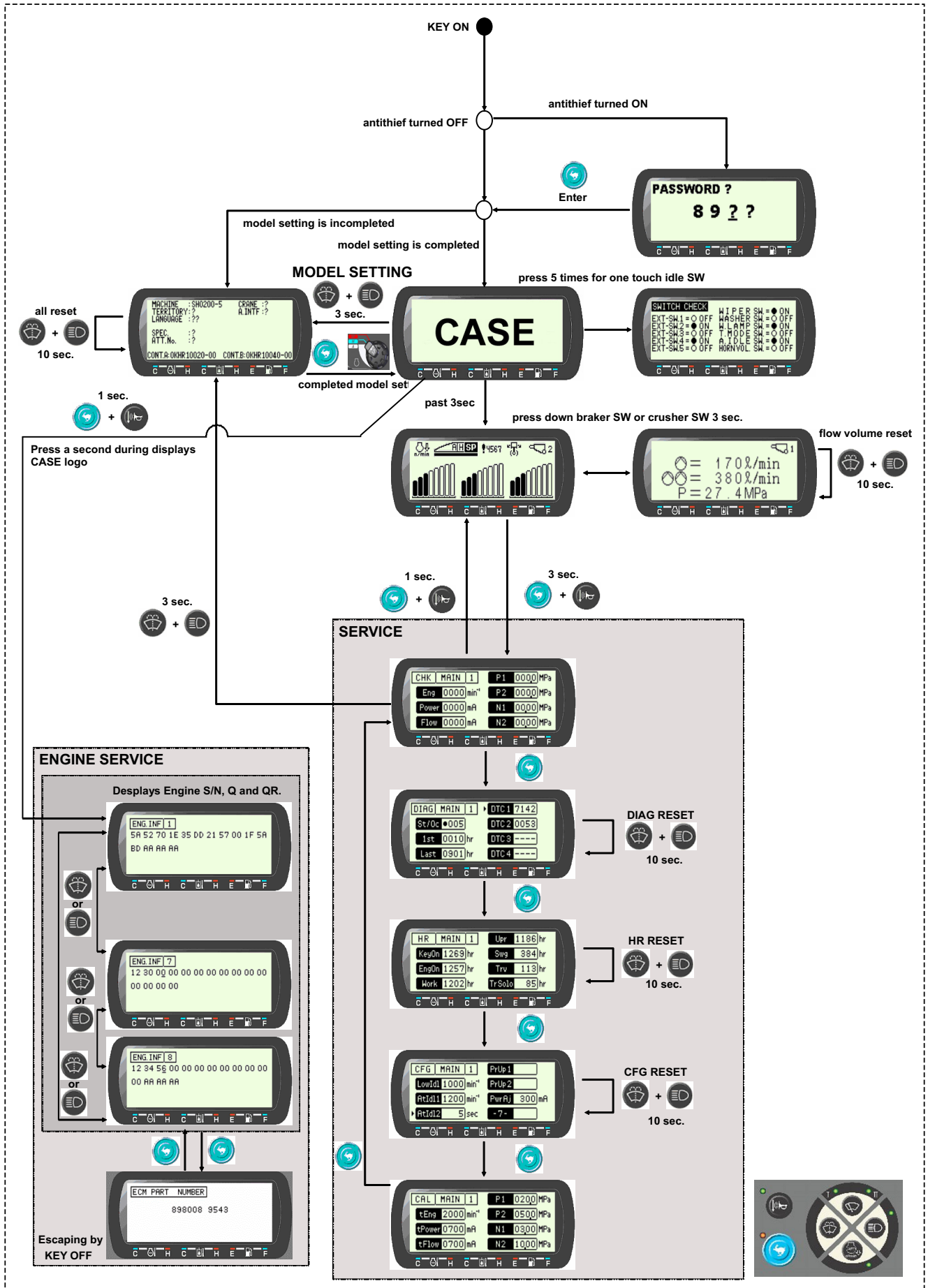
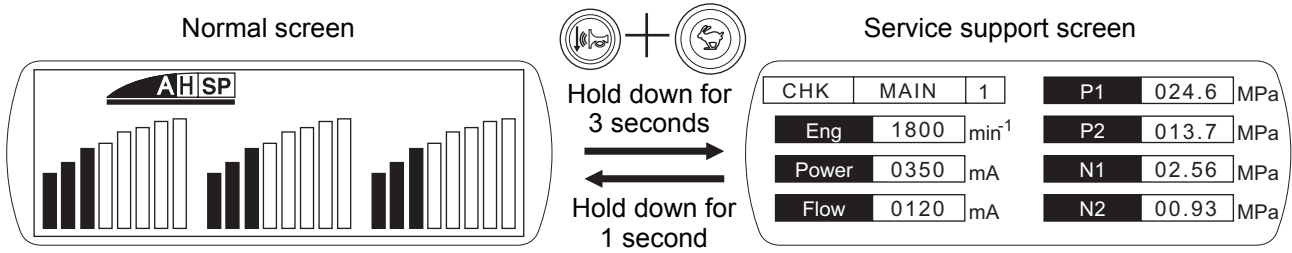


SERVICE SUPPORT

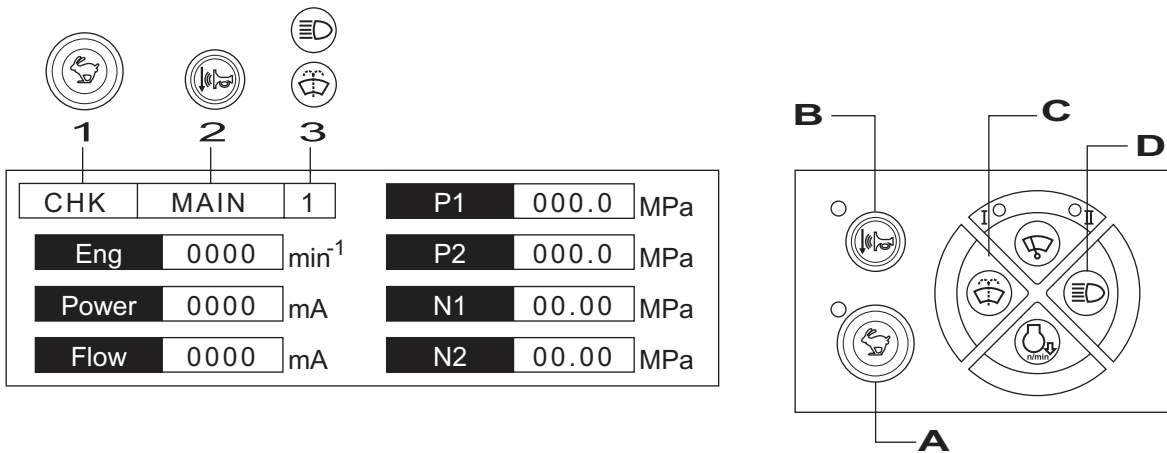


a) Operation for shifting to service support screen

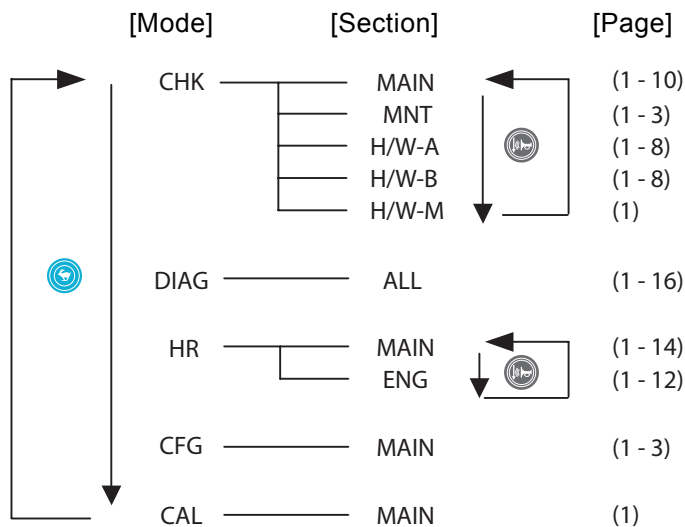
1. If both the travel high-speed switch and the horn volume select switch on the switch panel are held down for 3 seconds, the display switches to the service support screen.
2. If both the high-speed travel switch and the horn volume select switch on the switch panel are held down again for 1 second, the display returns to the normal screen.



b) Service support screen switching operation



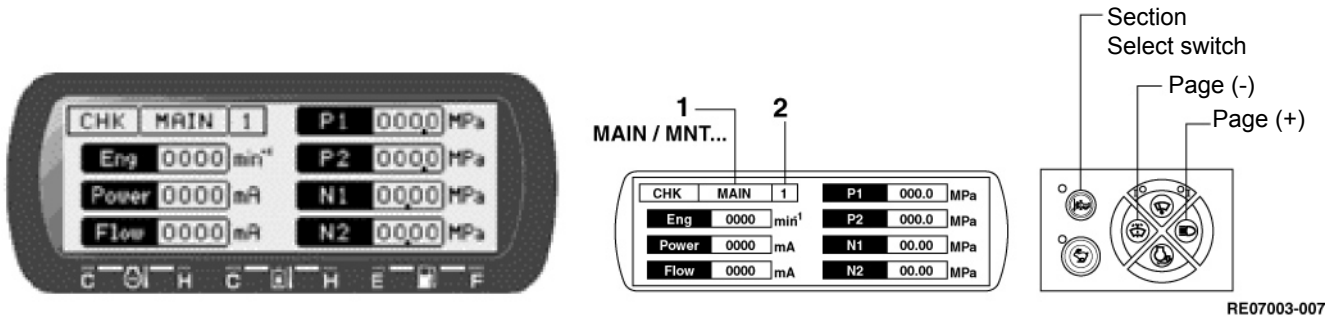
A	Mode select switch	1	Mode (switching with high speed travel switch A)
B	Section select switch	2	Section (switching with horn volume select switch B)
C	Page (-)	3	Page (switching: forward with light switch D and back with washer switch C)
D	Page (+)		



Screen Display List

1. CHK (status display) Screen List

In CHK mode, in addition to the machine status (milli-amp, oil pressures, temperatures, etc.), it is possible to check sensor and switch input/output states, as well as the angle, load ratio and work radius, etc. at the applied machine (liftcrane application machine, lifting magnet machine).



RE07003-007

1	Section	2	Page
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NOTE: From the CHK mode screen, if the wiper switch and the light switch are held down for 3 seconds, the display shifts to the model selection screen.

A) MAIN

1) Engine and pump

CHK	MAIN	1	P1	000.0	MPa
Eng	0000	min ⁻¹	P2	000.0	MPa
Power	0000	mA	N1	00.00	MPa
Flow	0000	mA	N2	00.00	MPa

- Eng : Engine speed
- Power : Actual milli-amp for horsepower control proportional valve
- Flow : Actual milli-amp for flow control proportional valve
- P1 : Pump1 Discharge pressure
- P2 : Pump2 Discharge pressure
- N1 : Pump1 Negative control pressure
- N2 : Pump2 Negative control pressure

2) Temperature and pressure

CHK	MAIN	2	Baro	0000	hPa
Coolnt	0000	°C	EngOil	0000	kPa
HydOil	0000	°C	BstT	0000	°C
FuelT	0000	°C	Air	0000	°C

- Coolnt : Radiator coolant temperature
- HydOil : Hydraulic oil temperature
- FuelT : Fuel temperature
- Baro : Barometric pressure
- EngOil : Engine oil pressure
- BstT : Boost temperature
- Air : Suction air temperature

3) Load and boost

CHK	MAIN	3	P1	000.0	MPa
Eng	0000	min ⁻¹	P2	000.0	MPa
Load	0000	%	BstT	0000	°C
Power	0000	mA	BstP	0000	kPa

- Eng : Engine speed
- Load : Load ratio
- Power : Actual milli-amp for horsepower control proportional valve
- P1 : Pump 1 Discharge pressure
- P2 : Pump 2 Discharge pressure
- BstT : Boost temperature
- BstP : Boost pressure

4) Load and milli-amp for horsepower control proportional valve

CHK	MAIN	4	P1	000.0	MPa
Eng	0000	min ⁻¹	P2	000.0	MPa
Load	0000	%	N1	00.00	MPa
Power	0000	mA	N2	00.00	MPa

Eng : Engine speed
 Load : Load ratio
 Power : Actual milli-amp for horsepower control proportional valve
 P1 : Pump 1 Discharge pressure
 P2 : Pump 2 Discharge pressure
 N1 : Pump 1 Negative control pressure
 N2 : Pump 2 Negative control pressure

5) Target and actual milli-amp for horsepower control proportional valve

CHK	MAIN	5	- 4 -		
Eng	0000	min ⁻¹	tEng	0000	min ⁻¹
Load	0000	%	ThVol	0000	%
Power	0000	mA	tPower	0000	mA

Eng : Engine speed
 Load : Load ratio
 Power : Actual milli-amp for horsepower control proportional valve
 -4- : *
 tEng : Target engine speed
 ThVol : Throttle volume degree of opening
 tPower : Target milli-amp for horsepower control proportional valve

6) Target and actual milli-amp for flow control proportional valve

CHK	MAIN	6	P1	000.0	MPa
Eng	0000	min ⁻¹	N1	00.00	MPa
Power	0000	mA	Swg	00.00	MPa
Flow	0000	mA	tFlow	0000	mA

Eng : Engine speed
 Power : Actual milli-amp for horsepower control proportional valve
 Flow : Actual milli-amp for flow control proportional valve
 P1 : Pump 1 Discharge pressure
 N1 : Pump 1 Negative control pressure
 Swg : Swing pilot pressure
 tFlow : Target milli-amp for flow control proportional valve

7) Target and actual milli-amp for hydraulic fan proportional valve

CHK	MAIN	7	HydOil	0000	°C
Eng	0000	min ⁻¹	FuelT	0000	°C
Coolnt	0000	°C	BstT	000	°C
Fan	0000	mA	tFan	000	mA

Eng : Engine speed
 Coolnt : Radiator coolant temperature
 Fan : Actual milli-amp for hydraulic fan proportional valve
 HydOil : Hydraulic oil temperature
 FuelT : Fuel temperature
 BstT : Boost temperature
 tFan : Target milli-amp for hydraulic fan proportional valve

8) Pilot pressure

CHK	MAIN	8	Upr	00.00	MPa
P1	000.0	MPa	Swg	00.00	MPa
P2	000.0	MPa	Trv	00.00	MPa
Cyl(B)	000.0	MPa	AmCls	00.00	MPa

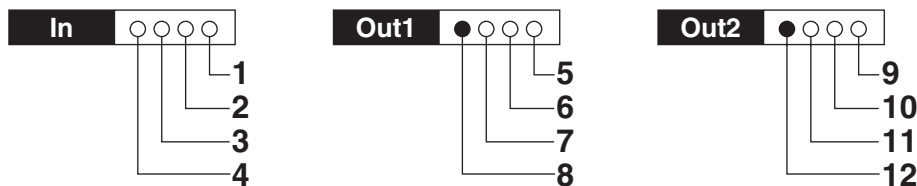
P1 : Pump1 Discharge pressure
 P2 : Pump2 Discharge pressure
 Cyl(B) : Boom bottom pressure
 Upr : Upper pilot pressure
 Swg : Swing pilot pressure
 Trv : Travel pilot pressure
 AmCls : Arm-in pilot pressure

9) Hydraulic circuits; Input/output and pressure

CHK	MAIN	9	P1	000.0	MPa
In	○ ○ ○ ○		P2	000.0	MPa
Out1	● ○ ○ ○		N1	00.00	MPa
Out2	● ○ ○ ○		N2	00.00	MPa

P1 : Pump1 Discharge pressure
 P2 : Pump2 Discharge pressure
 N1 : Pump1 Negative control pressure
 N2 : Pump2 Negative control pressure

Hydraulic circuit input /output state (○ = OFF, ● = ON)



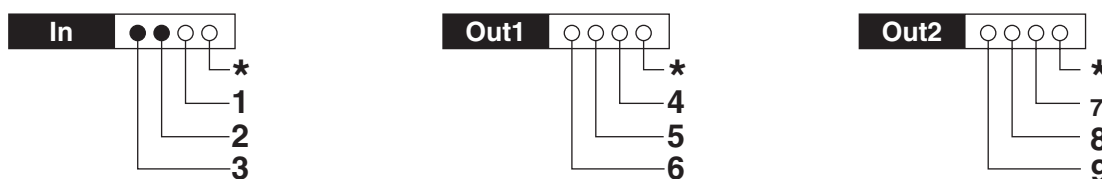
1	Pressure sensor; Arm in	7	Solenoid; Boost
2	Pressure sensor; Travel	8	Solenoid; Swing brake
3	Pressure sensor; Swing	9	Relay; Travel alarm
4	Pressure sensor; Upper	10	Solenoid; Fan reverse (large machine only)
5	Solenoid; Free swing / beacon	11	Solenoid; Option line switchover
6	Solenoid; Travel high-speed switchover	12	Solenoid; Power save

10) Electrical circuits; Input/output

CHK	MAIN	10	Eng	0000	min ⁻¹
In	● ● ○ ○		Coolnt	0000	°C
Out1	○ ○ ○ ○		Batt	0000	v
Out2	○ ○ ○ ○		FuelLv	0000	%

Eng : Engine speed
 Coolnt : Radiator coolant temperature
 Batt : Battery voltage
 FuelLv : Fuel sensor

Electrical circuit input /output state (○ = OFF, ● = ON)



1	Switch; Anti-theft protection	6	Glow signal
2	Battery charge	7	Engine stop due to trouble
3	Switch; Key	8	Low idle restriction due to trouble
4	A/C coolant temperature transmission	9	Restriction on milli-amp for horsepower control proportional valve due to trouble
5	Relay; Feed pump automatic stop		