KOBELCO

SHOP MANUAL

EXCAVATOR DOZER

ED195-8

TIER 3

87693703 NA

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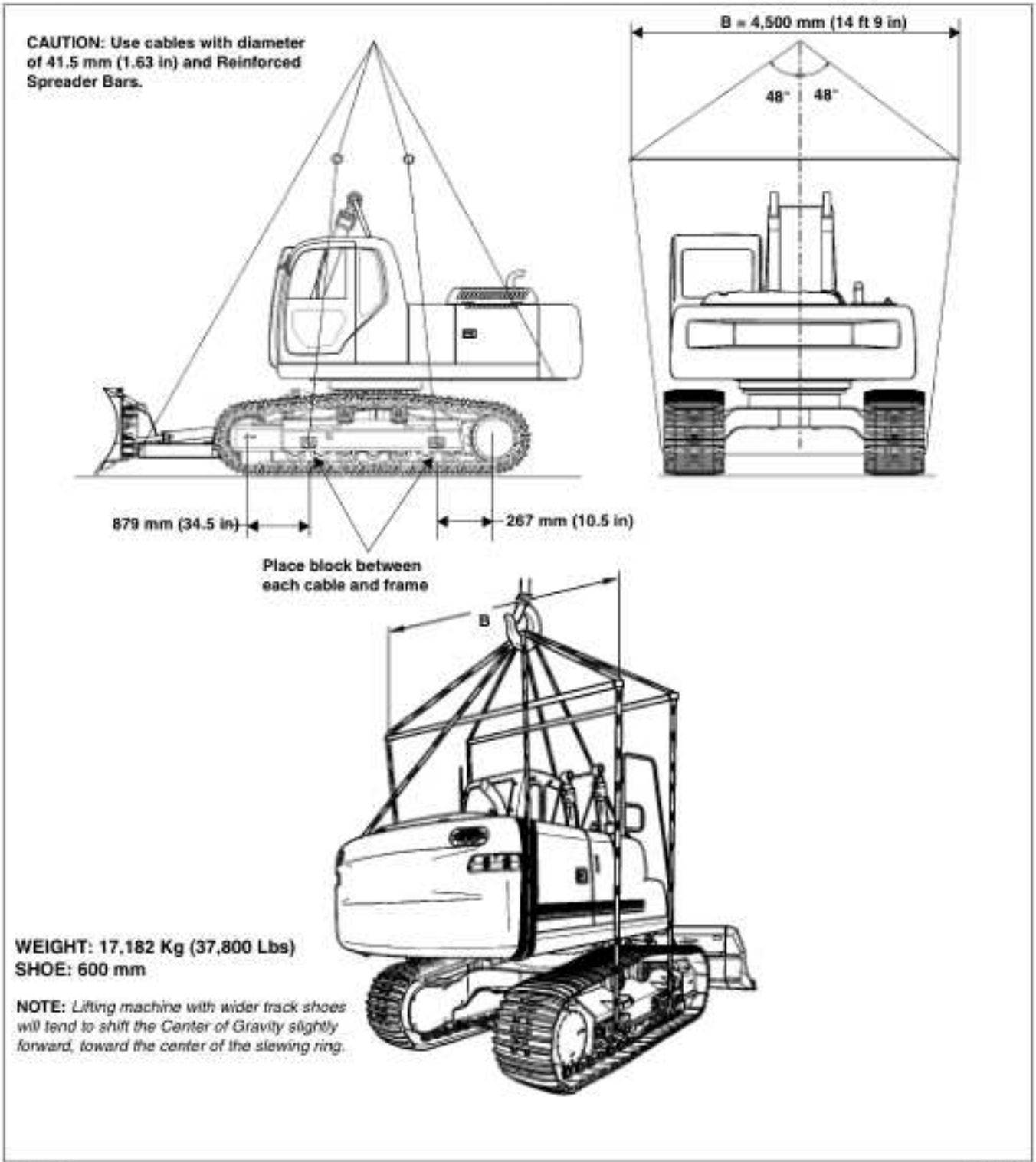
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2. Attach cables or wire ropes with a capacity rating sufficient to lift the machine, at lifting locations.
3. Bring loose ends of cable together at the machine center of gravity and attach to an overhead lifting device with a rated lifting capacity sufficient to lift the machine.

NOTE: *It may be necessary to place reinforced spreader bars between lifting cables to prevent damage to the machine during lifting.*

NOTE: *Lifting machine with wider track shoes will tend to shift the Center of Gravity slightly forward, toward the center of the slewing ring.*

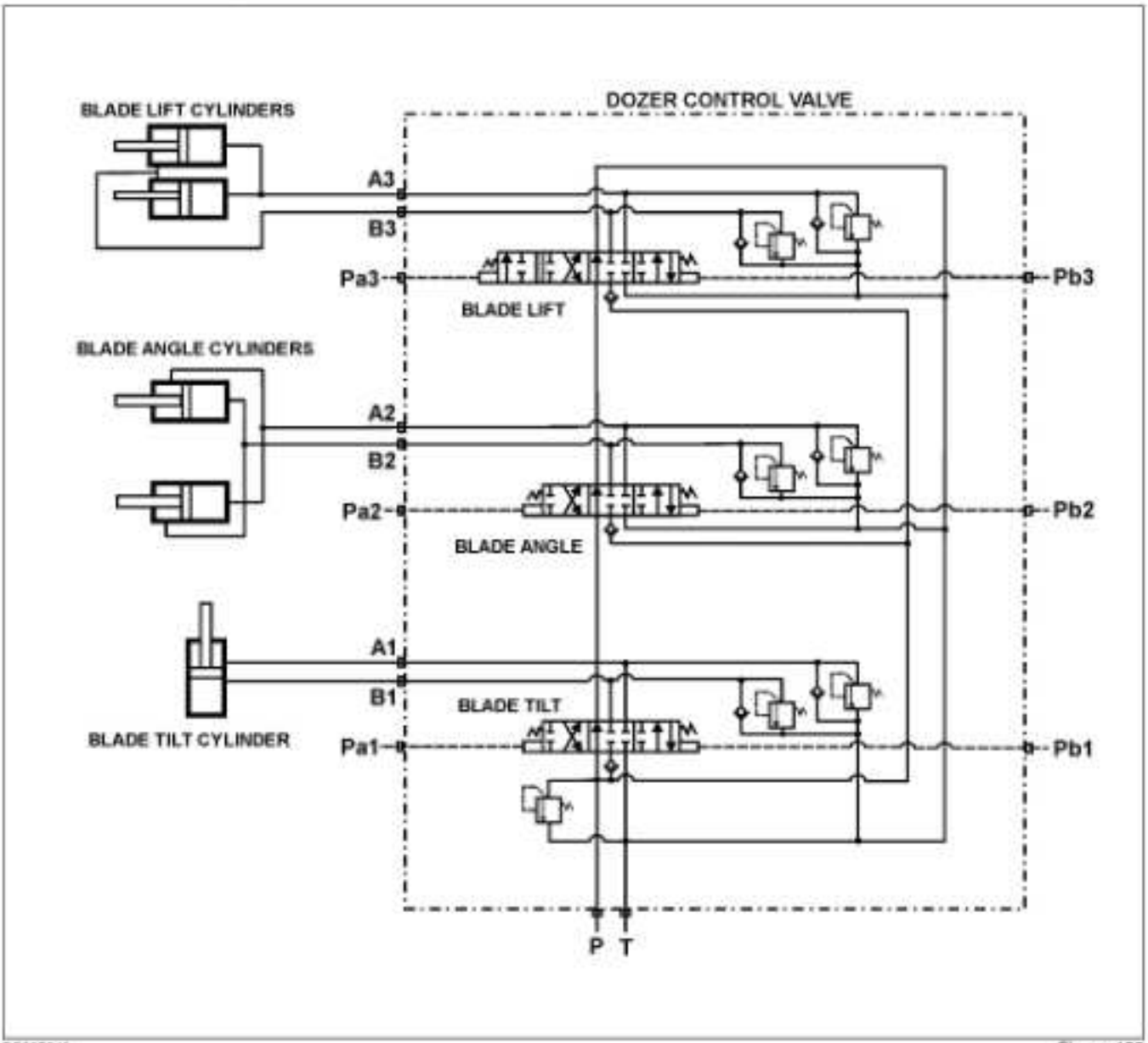


OC06E067

Figure 19

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Dozer Control Valve Hydraulic Circuit



OC09C048

Figure 185

Dozer Control Valve Specifications

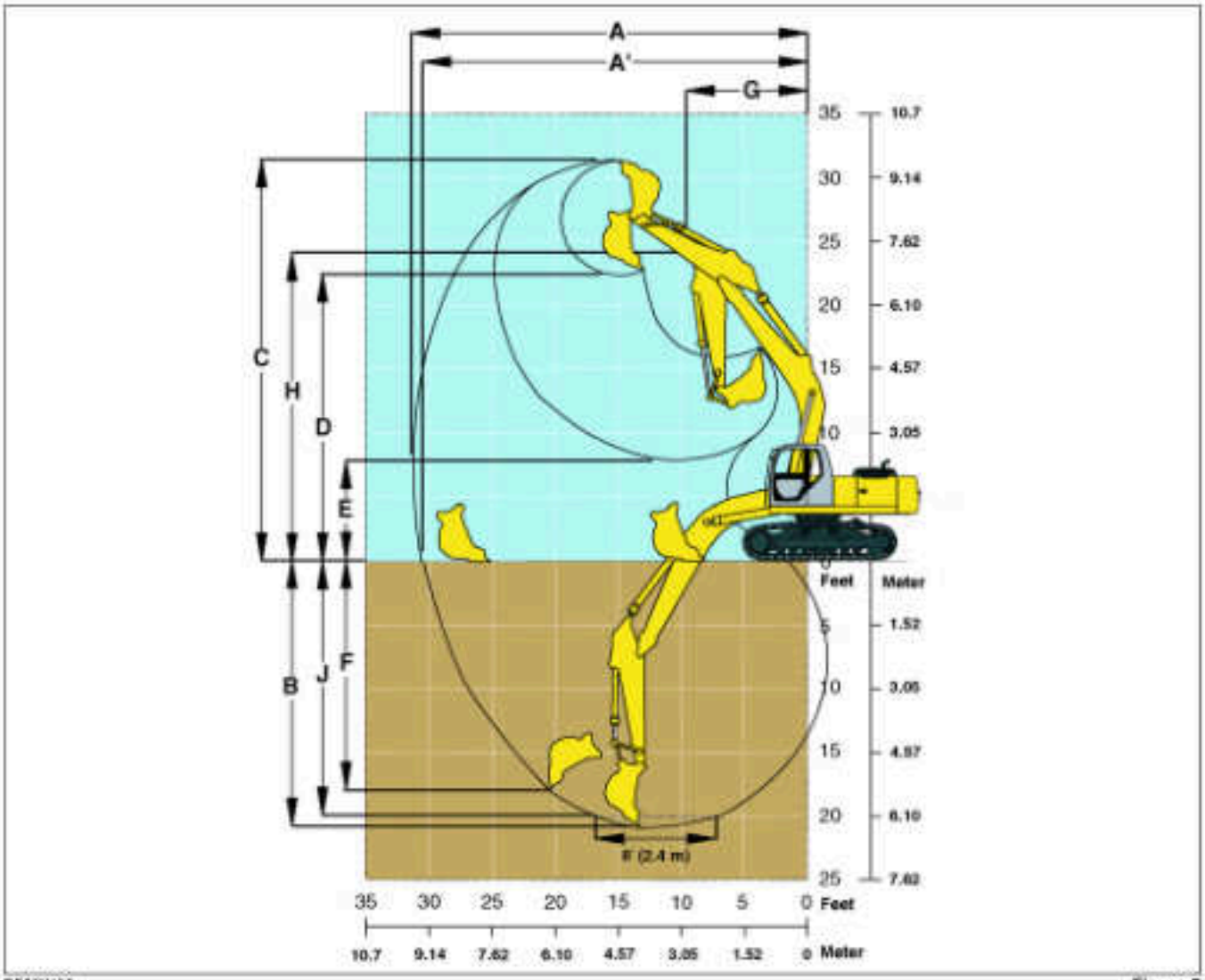
Rated Flow	60 L/min (16 gpm)	
Rated Pressure	24.5 MPa (3553 psi)	
Oil Temperature Range	-20 ~ 80°C (-4 ~ 176°F)	
Intermittent Maximum Temperature	100°C (212°F)	
Maximum Back Pressure	Continuous Pressure	0.34 MPa (49 psi)
	Peak Pressure	1.5 MPa (218 psi)
Applicable Operation Oil	ISO VG46	
Main Relief Valve Pressure	24.5 ± 0.5 MPa @ 60 L/min (3553 ± 73 psi @ 16 gpm)	
Over Load relief Valve Pressure	27.5 ± 0.5 MPa @ 30 L/min (3989 ± 73 psi @ 8 gpm)	

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SECTION 4 - TROUBLESHOOTING
CHAPTER 3 - TROUBLESHOOTING ELECTRICAL SYSTEM

| Classification | | Group No. | Trouble | Component | C1 Mechatro Controller | | |

ATTACHMENT WORKING RANGES



DC03K130

Figure 5

Units: meter (ft in) Machine equipped with 0.52 m^3 (0.68 yrd^3) Bucket		ED195-8	
	ARM	3.10 m	(10 ft 2 in)
A	Maximum digging reach	9.50 m	31 ft 2 in
A'	Maximum digging reach at ground level	9.33 m	30 ft 7 in
B	Maximum digging depth	6.52 m	21 ft 5 in
C	Maximum digging height	9.67 m	31 ft 9 in
D	Maximum dumping clearance	7.01m	23 ft 0 in
E	Minimum dumping clearance	2.12 m	6 ft 11.5 in
F	Maximum vertical wall digging depth	5.97 m	19 ft 7 in
G	Minimum front swing radius	2.83 m	9 ft 3 in
H	Height at minimum swing radius	7.37 m	24 ft 2 in
J	Digging depth for 2.4 m (8 ft) flat bottom	6.35m	20 ft 10 in

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HYDRAULIC CIRCUITS AND COMPONENTS

HYDRAULIC CONTROL SYSTEM LOGIC

Positive Control System.

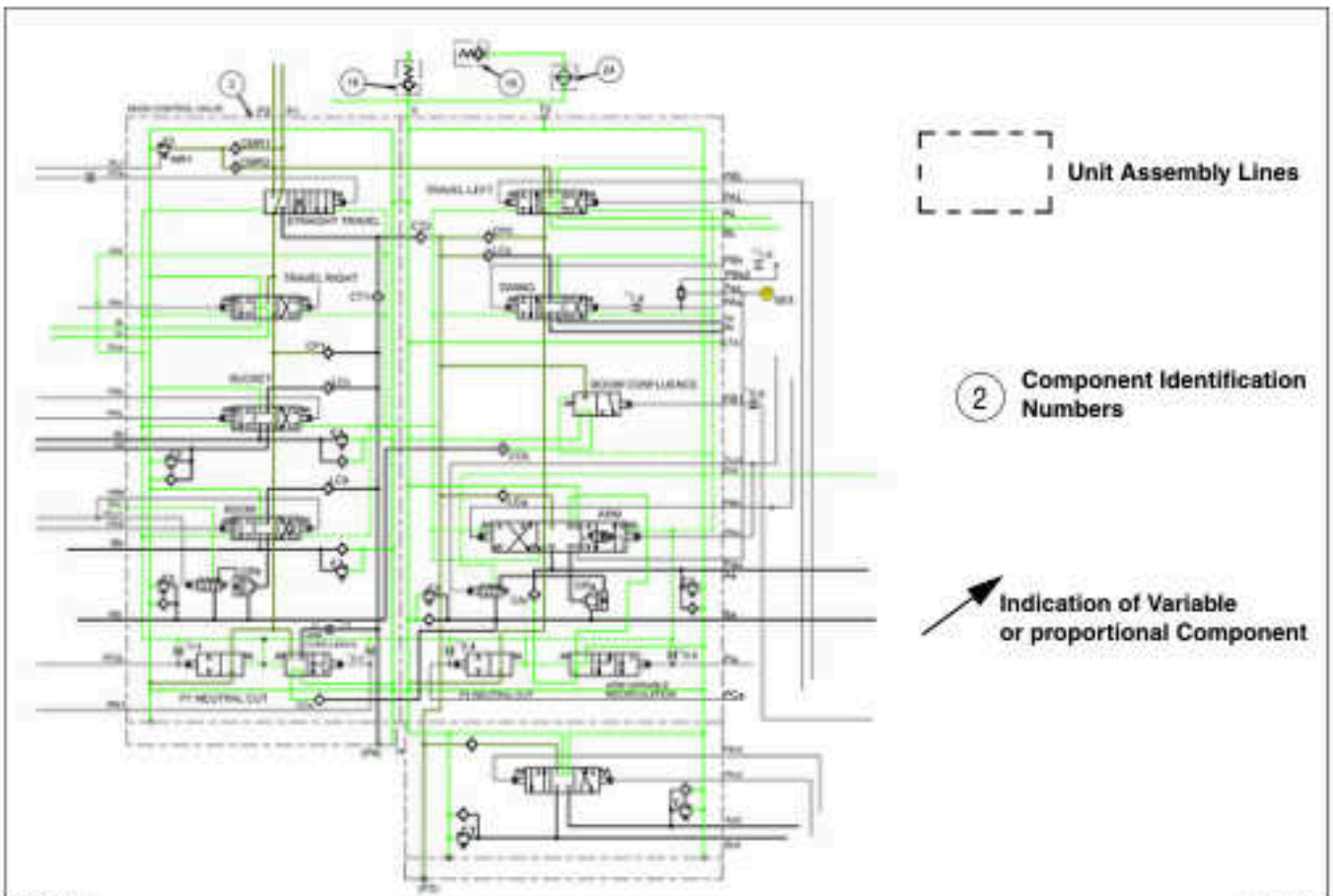
This machine (ED195-8) has a Positive Contol System.

Difference between Positive Control System and the Negative Control System.

Positive Control System: Proportional solenoid valves (PSV) use pilot pump oil (P3) through the PSV to control the servo piston of the main hydraulic pump by placing force on the compensating spool in the pump regulator it forces the compensating spool to allow pressure only to the small diameter end of the servo piston to push the pump on stroke. This pressure is at a minimum range (80–100 psi) at neutral. PSV pressure is increased to allow the stroke angle of the pump's rotating group to change from a low flow state to a high flow state based on system working pressure and electronic control of the PSV-1 and PSV-2 by the main C-1 computer. Thus sense the pressure is added (addition) or increased, this is where the term positive control derives from.

Negative Control System: Proportional solenoid valves (PSV) use pilot pump oil (P3) through the PSV to control the servo piston of the main hydraulic pump by placing force on the compensating spool in the pump regulator to keep the pump at minimum stroke. This pressure is at maximum range (465 psi) and is reduced to allow the stroke angle of the pump's rotating group to change from a low state to a high flow state based on system working pressure and electronic control of the PSV-1 and PSV-2 by the main C-1 computer. Thus sense the pressure is taken away (negated) or subtracted, this is the term negative control derives from.

SYMBOLS AND COMPONENTS



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Figure 1

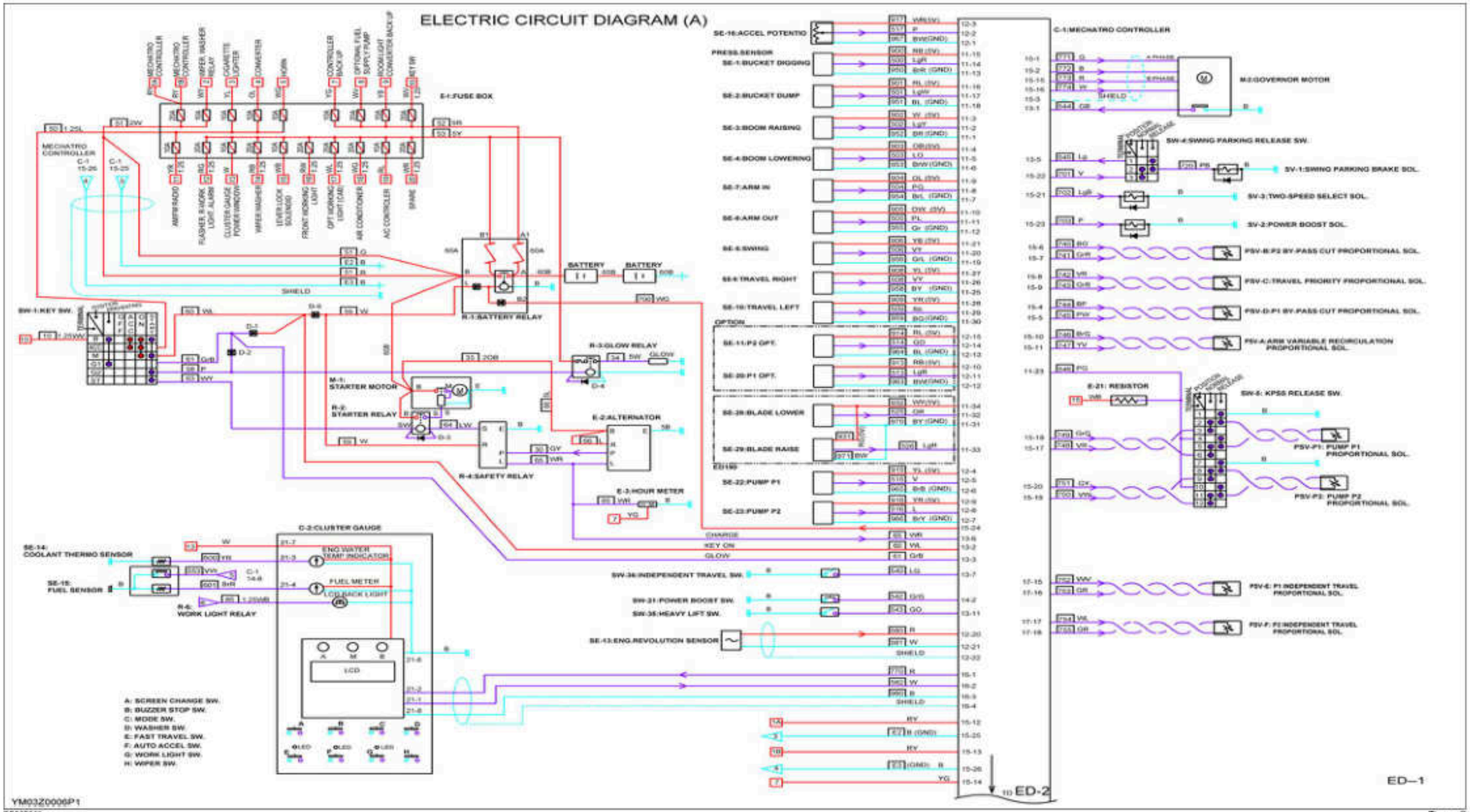
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SECTION 2 - SYSTEMS
CHAPTER 3 - ELECTRICAL SYSTEM

ELECTRICAL SCHEMATIC

ELECTRICAL SCHEMATIC DIAGRAMS

DIAGRAM A



0C06E066

Figure 7

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