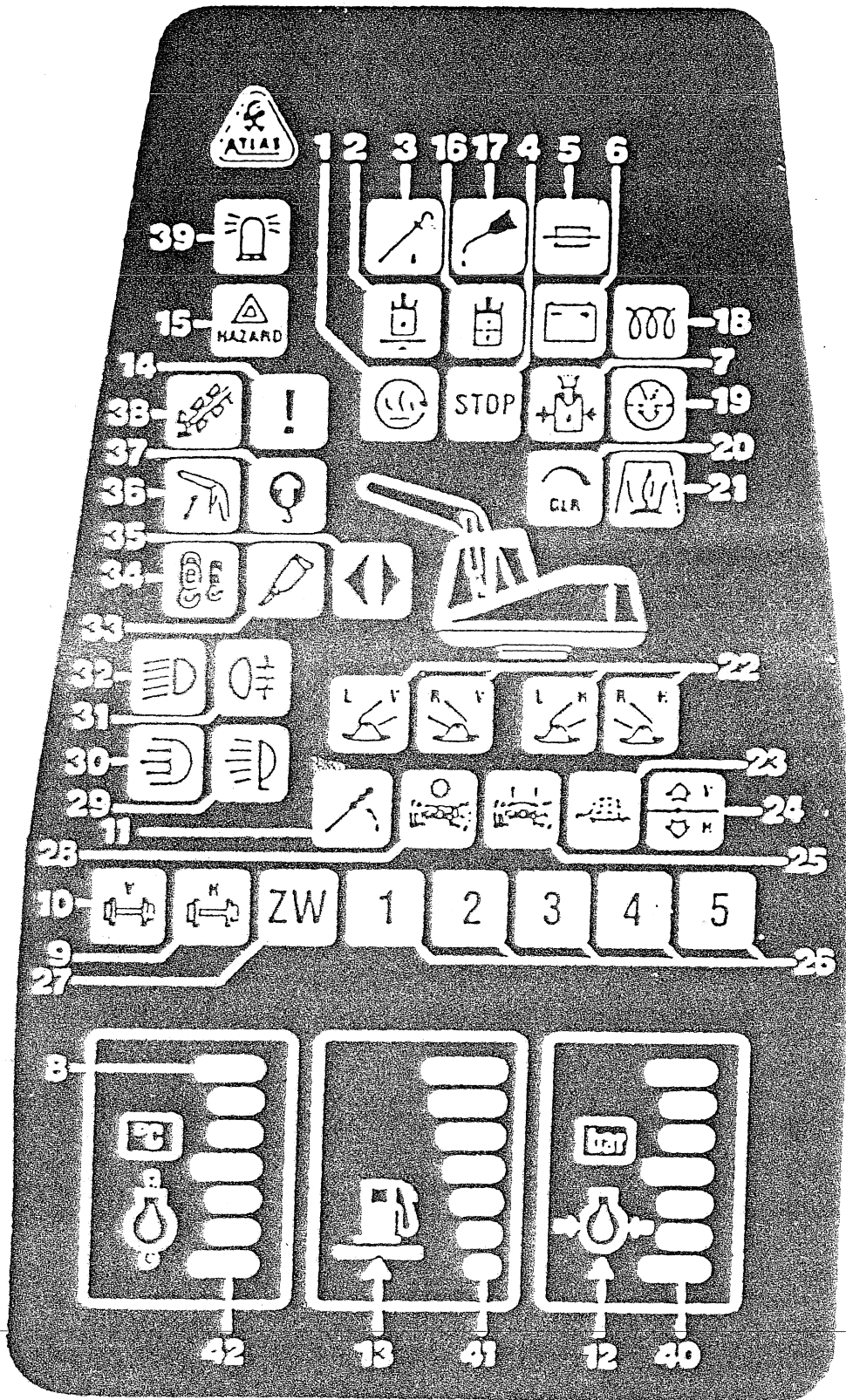
# Displays and controls

Discription

Tafel:

Name: Ro.

Datum: 11.95





# Displays and controls

Description

Schulungszentrum P14

Tafel:

Name: Ro.

Datum: 01.97

## 1. Cylinder head temperature / hydraulic fluid temperature ( 1704 - 1804 )

warning light - red

in case of overheating of cylinder head - permanent lighting

sensor in 1. cylinder head ( only air cooled engine )

in case of overheating of hydraulic fluid - flashing light

sensor in suction line of oil pressure pump

If these faults occur the pump capacity will automatically be reduced

## 2. Hydraulic fluid level ( 1004 - 1304 extra ) , 1404 - 1804 serie

warning light - red

If the hydraulic fluid level is too low - permanent lighting

controlling takes place only during starting the engine.

Additional visual control on sight glass of oil tank.

## 3. Engine oil level ( not installed )

warning light - red

For automatic controlling of engine oil level.

Controlling takes place only during starting the engine.

## 4. Stop engine

warning light - red

V- belt defective

(air cooled engine 1204 - 1804)

- permanent lighting

- additional a buzzer sounds

Engine oil pressure too low

- permanent lighting, additionally the warning light (12) flashes, and a buzzer sounds with the engine running.

Main hydraulic brake pressure below (< 100 bar)

Engine oil overheating (<120°)  
(air cooled engines)

- permanent lighting, additional the warning light (8) flashes and a buzzer sounds.

Cooling water (>118°)  
(water cooled engines)

- permanent lighting, additional the warning light (8) flashes and a buzzer sounds.

Cooling water level too low  
(water cooled engine)

- permanent lighting, additional the warning light (8) lights up and a buzzer sounds.



# Displays and controls

Discription

Schulungszentrum P15

Tafel:

Name: Ro.

Datum: 01..97

## 5. Fuse monitor

warning light - red

Turn ignition key into position (1) - permanent lighting.

If the engine runs only permanent lighting.

Fuse defective. Each single defective fuse will be indicated on the board by a luminous diode.

## 6. Generator, charge telltale

warning light - red

charge telltale - permanent lighting

## 7. Air pressure - hydraulic fluid tank

( excavator without air pressure system no indication )

warning light - red

No or too low air pressure (< 0.3 bar) in the hydraulic fluid tank - permanent lighting

Pressure switch at the hydraulic fluid tank.

## 8. Engine oil monitoring

(air cooled engine)

warning light - red

If the engine oil is overheated (>120°)

- flashing lights  
the warning light (4)  
lights up additionally  
and a buzzer sounds.

Water check temperature  
and water level

(water - cooled engines)

If the cooling water is overheated

- flashing lights  
the warning light (4)  
lights up additionally  
and a buzzer sounds.

Cooling water level too low

- permanent lighting  
the warning light (4)  
lights up additionally  
and a buzzer sounds.

## 9. Track roller pressure - rear

warning light - red

Contact pressure too low

Only for 2 - way - excavator

- permanent lighting  
and a buzzer sounds.

## 10. Track roller pressure - front

warning light - red

Contact pressure too low

Only for 2 - way - excavator

- permanent lighting  
and a buzzer sounds.



Displays and controls

Discription

Schulungszentrum P16

Tafel:

Name: Ro.

Datum: 01..97

11. Hand brake

Excavator already braked - permanent lighting  
Pressure switch below the cabin

12. Engine oil pressure

warning light - red  
If engine oil pressure is too low at running engine -  
flashing light, and the warning light (4) lights up,  
and a buzzer additionally sounds.  
Pressure switch on engine (filter console)

13. Fuel level - minimum

warning light - red  
If the fuel level is going down to 1/8 - flashing light  
Sensor inside the tank

14. Caution

warning light - yellow  
Fault inside the computer - permanent lighting  
Incandescent lamp defective (brake light,  
flash turn indicators) - flashing light

15. Hazard warning flashers

warning light - red  
If hazard warning flashers is engaged - flashing light,  
also the control light (35) is flashing.

16. Hydraulic fluid filter

control light - yellow  
Hydraulic fluid filter contaminated - permanent lighting  
Remarks : 4 seconds after switching on the ignition the engine  
oil temperature and cooling water temperature will be  
interrogated once.

In case of <math><40^{\circ}\text{C}</math>

- the control light will  
be suppressed for 30 minutes

In case of >math>>40^{\circ}\text{C}</math>

- the control light will  
immediately light up if the  
hydraulic fluid filter is  
contaminated.