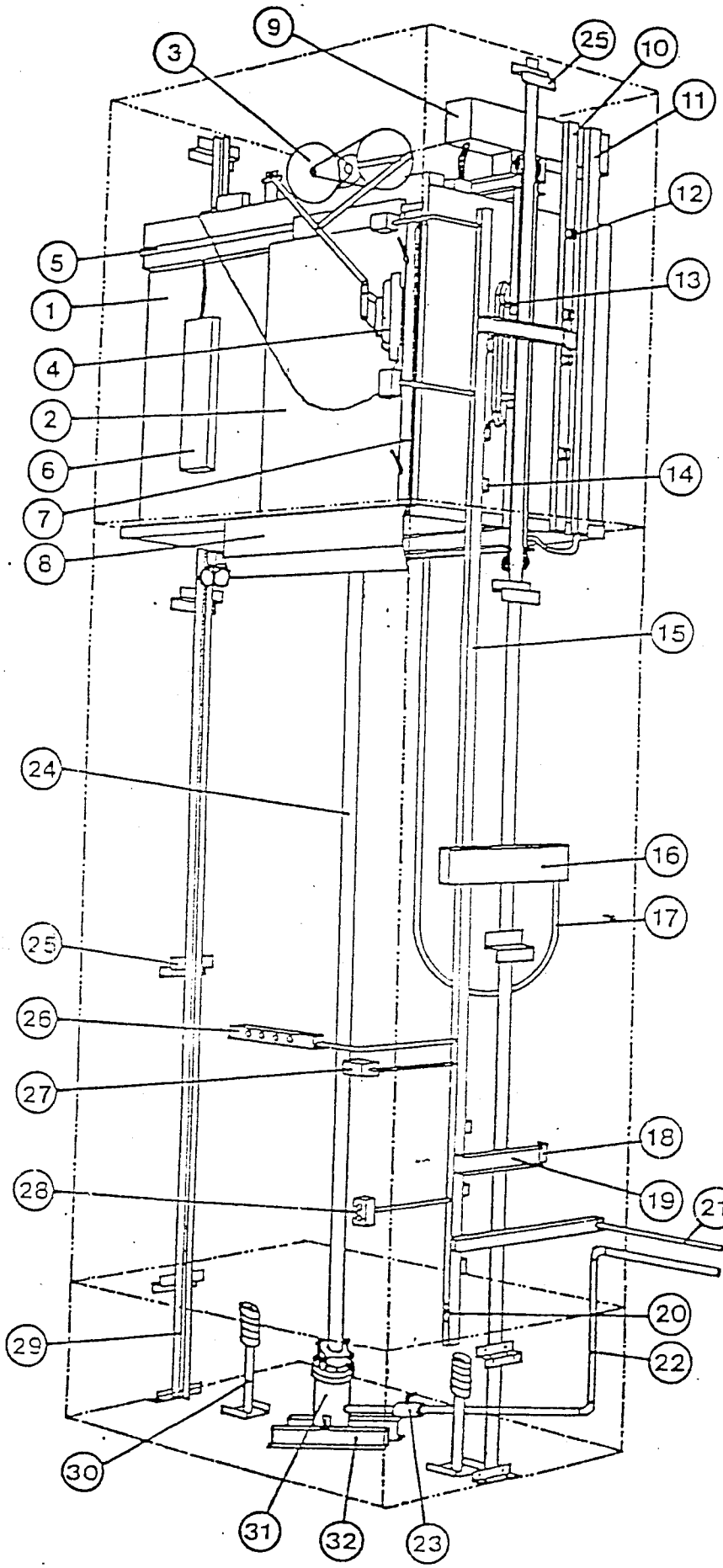
AMLIF INTERNATIONAL



1. CAB
2. CAR DOOR
3. DOOR OPERATOR
4. DOOR CLUTCH
5. DOOR HANGER TRACK
6. CAR STATION
7. SAFETY EDGE
8. TOE GUARD
9. CAR TOP BOX
10. SENSOR STICK
11. CABLE GUTTER
12. LEVEL SENSOR
13. CAM
14. LIMIT SWITCH
15. WIRING GUTTER
16. JUNCTION BOX
17. TRAVEL CABLE
18. VANE
19. VANE/GUTTER MOUNT
20. PIT SWITCH
21. ELECTRIC CONDUIT
22. HYDRAULIC PIPE
23. PIT VALVE
24. PISTON
25. RAIL BRACKET
26. POSITION INDICATOR
27. DOOR INTERLOCK
28. HALL STATION
29. GUIDE RAIL
30. BUFFER SPRING
31. JACK
32. PIT CHANNELS

NOTE: HOISTWAY FRAMES AND DOORS NOT SHOWN.

TYPICAL HYDRAULIC ELEVATOR

BH 4-1000

SECTION 4 START INSTALLATION

SYSTEM DIAGRAM

FIGURE 5-1 SHOWS A SCHEMATIC DIAGRAM OF THE HYDRAULIC SYSTEM WHICH CONSISTS OF THE OIL TANK, SCREW TYPE PUMP, THREE-PHASE INTRODUCTION MOTOR SOLENOID ACTED HYDRAULIC SERVO VALVES, A MUFFLER AND A JACK. THE TERM "JACK" WHEN USED IN THIS MANUAL REFERS TO THE COMBINATION OF THE CYLINDER AND PLUNGER AS A UNIT.

1. With no power applied to the valves, but with the motor and the pump running, the full pump output is routed through the up valve back to the pump input. The oil is thus, re circulating or "By-passing" and the elevator car does not move.
2. When power is applied to both the up and the up stop valve solenoids, the valve closes smoothly to route the full pump output into the jack and thus drive the car up at full up speed.
3. When power is applied to the up stop solenoid only, the up valve smoothly opens or closes to bleed part of the pump output back to the input and to thus allow only a controlled amount of oil to flow back into the jack to thus allow only a controlled amount of oil to flow back into the jack to thus allow acceleration or up slow down.
4. To lower the car, the down valve is partially opened by the down level solenoid or is fully opened by the down and down level solenoids together. This allows oil to flow from the jack, back into the tank and the elevator to lower.

STEP-BY-STEP INSTALLATION

The drawings that follow illustrate and describe the installation steps for the type of elevator covered by this manual.

TYPE OF ELEVATOR	DRAWING NUMBERS
BORED HOLE HYDRO	BH 4 - 1000 & BH 4 – 1001
ENTRANCE INSTALLATION DRAWINGS ARE IN SECTION 6	EN - 60 - 2000 - EN60 – 2007
CAB INSTALLATION DRAWINGS ARE IN SECTION 8	CAB 80 - 000 - CB80 – 0003

JACK PLUMBING AND LEVELING

Use the spider and light method to plumb jack. The explosion proof light housing with a 12 volt 25 watt light bulb connected by cord to the drill rig or truck battery with the proper diameter plate on top is lowered down the cylinder until it touches bottom. The centering spider is then attached to the top of the cylinder flange. Insure that the light cord passing through the spider is centered on the cylinder opening. Lift up the cord passing through the spider is centered on the cylinder opening. Lift up the cord a few inches freeing the light from contact with the bottom of cylinder. Using the leveling jack bolts located on the ears, adjust until there is a uniform light gap appearing around the perimeter of the plate below. The cylinder should then be plum.

Begin back filling the hole carefully:

1. Avoid large rocks that might damage the cylinder coating or wedge between the cylinder and the hole causing misalignment.

2. The dirt must be hand shoveled. Do not attempt to use a skip loader or other earth moving machinery.

3. Damp dirt will tend to build up on one side and deflect the jack unless it is shoveled from all sides.

4. Check the light ring continually during the backfill.

After the hole around the cylinder is back filled, remove the plumbing device and install the large "O" rings back in the groove on the cylinder flange. Lower the piston down inside the cylinder carefully to prevent damage to the piston surface. Remove the tape and rag from under the stuffing box assembly.

Push the stuffing box assembly backs down against the cylinder flange making certain the "O" ring is in its groove and not being pinched.

Reinstall the eight (8) bolts and tighten alternately.
You can now release the drill rig.

Before leaving the pit area, wrap plastic protection around the jack head. Also, make sure cylinder is filled with oil. If feed lines are not installed at this time use pipe tape and/or pipe dope and secure the inlet so that no water can get into the cylinder.

Return all completed drilling forms to your construction manager as soon as possible.

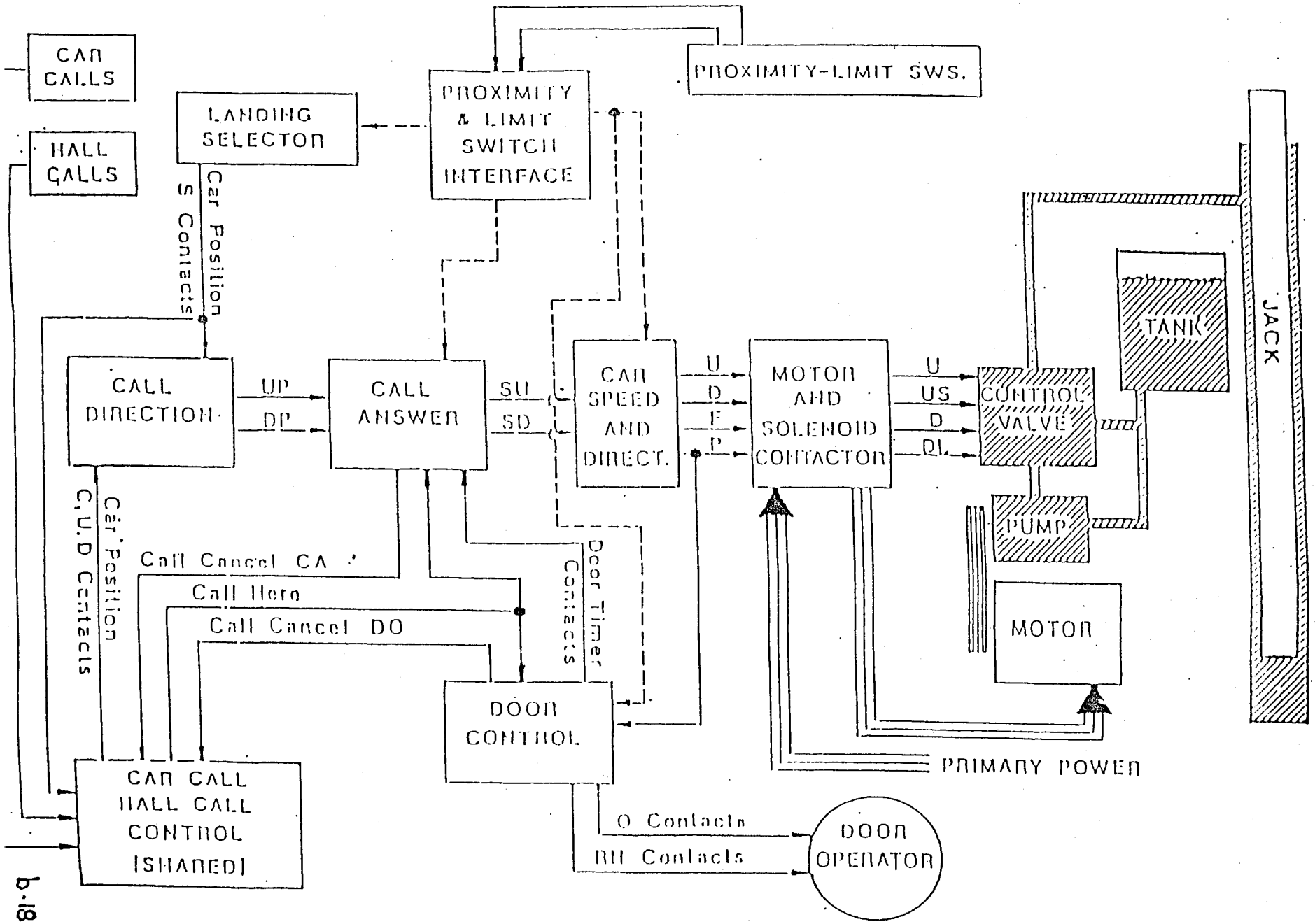


FIGURE 5-1 SIMPLIFIED BLOCK DIAGRAM, SIMPLEX AND DUPLEX SELECTIVE COLLECTIVE