



1979

Established JUNJIN INDUSTRY
MAINTENANCE & PARTS trade

1991

Established “JUNJIN Heavy Industry”
Contract Official dealer of PM
Lunching concrete pump

1995

Lunching JUNJIN concrete pump to
domestic market
Develop first 43M pump

1998

Lunching Research & Development center

2005

Develop 63M pump

2012

Export JUNJIN concrete pump over 60 countries

ENGINEER TRAINING

HYDRAULIC

Concrete pump general

Main function

Concrete pumping system

Basic of hydraulic

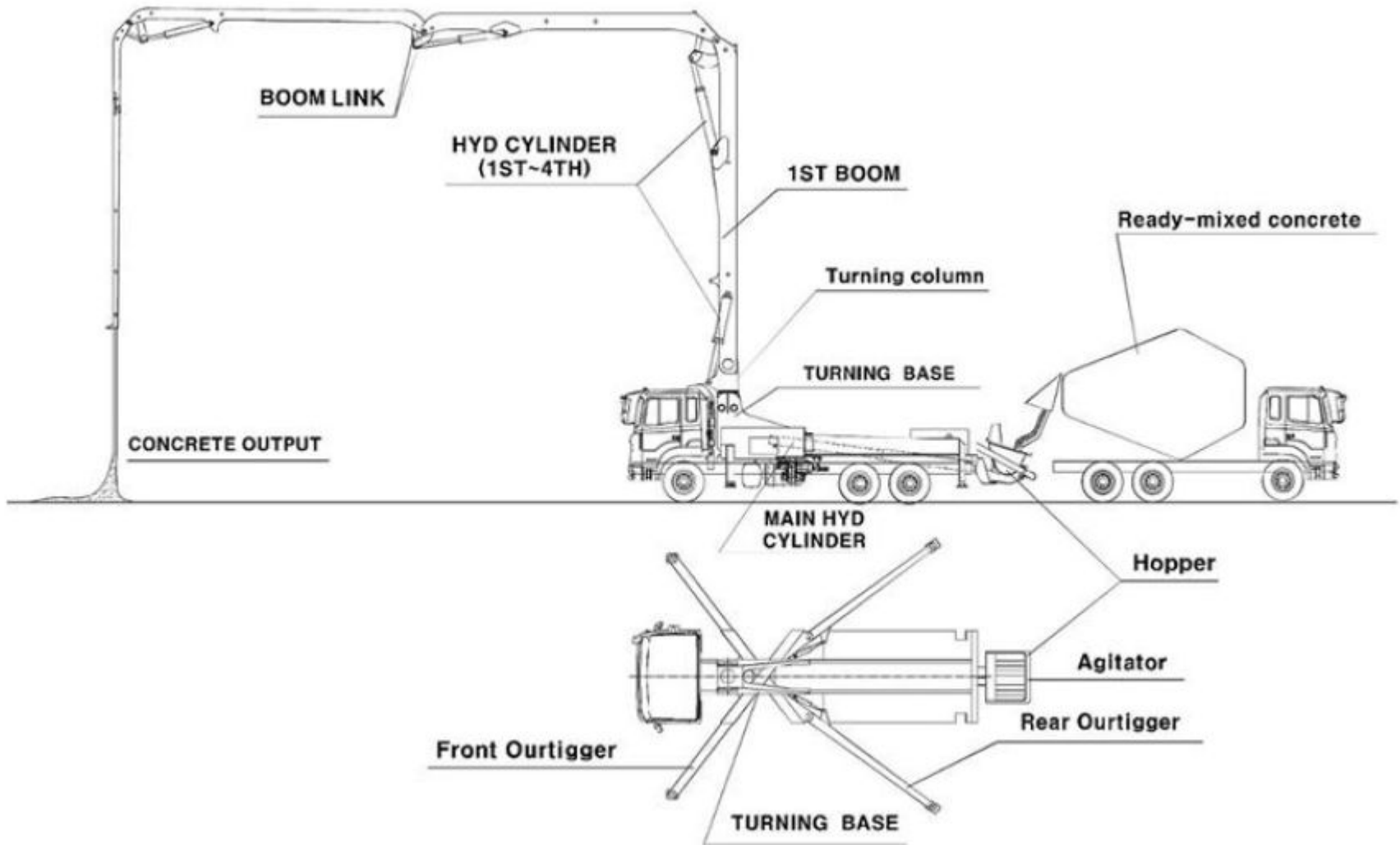
Filter system

Air pressing

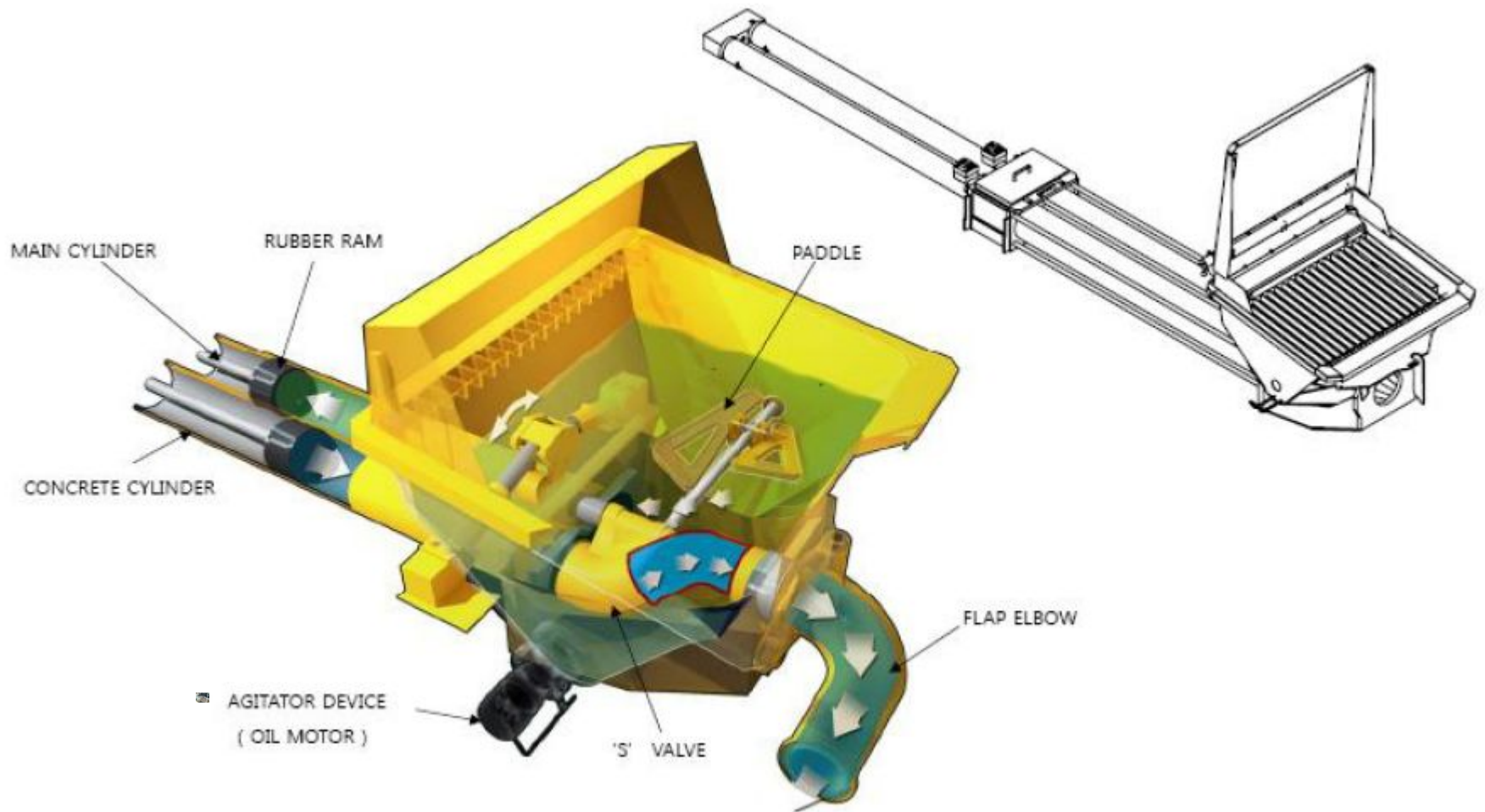
Grease system



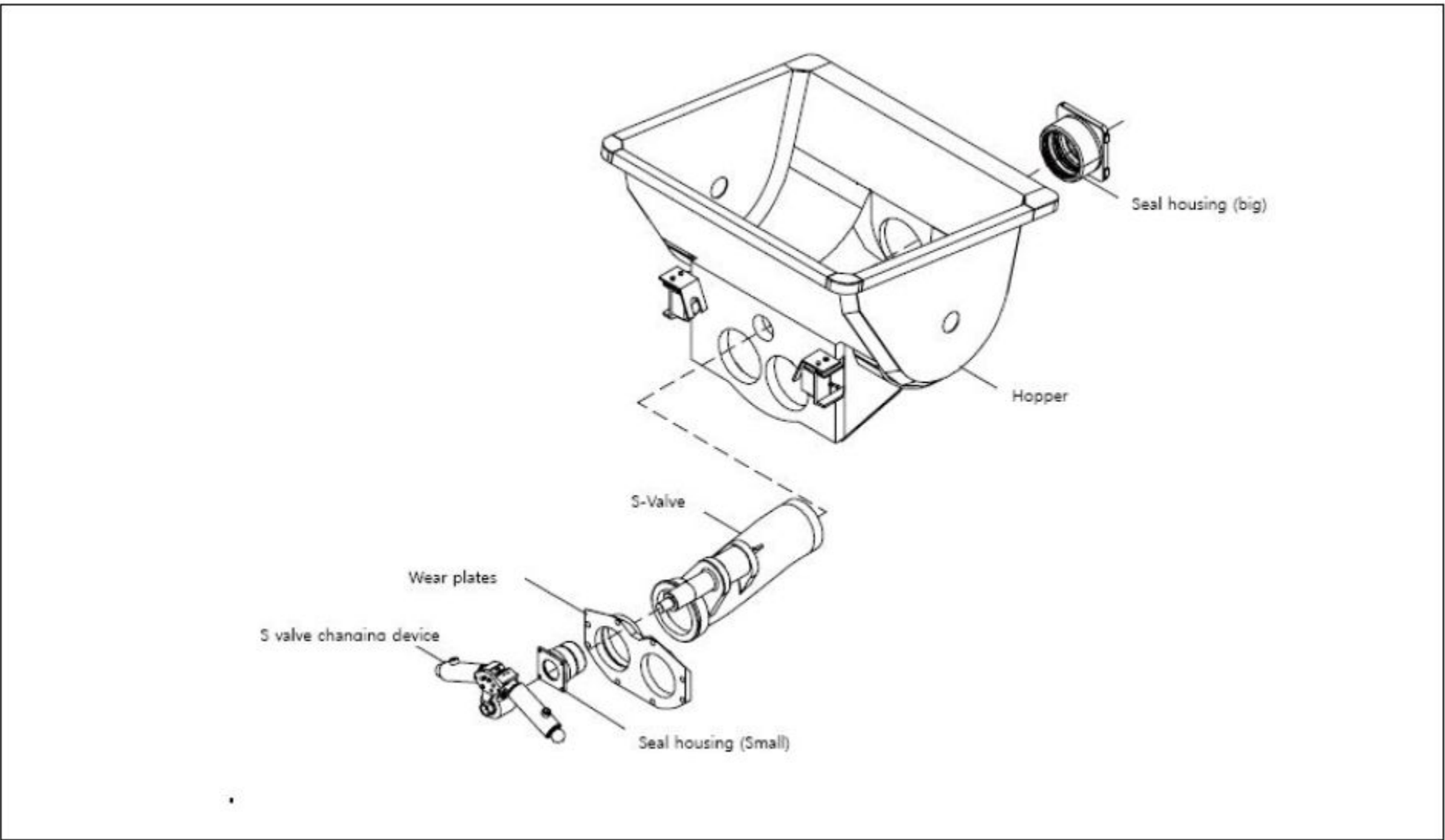
What is concrete pump



■ Concrete pump?



Concrete pump?



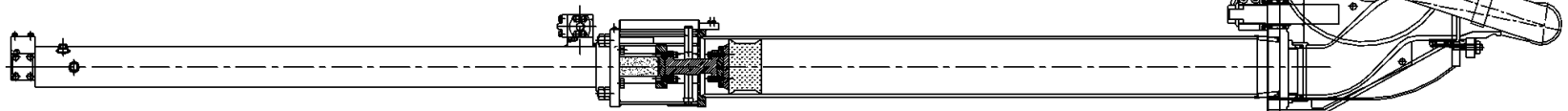
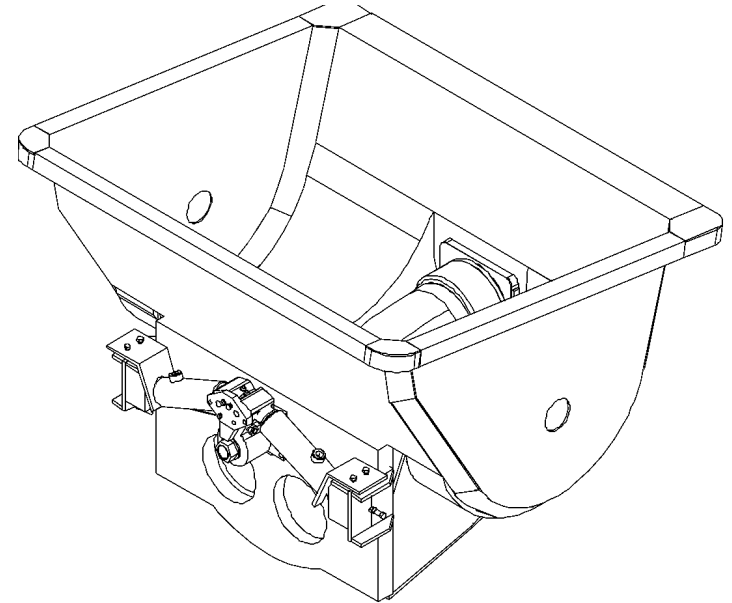
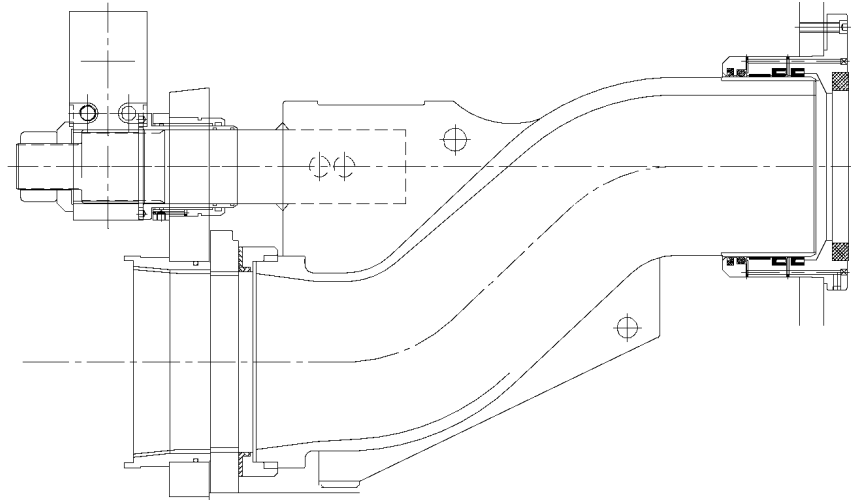
Concrete pump?

Concrete pump

CONCRETE PUMPING
FROM MIXER TO PUMPING POSITION
POWER TRANSFER LINE

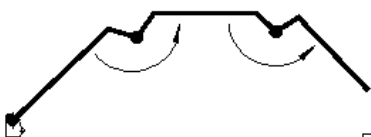
Main Function

- 1) Main cylinder (Concrete CYL.)
- 2) Plunger cylinder ('S' V/V Changing CYL.)

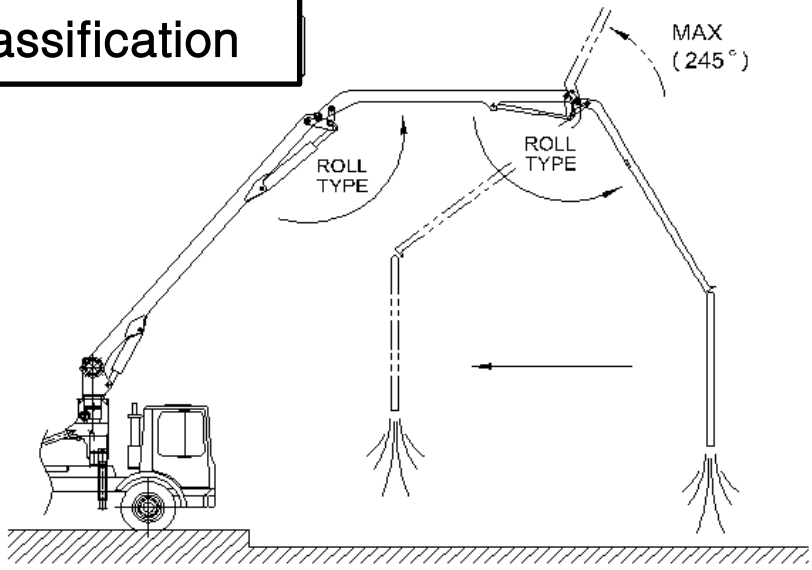
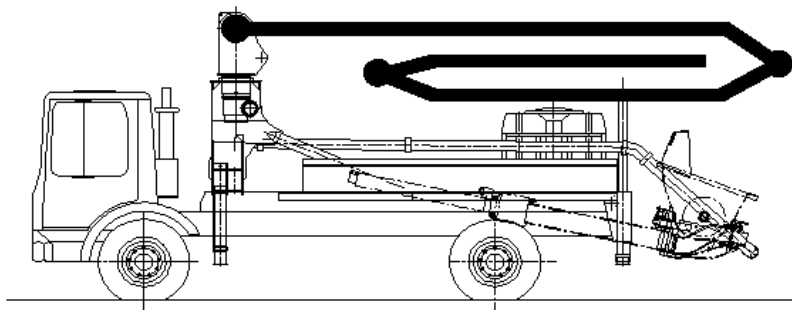


BOOM TYPE

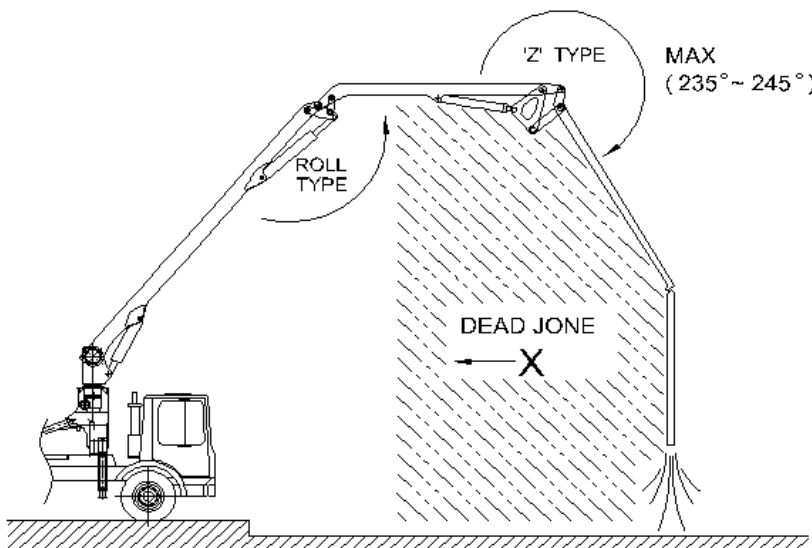
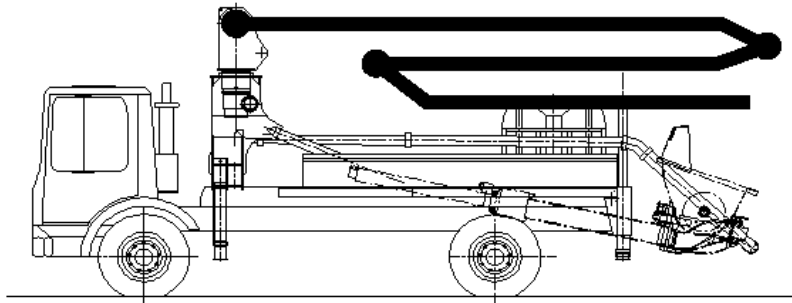
BOOM TYPE Classification



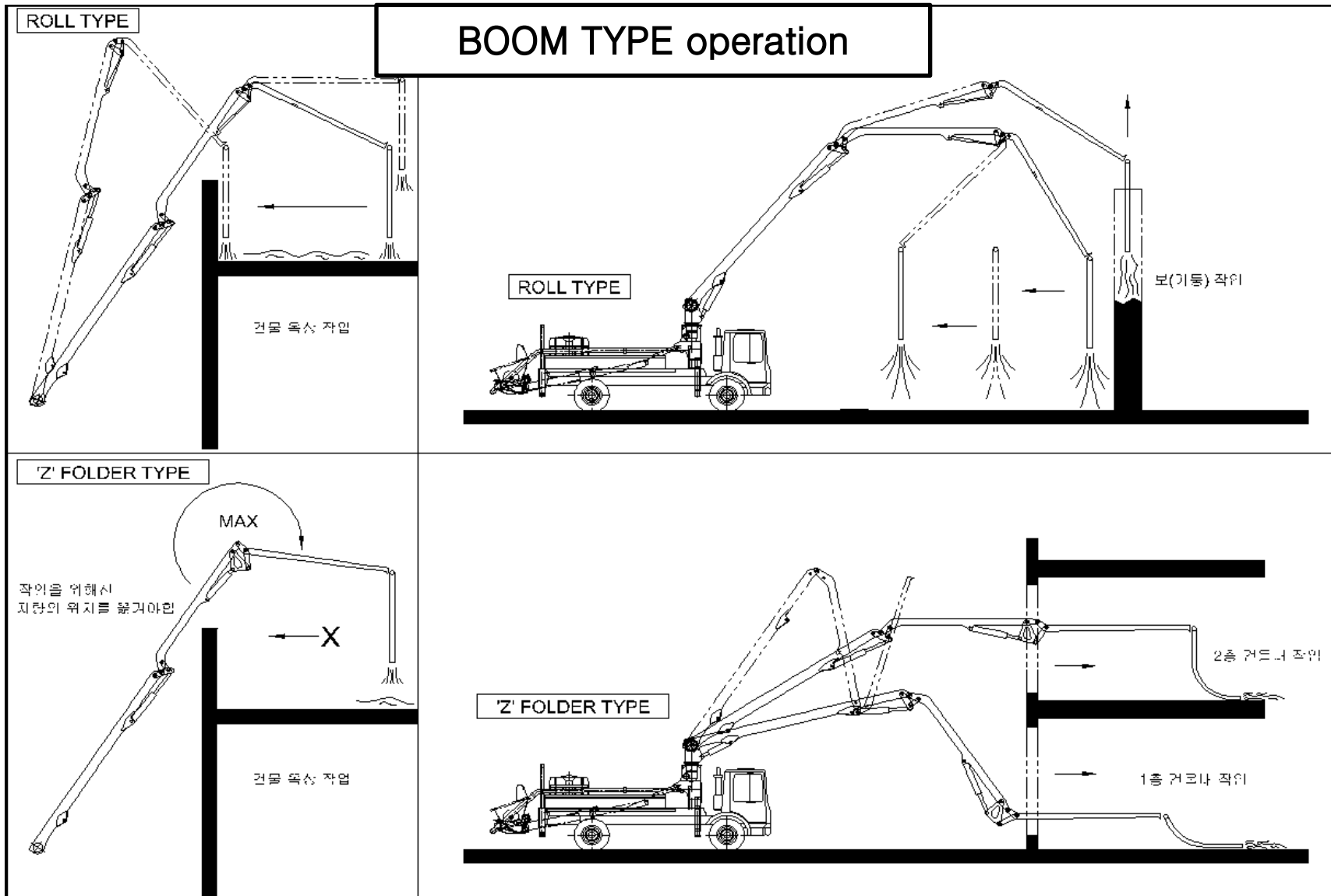
ROLL TYPE



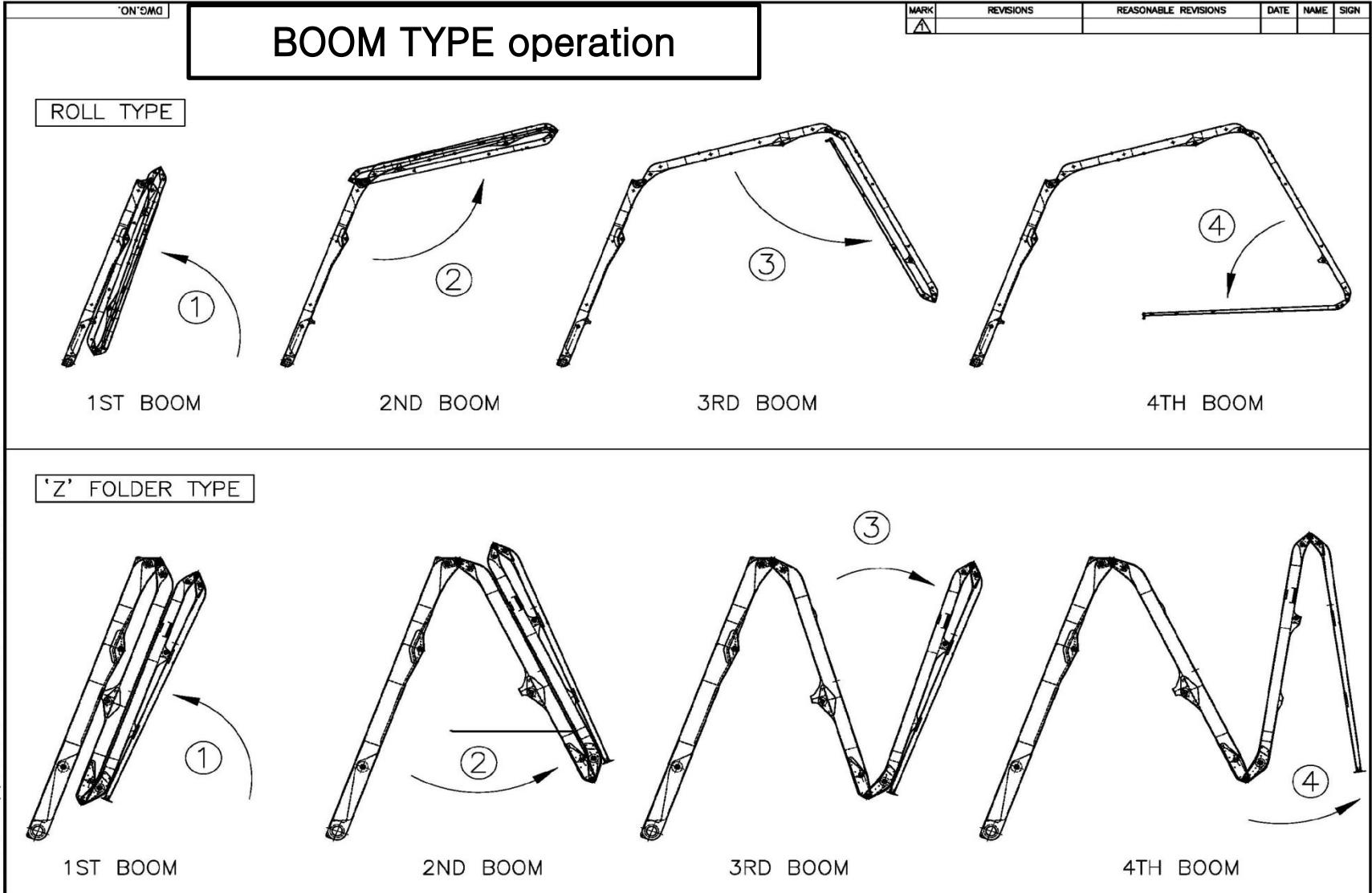
'Z' FOLDER TYPE



BOOM TYPE

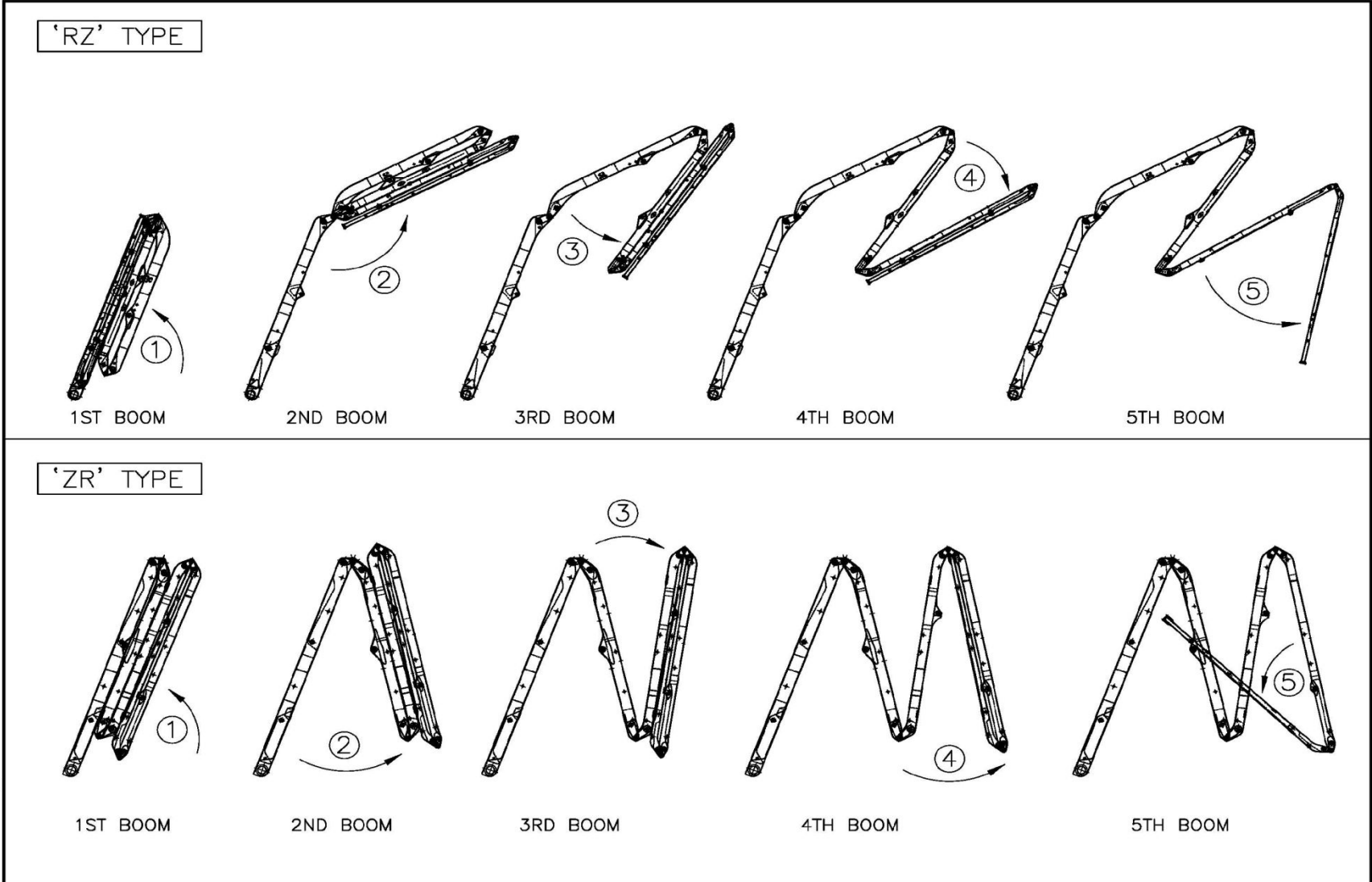


BOOM TYPE



본도면은 전진중공업(주)의 중요하고 자신으로 사정할의나 중요성이 무관하게는 항상 책임을 다한다.

BOOM TYPE



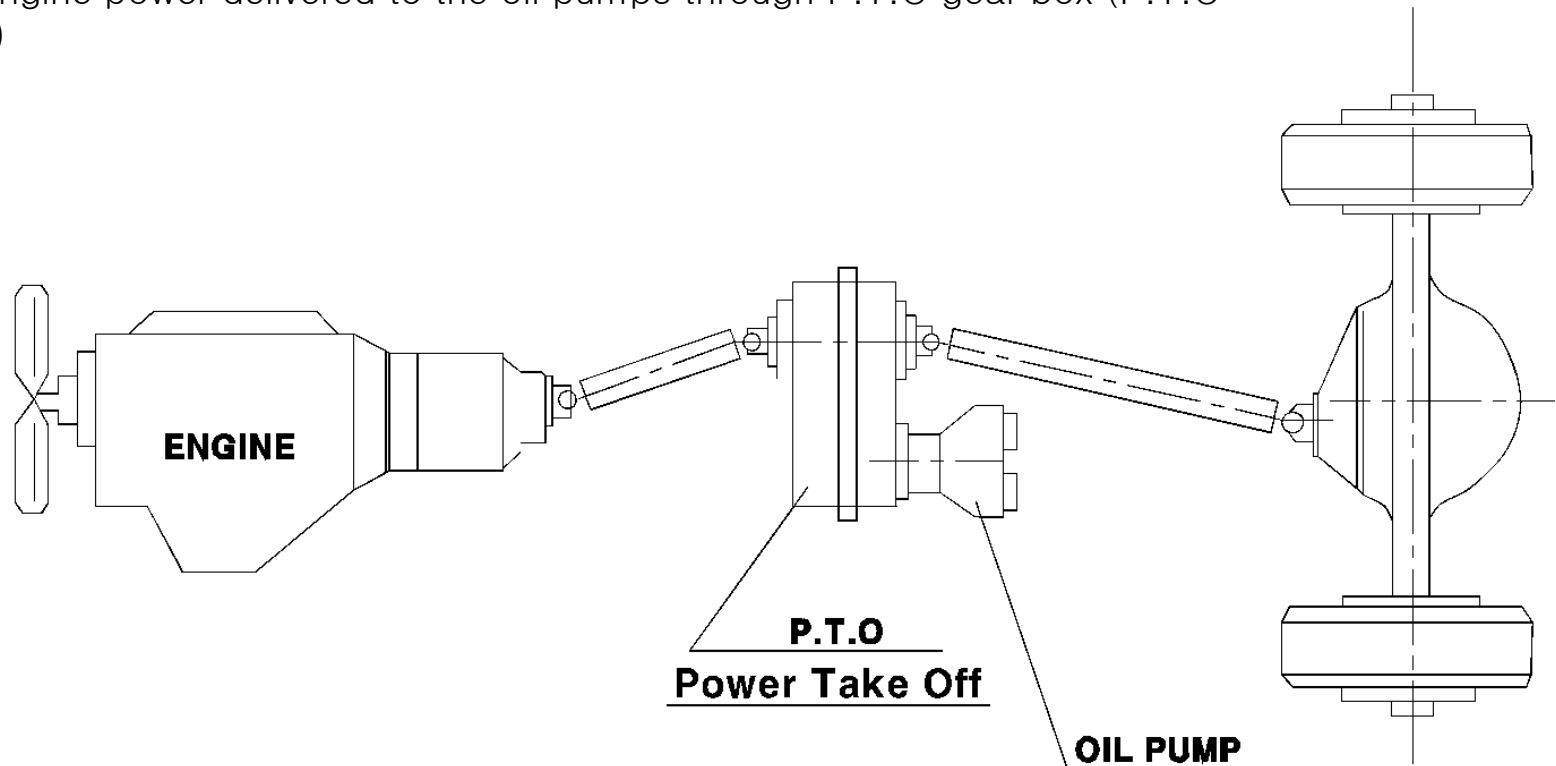
"본 도면은 진진중공업(주)의 중요한 재산으로 사생활이나 정보유출이 무안하며, 무단복제, 행사상 책임을 다합니다."

MAIN FUNCTION

P.T.O ON – OFF

OFF : Engine power delivered to the differential gear box of rear axle through propeller shaft. (DRIVE MODE)

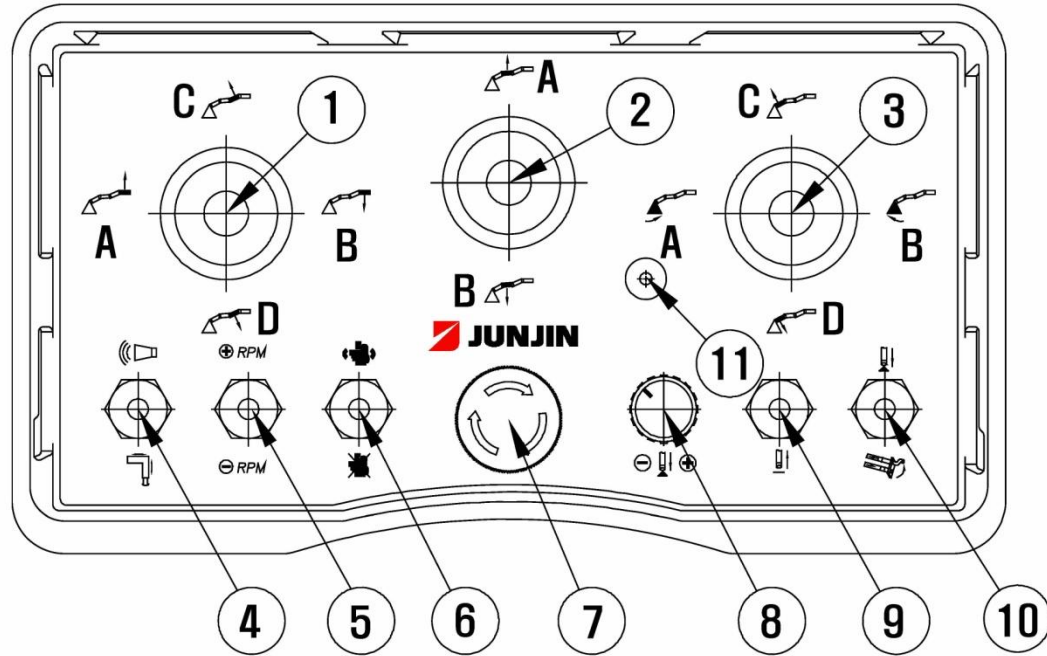
ON : Engine power delivered to the oil pumps through P.T.O gear box (P.T.O MODE)



■ MAIN FUNCTION

1. P .T. O ON/OFF
2. PUMPING ON/OFF
3. VOLUMN CONTROL, OIL PUMP VOLUMN
4. COOLING SYSTEM

■ MAIN FUNCTION



1,2,3 – Boom control lever

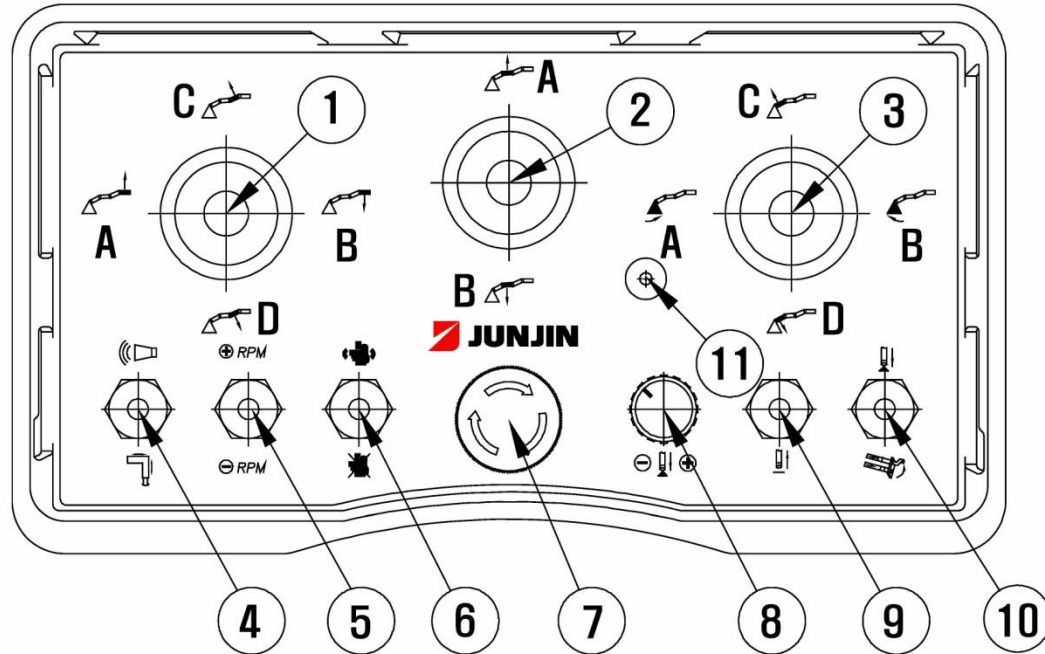
9 – Back pumping switch ON-“OFF”

4 – Outrigger, horn

10 – Pumping switch ON-“OFF”-ON

5 – Engine speed control switch : +increase/-reduce

MAIN FUNCTION

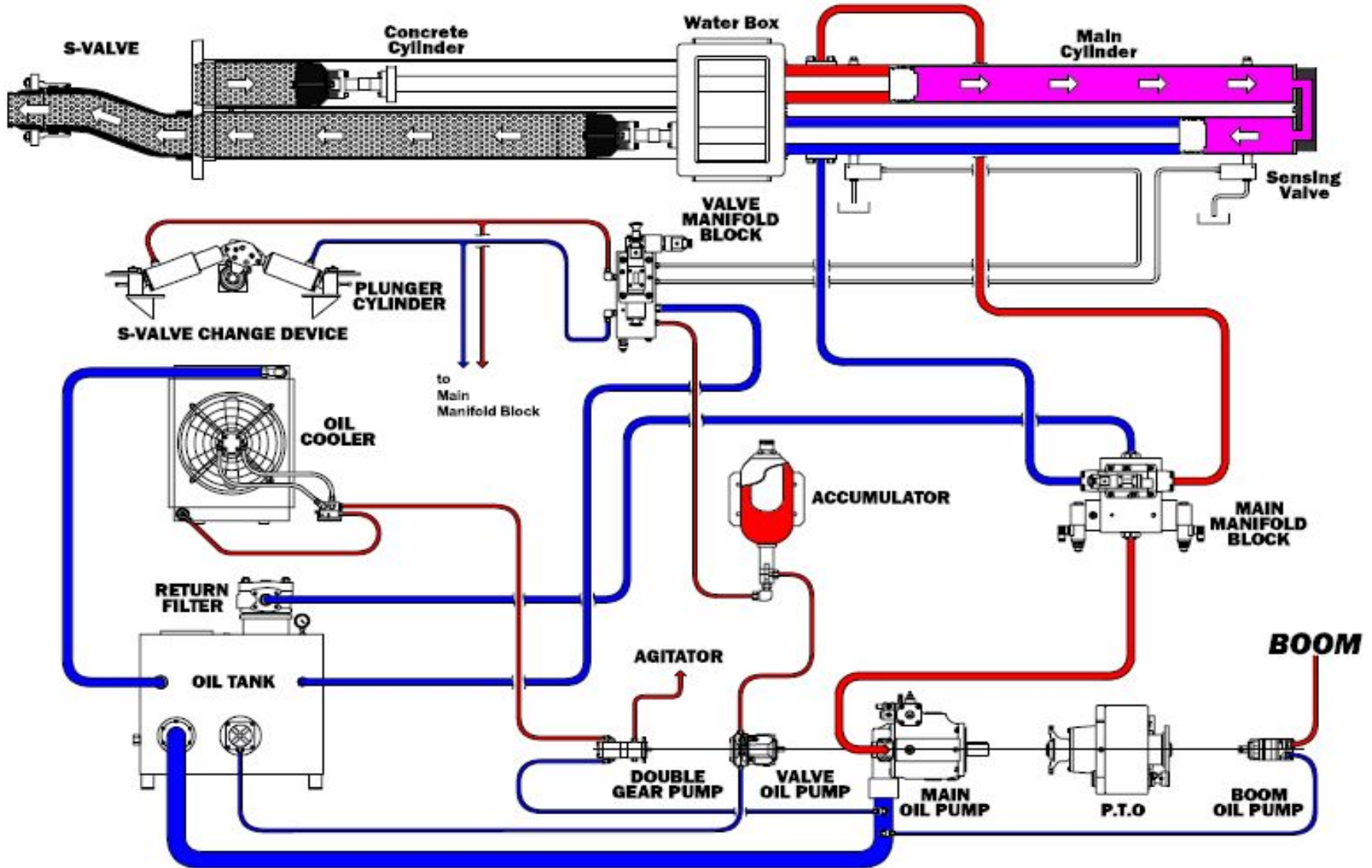


6 – Engine stop / start switch : ON-“OFF”-ON

7 – Emergency shot-down button : PUSH “ON-OFF”

8 – Output adjustment switch : +increase/-reduce

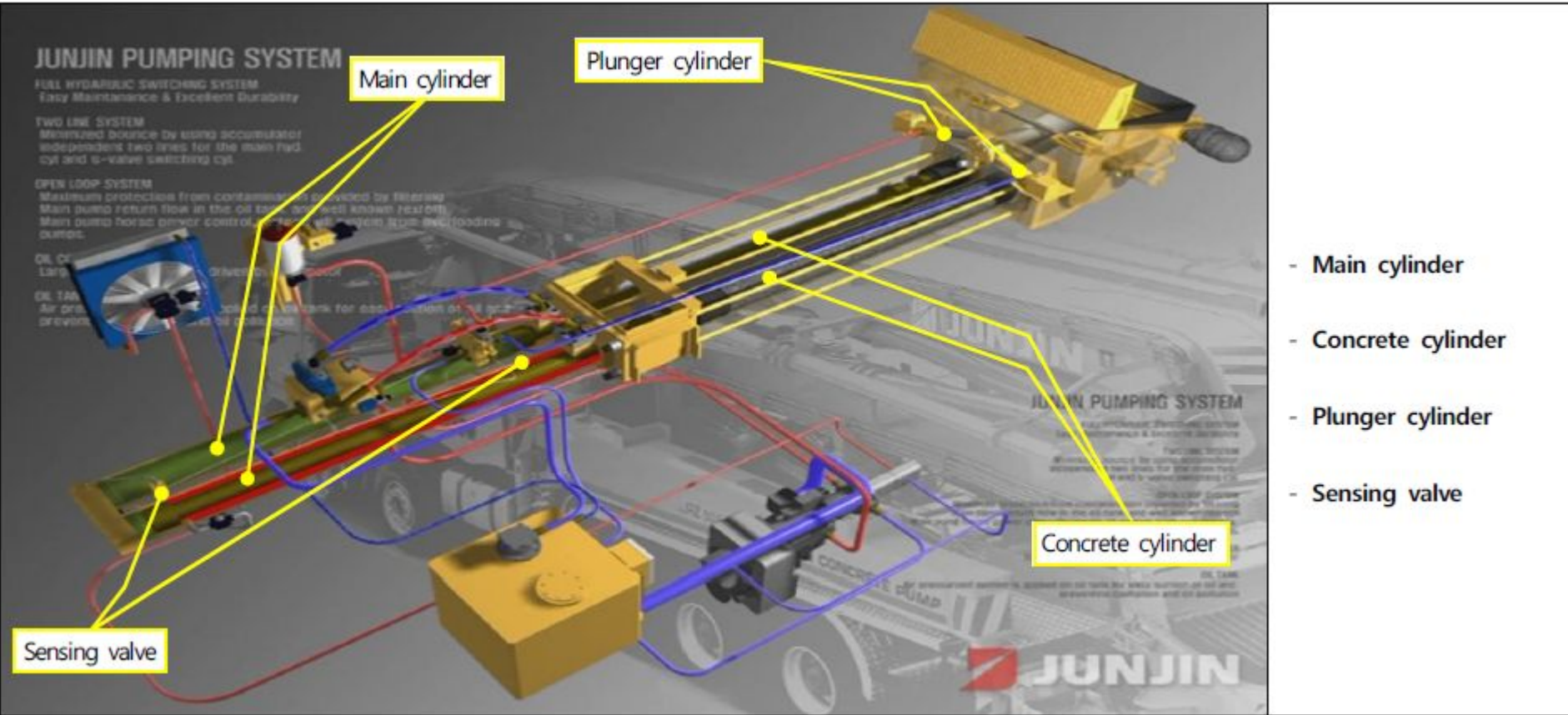
Concrete pumping system



■ Concrete pumping system

- ① RETURN FILTER : filtering returned oil to the TANK
- ② AGITATOR OIL PUMP : AGITATOR/OIL COOLER runs
- ③ VALVE OIL PUMP : In-charges S-VALVE switching
- ④ MAIN OIL PUMP : In-charges MAIN CYLINDER movement
- ⑤ P.T.O : deliver engine power to the pumping system ON/OFF
- ⑥ BOOM OIL PUMP : In-charges BOOM movement
- ⑦ ACCUMULATOR : accumulate hyd. Oil for fast S-VALVE switching
- ⑧ MAIN MANIFOLD BLOCK : controls MAIN CYLINDER direction
- ⑨ VALVE MANIFOLD BLOCK : controls S-VALVE direction
- ⑩ PLUNGER CYLINDER : Valve oil pump's actuator
- ⑪ OIL COOLER : cooling down the oil
- ⑫ SENSING VALVE : controls MAIN & VALVE manifold block oil flow direction

■ Concrete pumping system



■ Concrete pumping system

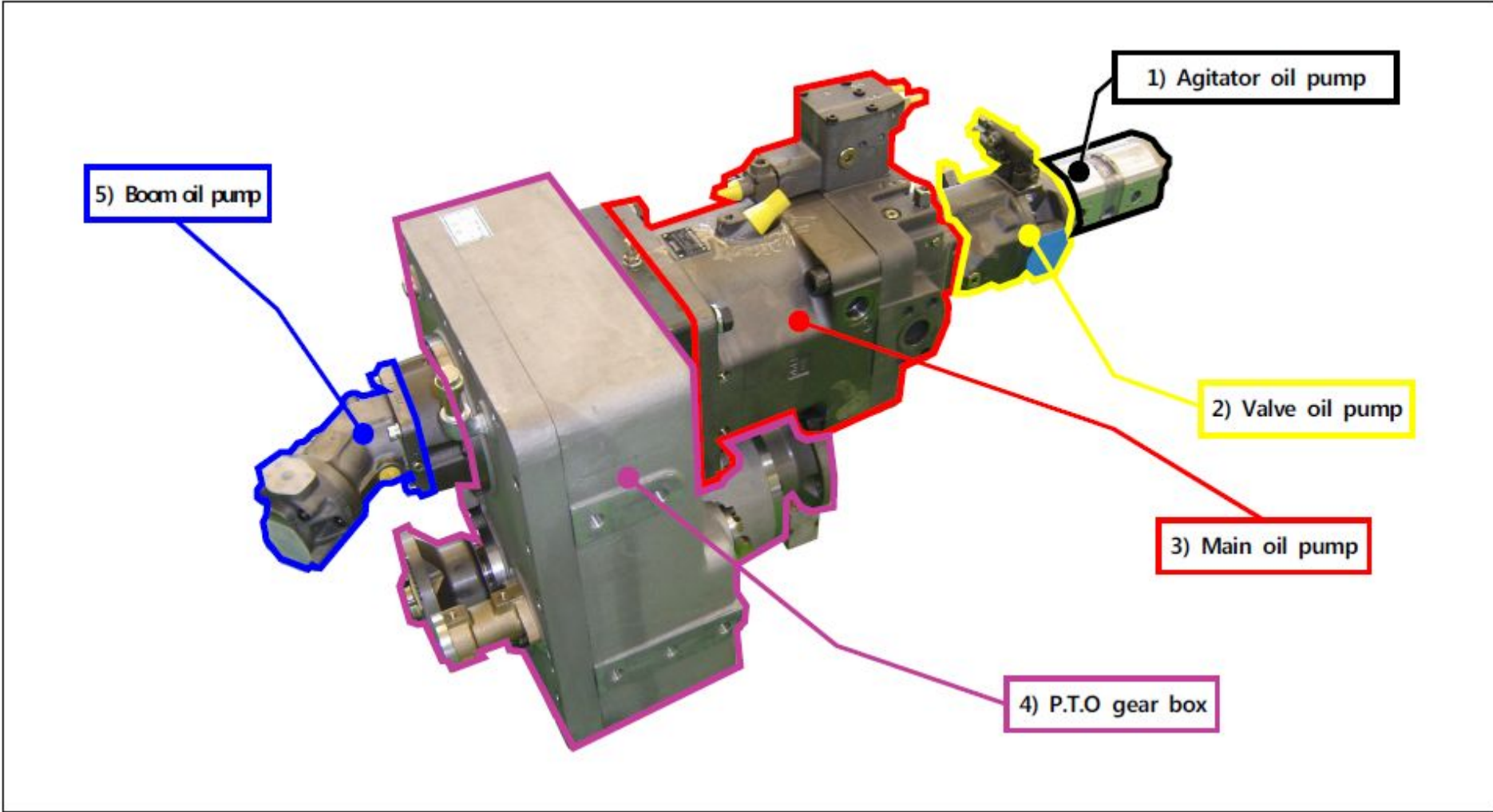


Sensing valve (#12)



Plunger cylinder (#10)

■ Concrete pumping system



■ Concrete pumping system



Valve oil pump (#3)



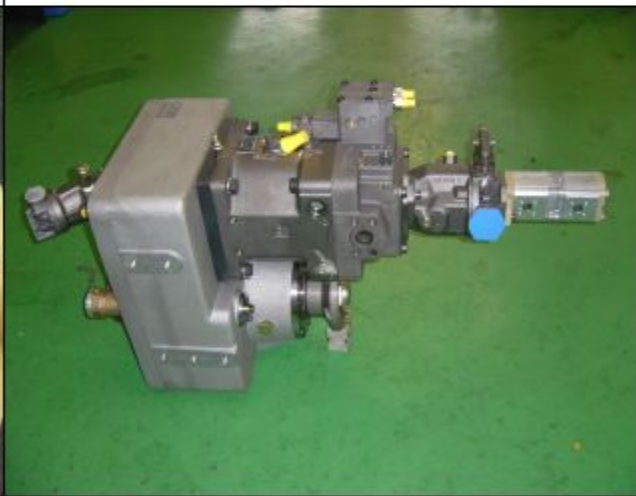
Main oil pump (#4)



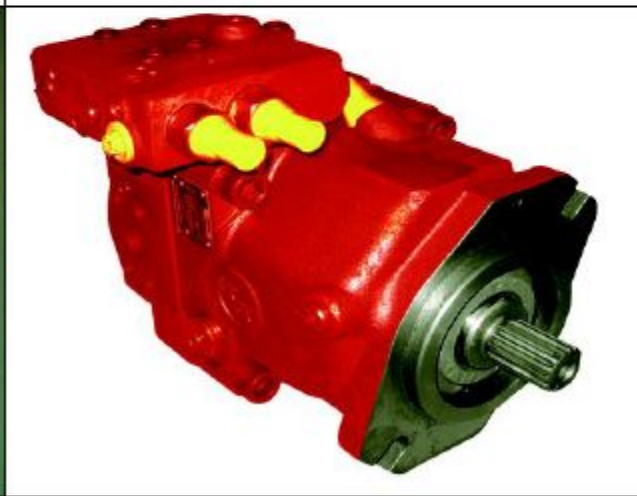
P.T.O gear box (#5)



Agitator oil pump (#2)



Completed (Assembly)



Boom oil pump (#6)

- Concrete pumping system



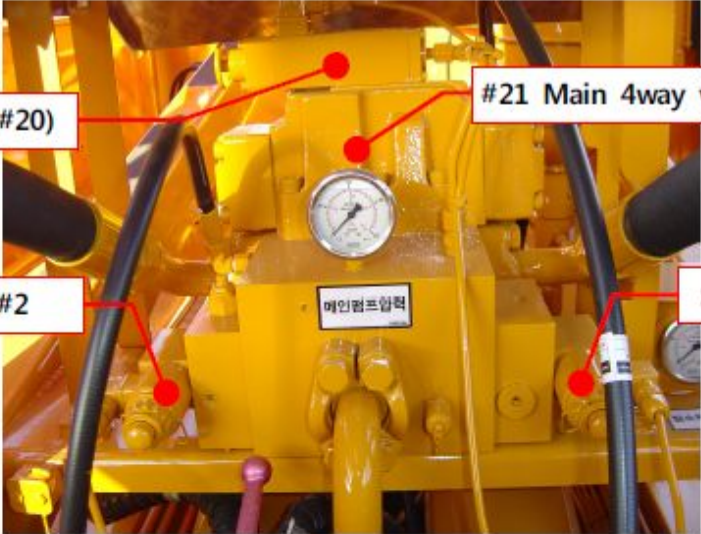
- Accumulator

Outvolume control valve
0 ~ 35BAR (#8)

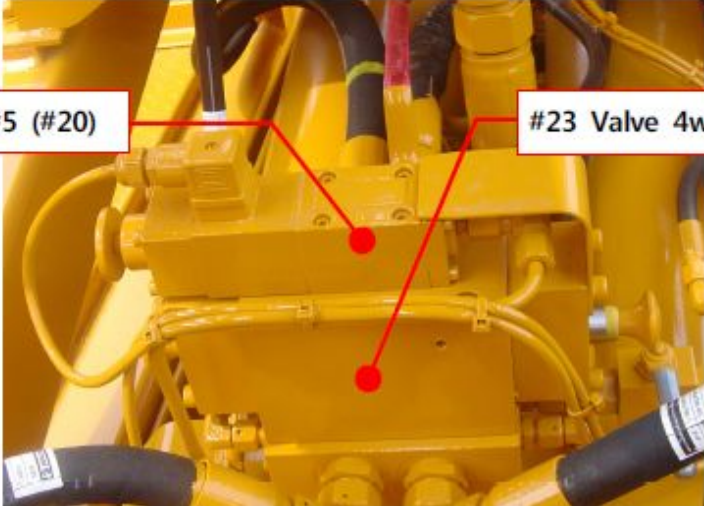


Reducing valve 40 BAR (#16)

Accumulator (#7)






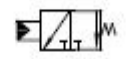

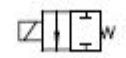

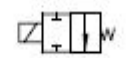

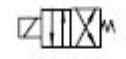

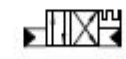


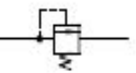

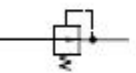



Main manifold block (#08)


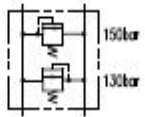


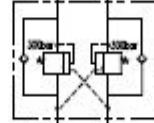


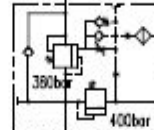


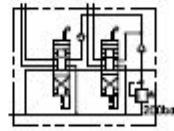
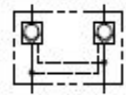


Valve manifold block (#09)

■ Basic of hydraulic (Symbol)

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	FIXED DISPLACEMENT PUMP		LOGIC VALVE
	VARIABLE DISPLACEMENT PUMP		RELIEF LOGIC VALVE
	HYD MOTOR		SENSING VALVE
	PRESSURE GAUGE		SOL. V/V (Normal close)
	STOP VALVE		SOL. V/V (Normal open)
	CHECK VALVE		SOL. V/V (Back pumping)
	PRESSURE TEST COUPLING		4-WAY V/V(HYD. OPERATED)
	SHUTTLE VALVE		4-WAY V/V(HYD. & MANUAL OPERATED)
	RELIEF VALVE		HYD CYLINDER
	REDUCING VALVE		PLUNGER CYLINDER

■ Basic of hydraulic (Symbol)

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	OIL COOLER		DOUBLE RELIFE VALVE (BRAKE VALVE)
	FILTER		
	HIGH PRESSURE FILTER		COUNTER BALANCE V/V FOR TURNING
	ACCUMULATOR		
	ORIFICE		LOAD HOLDING VALVE
	OIL TANK		
	TURNING CYLINDER		CONTROL VALVE(MANUAL)
	PILOT CHECK VALVE		

■ Hydraulic circuit

■ PUMPING

1. Pumping ON / OFF

- Safety in pumping STOP
- Holding (pumping STOP)

2. PUMPING (MAIN CYLINDER RECIPROCATING ACTION)

- SENSING VALVE, MAIN CYLINDER
- BACK PUMPING
- PLUNGER CYLINDER

3. TWO LINE system

- Accumulator, Valve oil pump
- 250BAR Relief valve, 190BAR Relief valve
- Volume control

4. ETC system

- Oil cooler
- Agitator control valve, Water pump
- Filter system

■ Hydraulic circuit

■ BOOM & OUTRIGGER

1. Boom control

- Outrigger switch - Boom / Outrigger switching
- 3way compensator
- 2way compensator

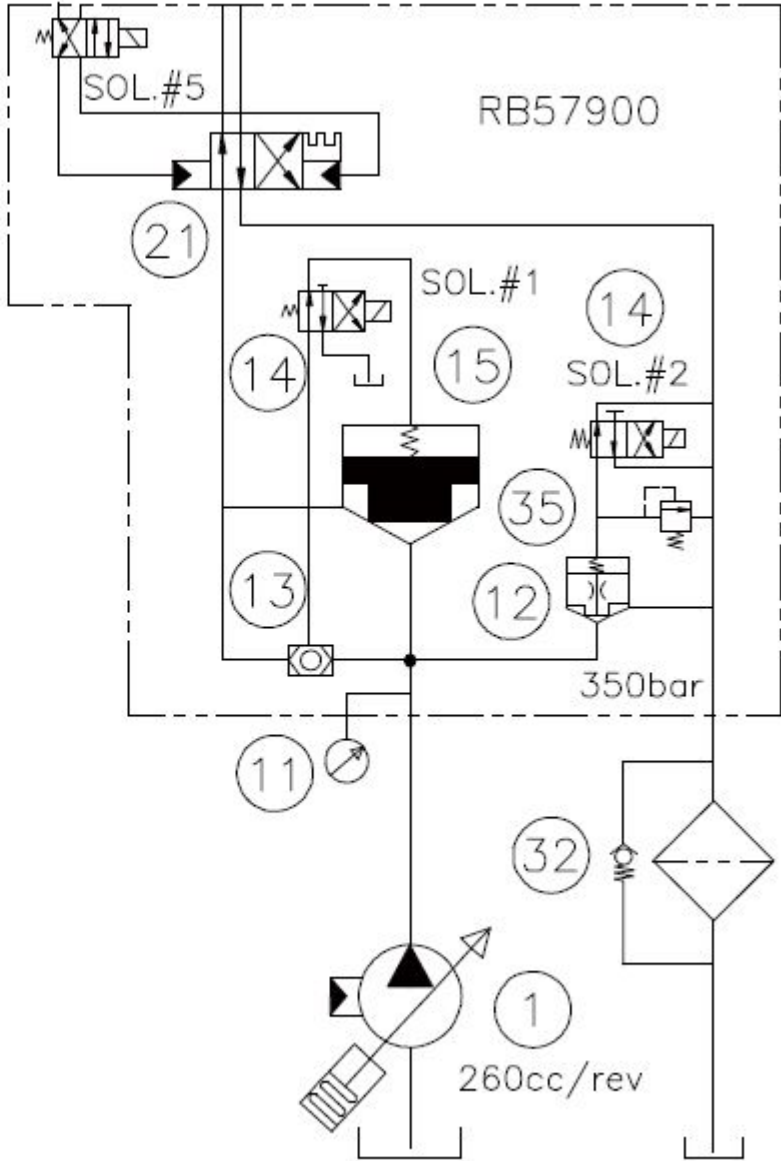
2. Load holding valve

- Boom
- Turning

Hydraulic circuit

1. Pumping ON / OFF

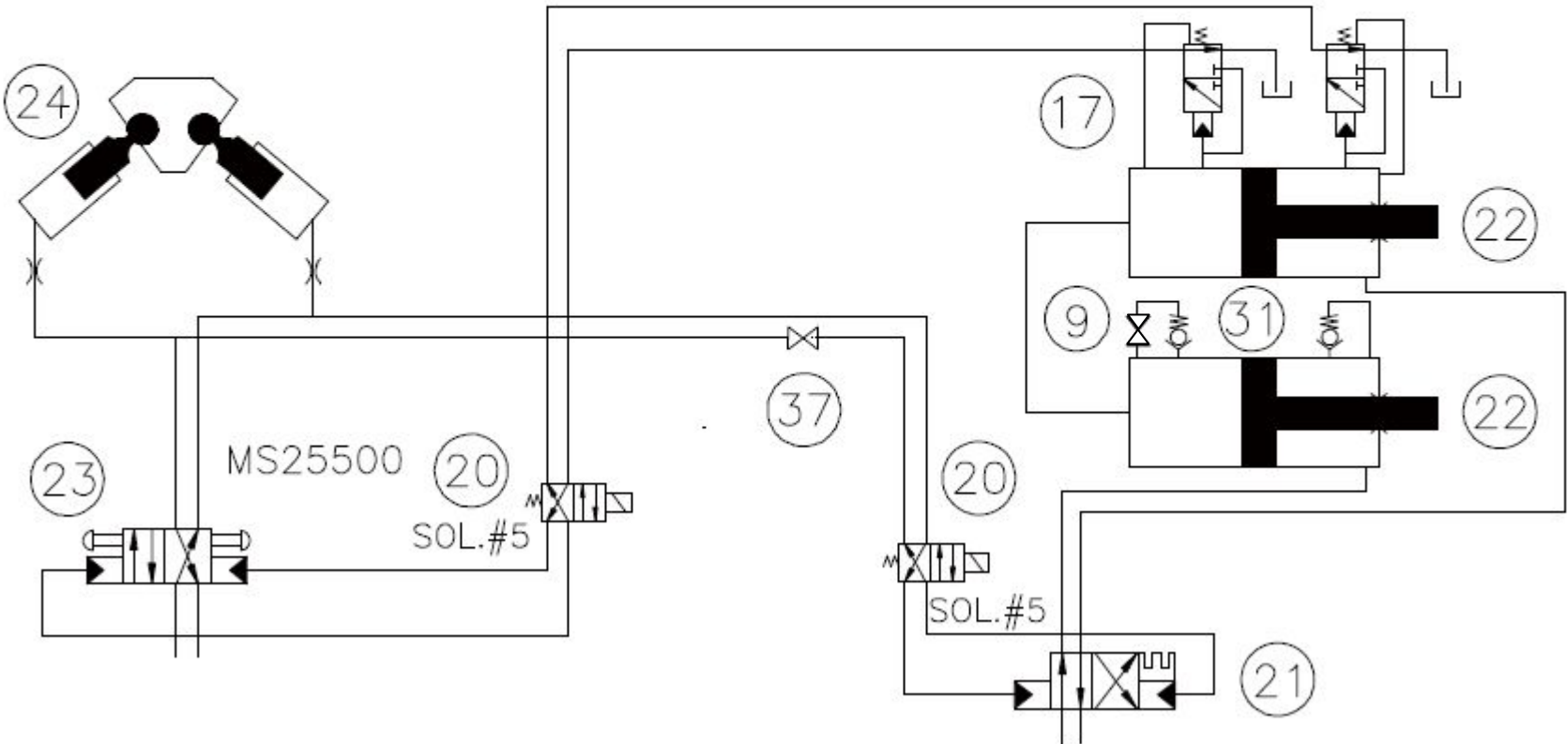
- Safety pumping STOP
- Holding (pumping STOP)



Hydraulic circuit

2. Pumping

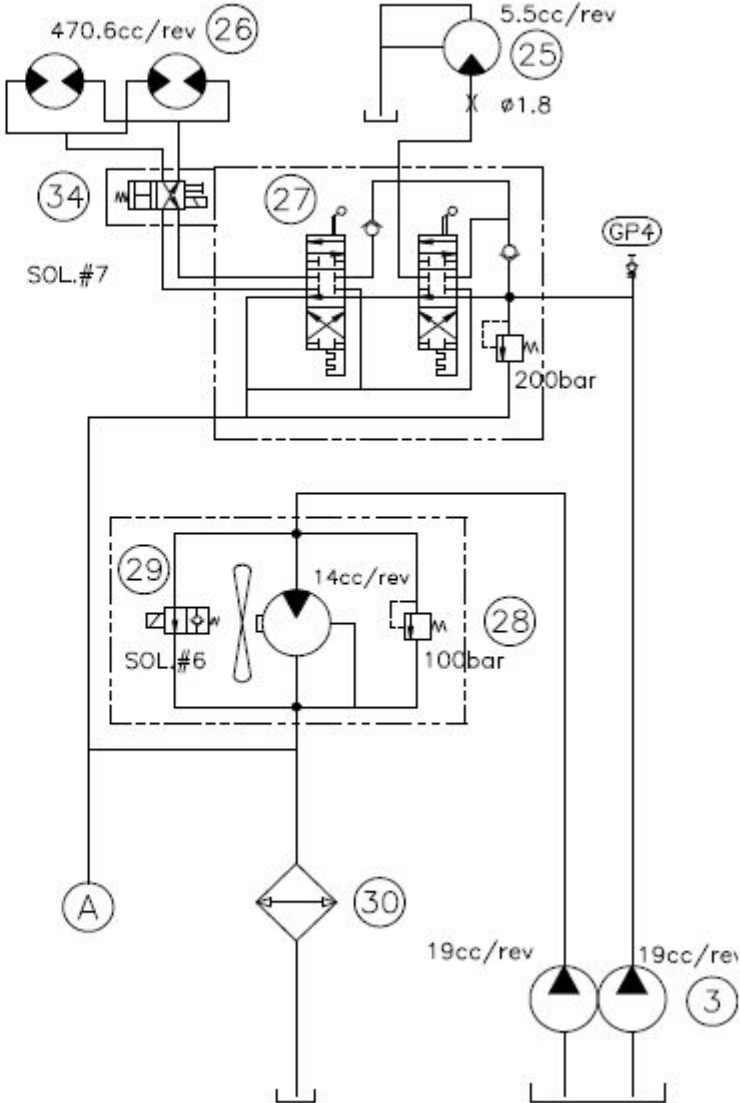
- Pumping (Main cylinder reciprocating)
- Sensing valve, Main cylinder, Plunger cylinder
- Back pumping



Hydraulic circuit

4. ETC system

- Oil cooler
- Agitator control valve
- Water pump
- Filter system



Hydraulic components

Hydraulic Components

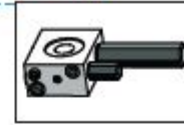
Oil Cooler & Radiator



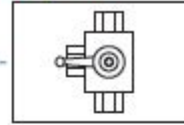
HYD. Filters



Load holding VV



3 Way ball VV



Main Cyl.



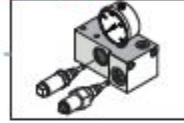
Sensing VV



Accumulator



Reducing VV



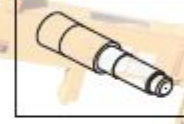
Main oil pump



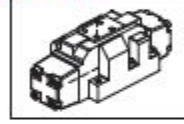
Valve oil pump



Shuttle V/V



Main 4 Way V/V



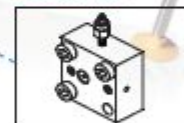
P. T. O BOX



Boom oil pump



350 Bar Relief VV



Logic V/V



Agitator control VV



Agitator pump



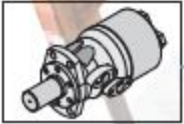
250 Bar Relief VV



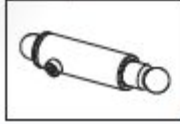
Valve 4 Way VV



Agitator motor



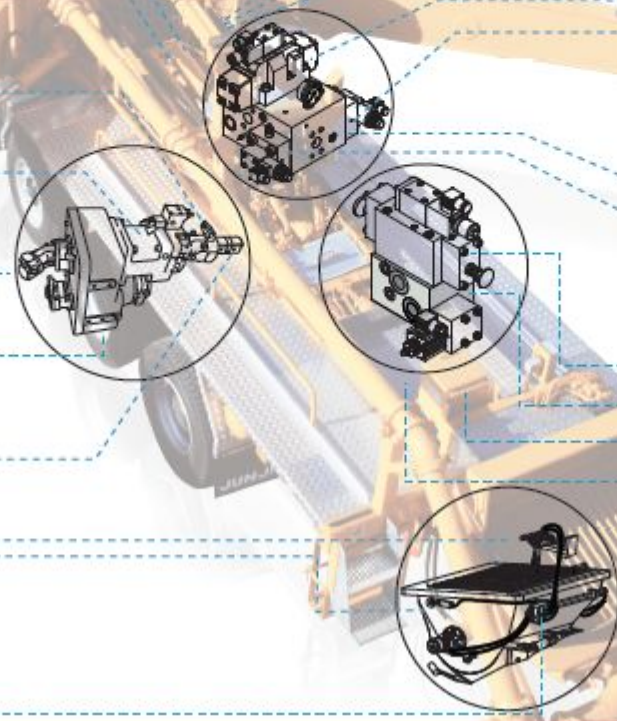
Plunger Cyl.



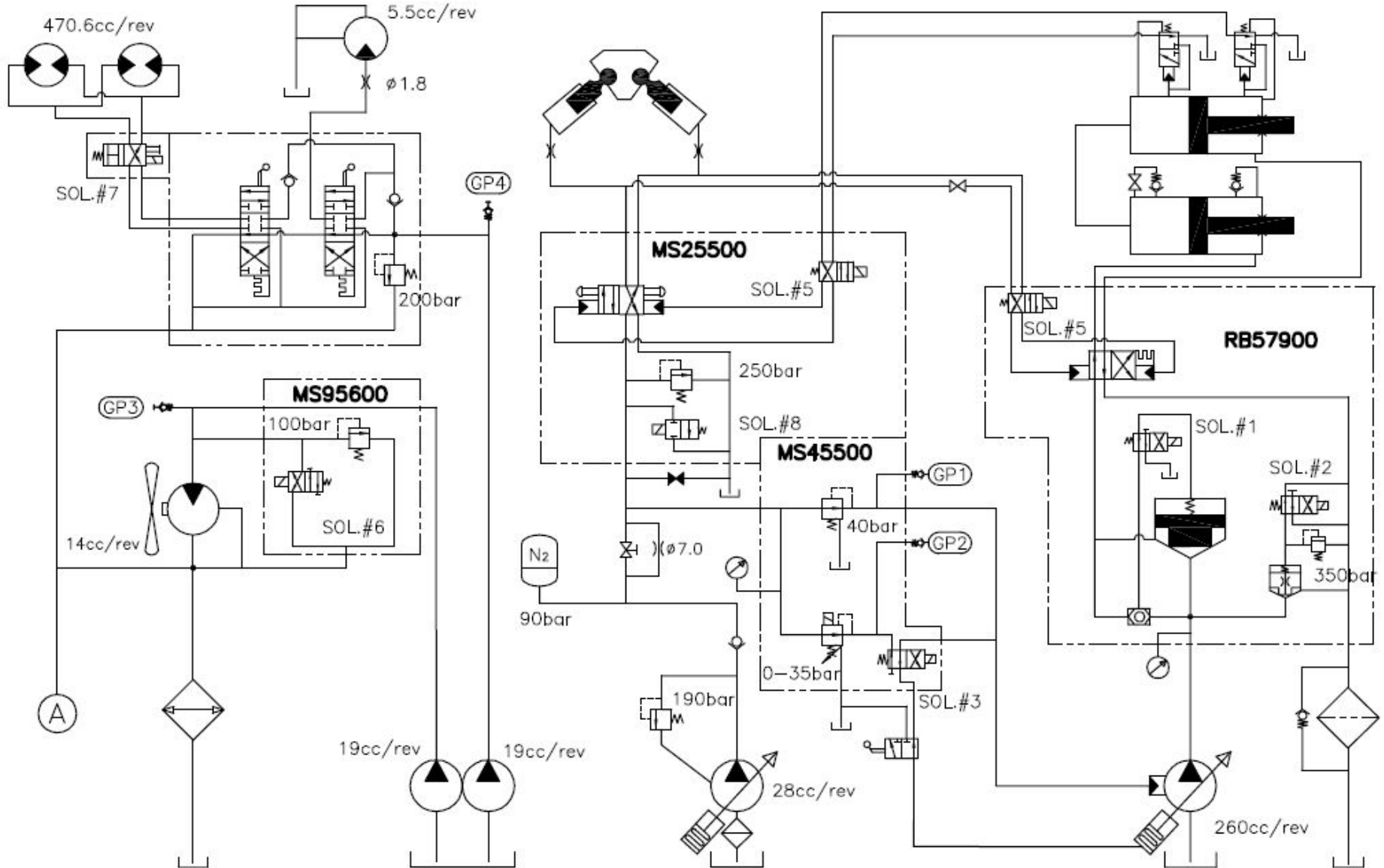
Water pump



Grease pump

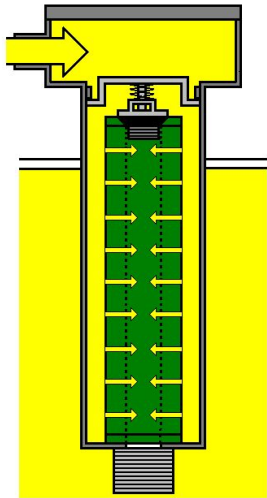


JUNJIN Hydraulic circuit

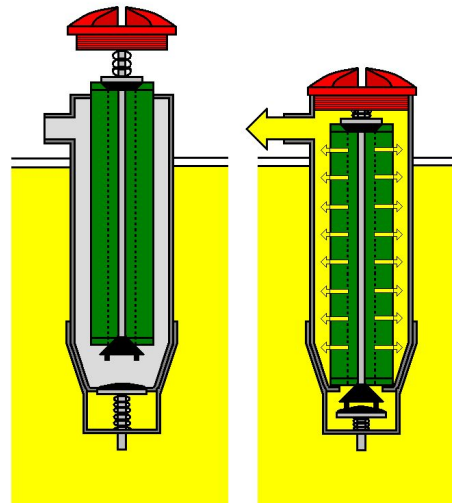


Filter system

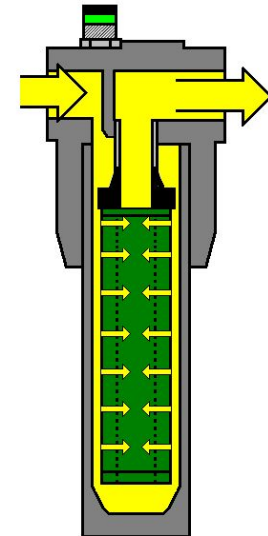
① Main filter



② Suction filter



③ Pressure filter



④ Suction strainer

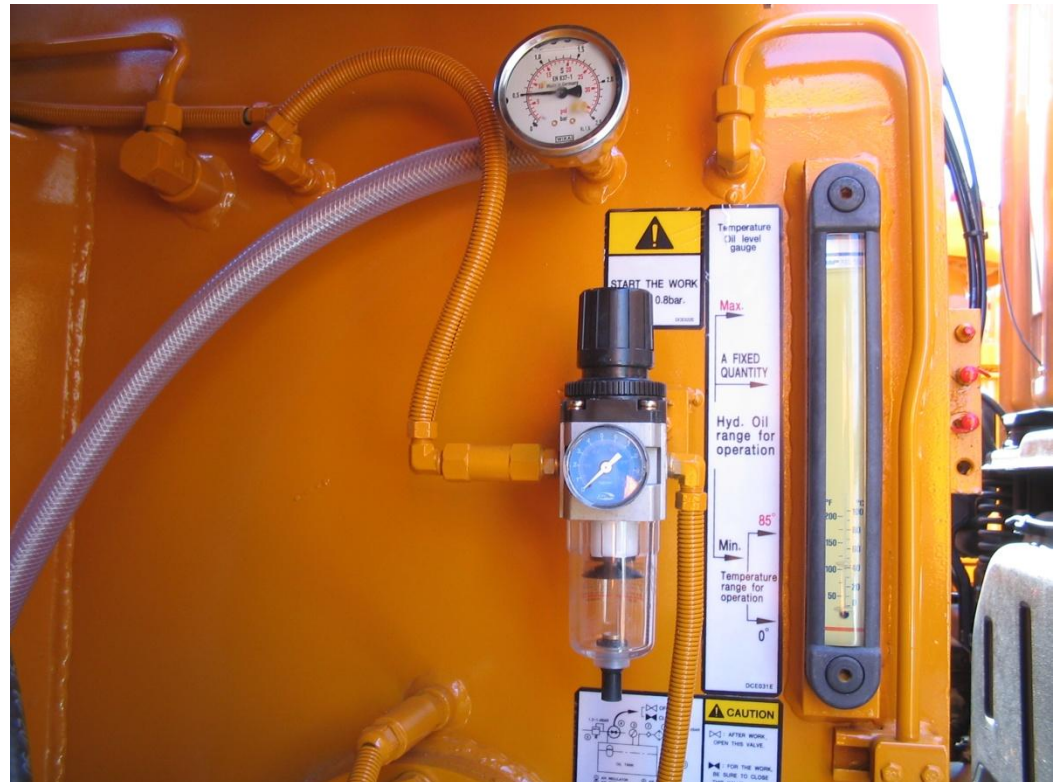


■ Air pressing

① Air pressing device

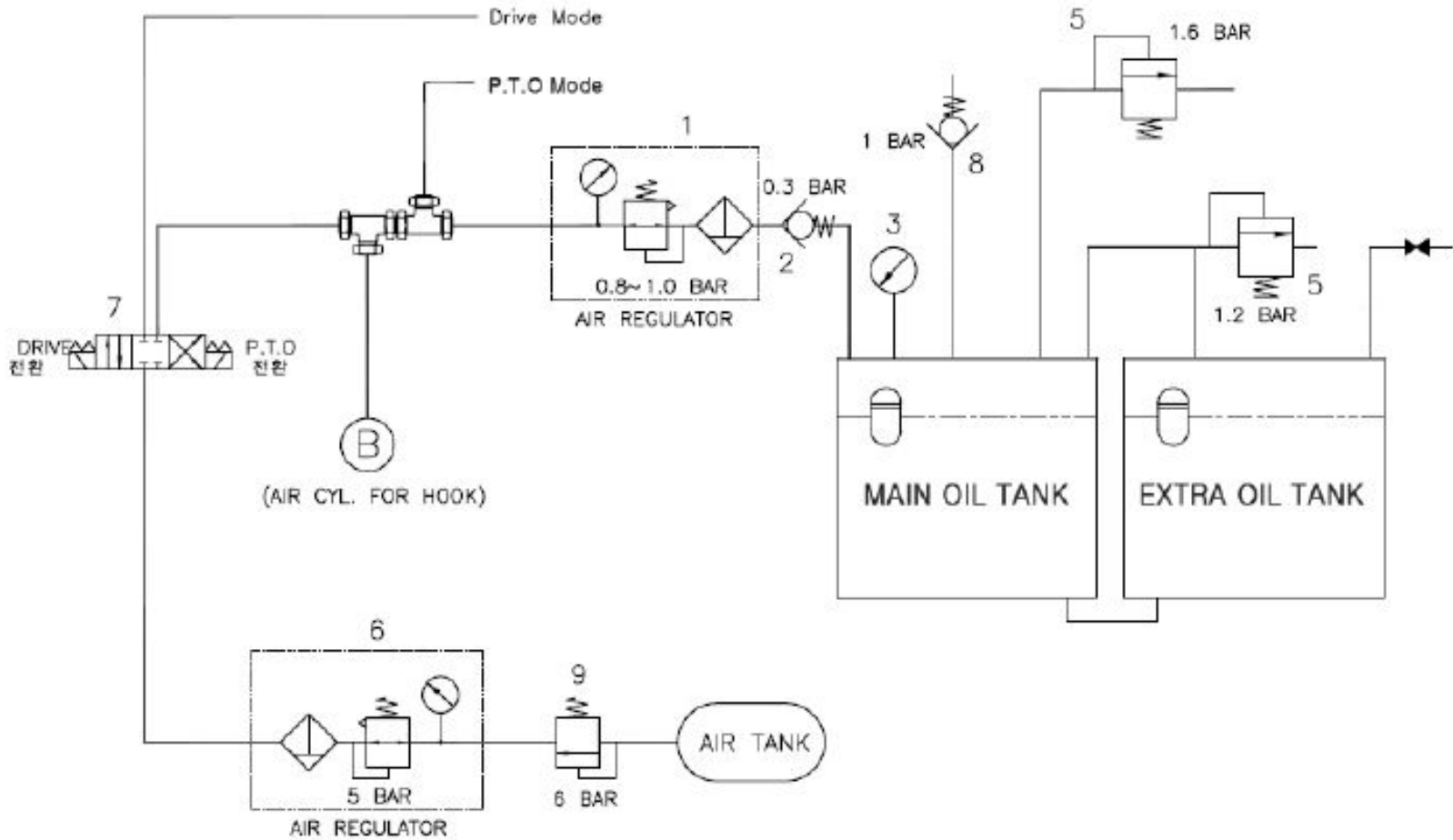
– Air regulator (5BAR / 1BAR)

– Air check valve

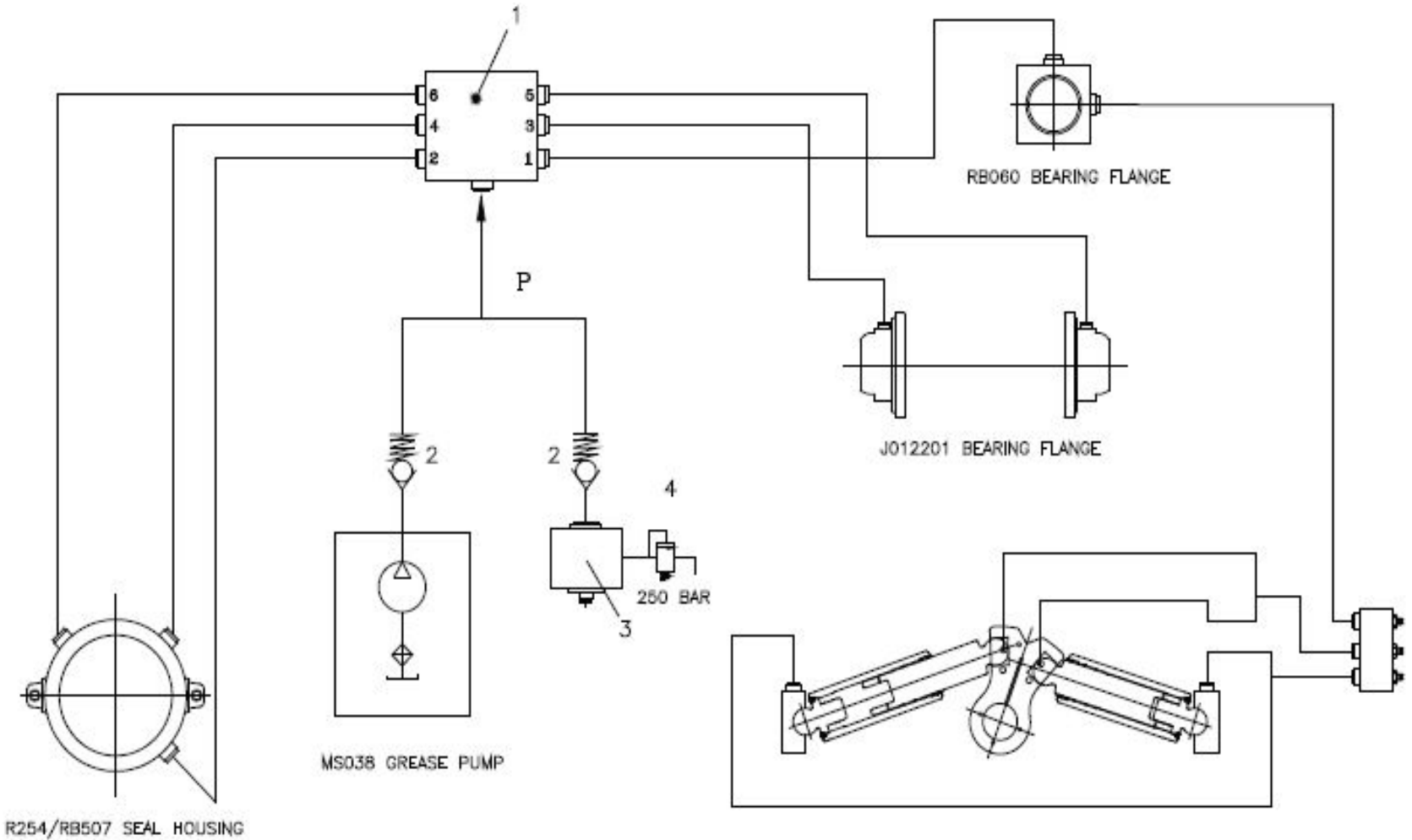


■ Air pressing

② P.T.O changing



■ Grease system



Thank you!