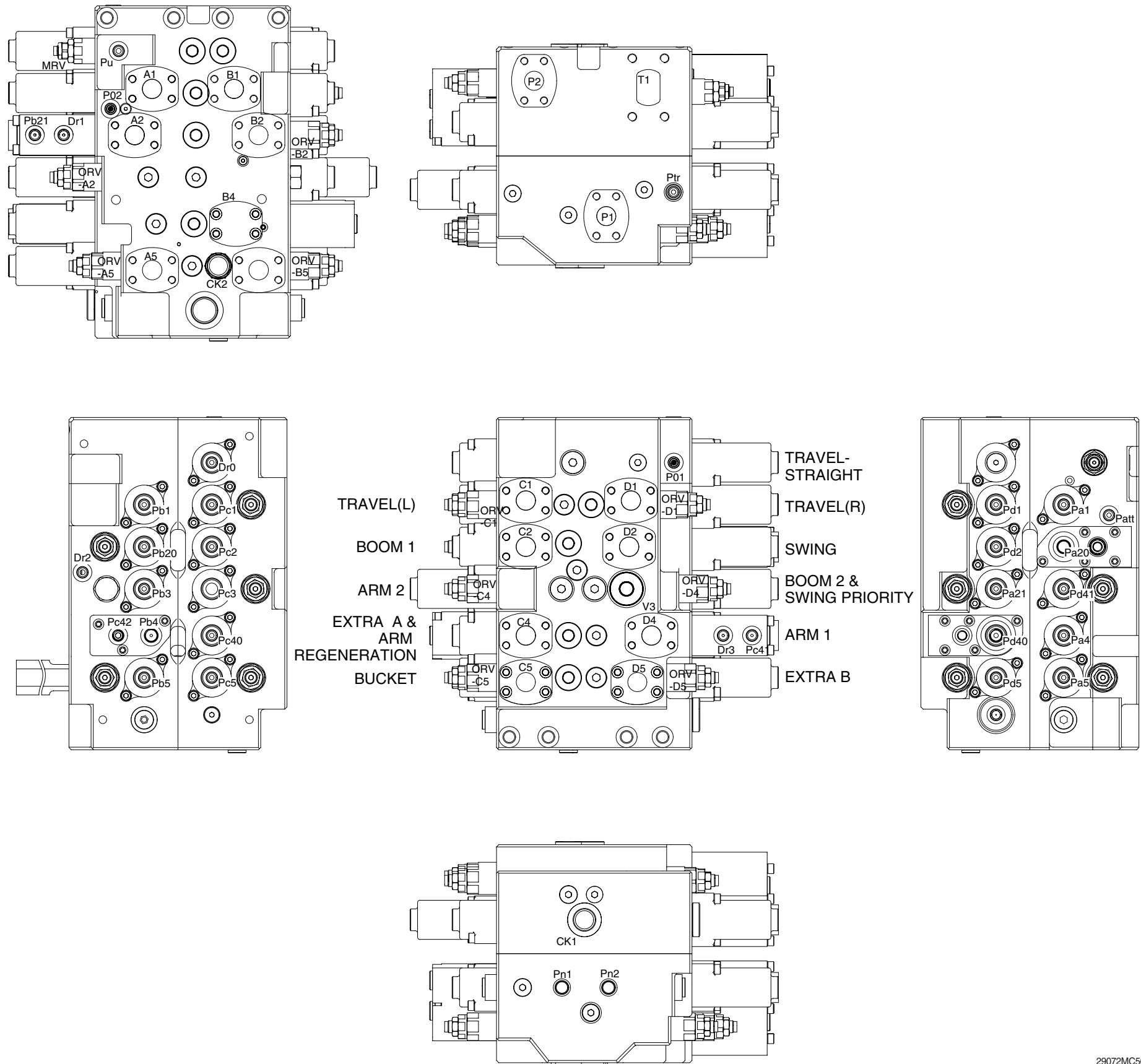


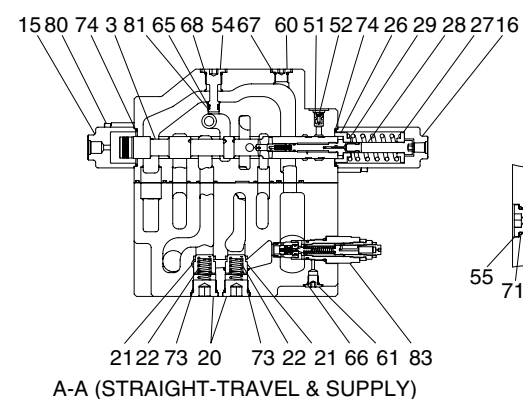
GROUP 2 MAIN CONTROL VALVE

1. STRUCTURE

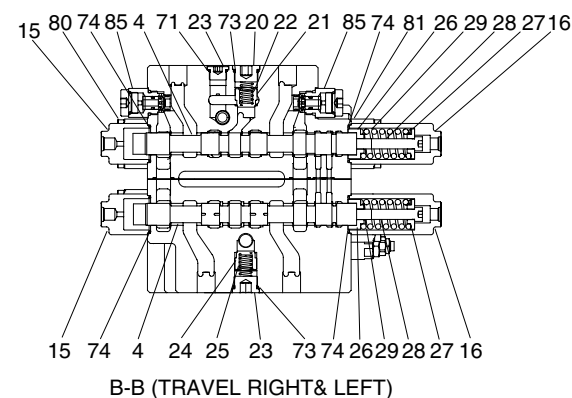
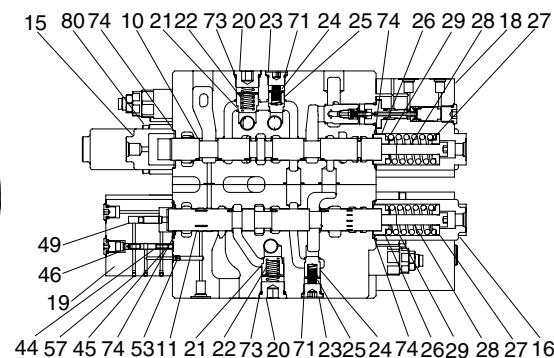


Mark	Port name	Port size	Tightening torque
Rs	Make up for swing motor	G1	20~25kgf · m (145~180lbf · ft)
Patt Pb21 Pcb Pd40 Pd41 Po1 Po2 Ptr Dr1 Dr2 Dr3	Auto idle-attachment Lock valve pilot port(Boom) Bucket in confluence port Arm out pilot port Arm out confluence pilot port Pilot pressure Pilot pressure Auto idle-travel Drain port Drain port Drain port	G1/4	3.5~3.9kgf · m (25.3~28.2lbf · ft)
Ck1 Ck2	Bucket confluence Bucket confluence	G3/4	17~19kgf · m (123~137.4lbf · ft)
Pa1 Pb1 Pc1 Pd1 Pa20 Pa21 Pb20 Pc2 Pd2 Pb3 Pc3 Pa4 Pb4 Pc40 Pc41 Pc42 Pa5 Pb5 Pc5 Pd5 Po Pu Dr0 Pn1 Pn2	Travel pilot port-LH(FW) Travel pilot port-LH(BW) Travel pilot port-RH(BW) Travel pilot port-RH(FW) Boom up pilot port Boom up confluence pilot port Boom down pilot port Swing pilot port(LH) Swing pilot port(RH) Arm in confluence pilot port Swing priority pilot port Option A pilot port(Breaker) Arm in regeneration cut port Arm in pilot port Lock valve pilot port(Arm) Arm in regen-cut signal selector port Bucket in pilot port Bucket out pilot port Option B pilot port Option B pilot port Pilot pressure port Main relief pressure up port Drain port Negative control signal port(P1 port side) Negative control signal port(P2 port side)	G3/8	7~8kgf · m (50.6~57.8lbf · ft)
A1 B1 C1 D1 A2 B2 C2 D2 B4 C4 D4 A5 B5 C5 D5 P1 P2	Travel motor port-LH(FW) Travel motor port-LH(BW) Travel motor port-RH(BW) Travel motor port-RH(FW) Boom up port Boom down port Swing motor port(LH) Swing motor port(RH) Option A port(Breaker) Arm in port Arm out port Bucket in port Bucket out port Option B port Option B port Pump port(P1 side) Pump port(P2 side)	SAE 5000, 1	7.5~9.2kgf · m (54.2~66.5lbf · ft)
T1	Return port	SAE 3000, 2 (M12)	6.4~8.6kgf · m (46.2~62.2lbf · ft)

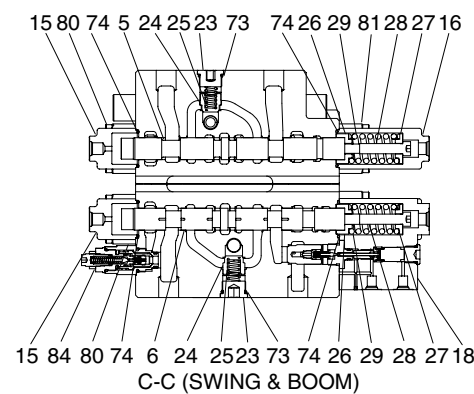
29072MC50



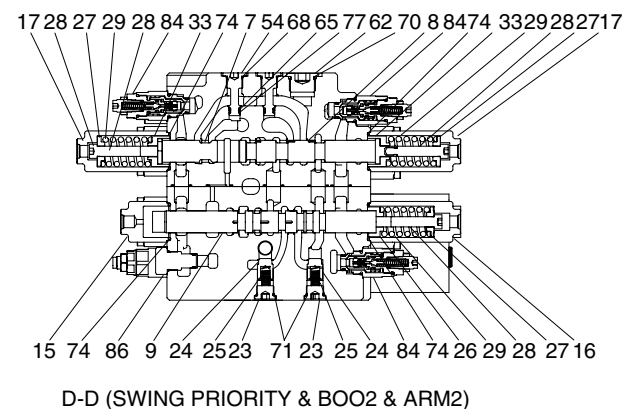
A-A (STRAIGHT-TRAVEL & SUPPLY)



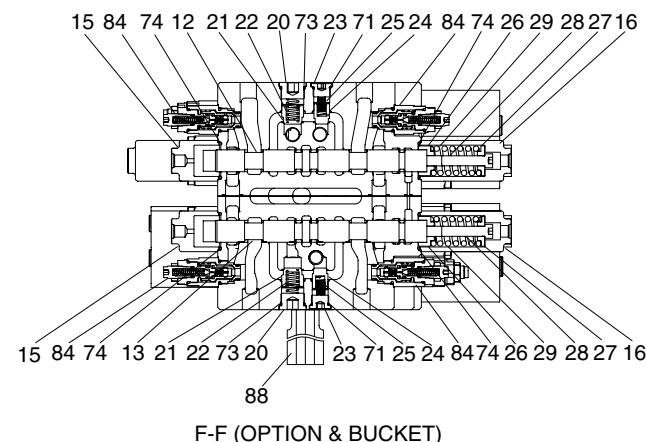
B-B (TRAVEL RIGHT & LEFT)



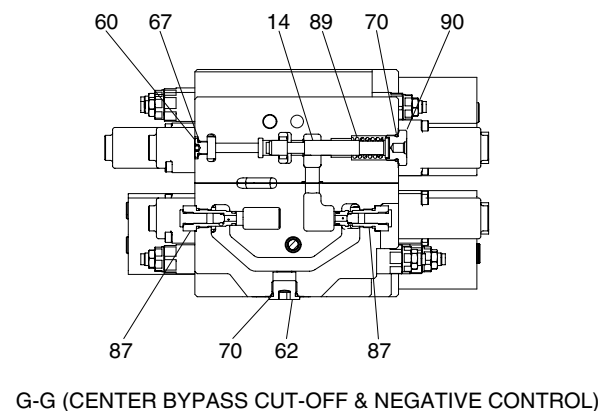
C-C (SWING & BOOM)



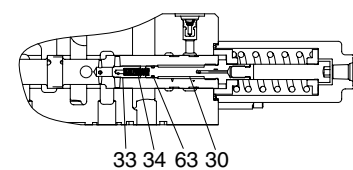
D-D (SWING PRIORITY & BOO2 & ARM2)



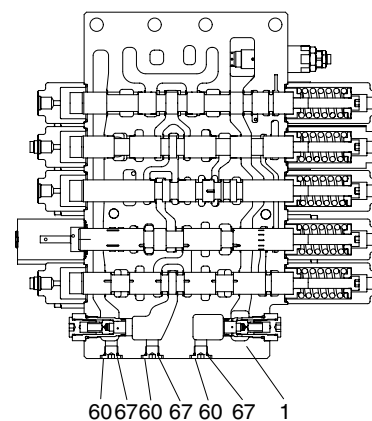
F-F (OPTION & BUCKET)



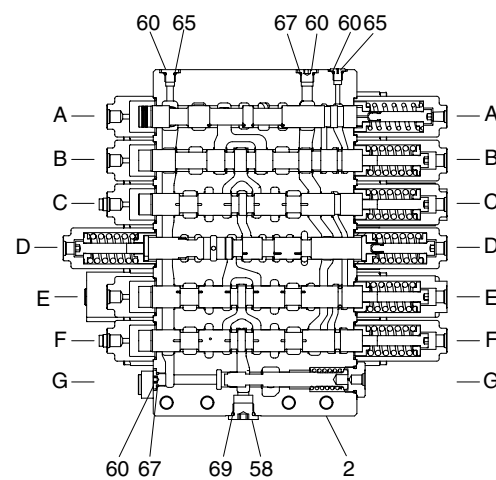
G-G (CENTER BYPASS CUT-OFF & NEGATIVE CONTROL)



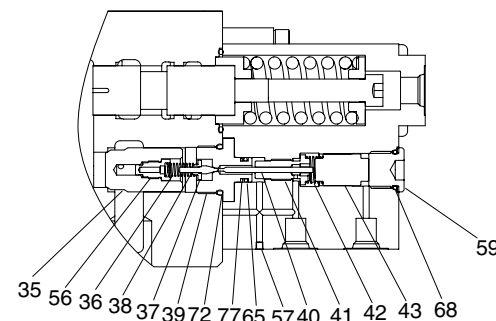
STRAIGHT-TRAVEL SPOOL DETAIL



P1 BLOCK SPOOL SECTION



P2 BLOCK SPOOL SECTION



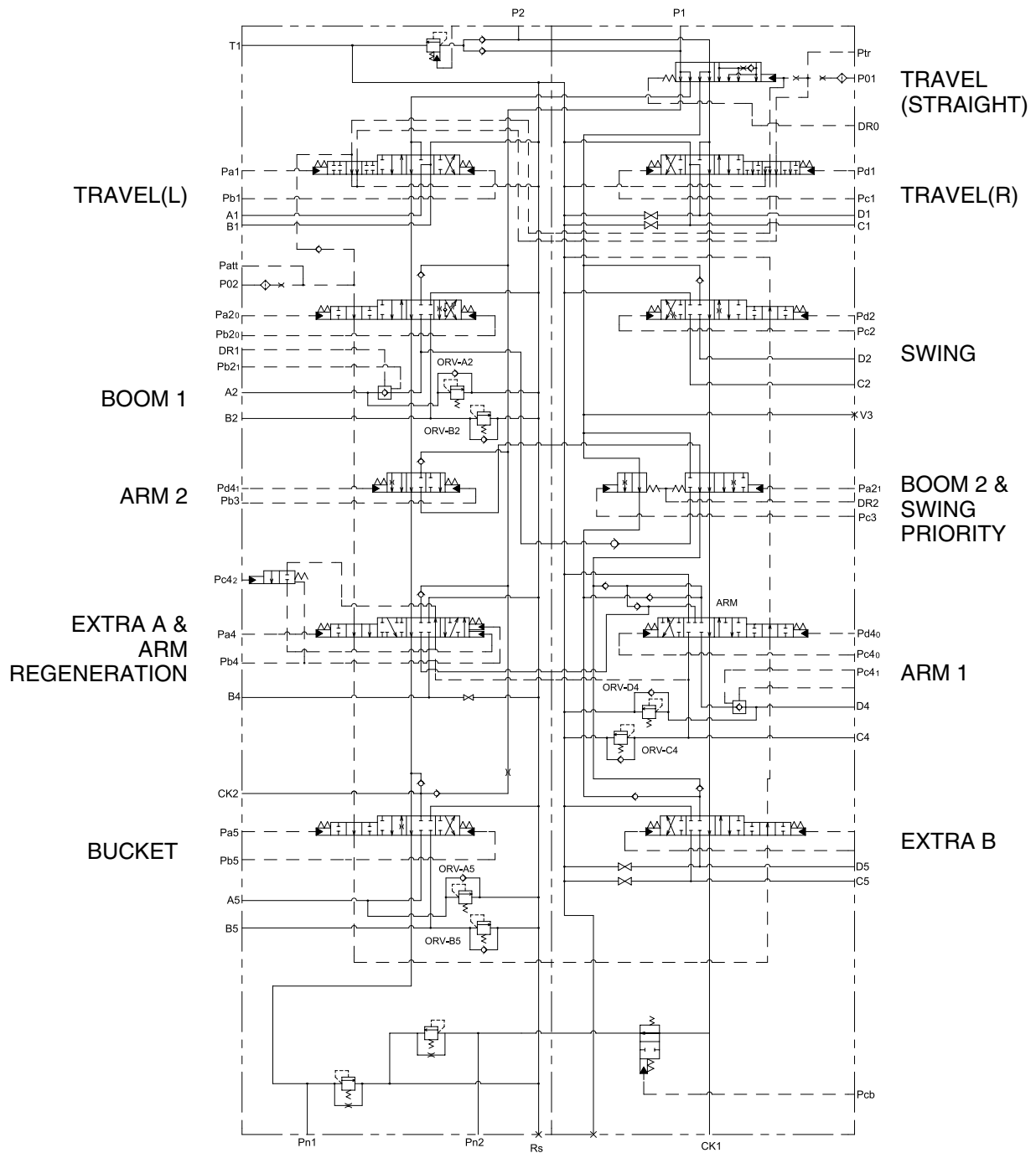
DETAIL OF LOCK VALVE (BOOM & ARM)

- 1 Body(P1)
- 2 Body(P2)
- 3 Spool-travel straight
- 4 Spool-travel
- 5 Spool-swing
- 6 Spool-boom
- 7 Spool-swing priority
- 8 Spool-boom 2
- 9 Spool-arm 2
- 10 Spool-arm
- 11 Spool-arm regeneration
- 12 Spool-bucket
- 13 Spool-option
- 14 Spool-bypass cut
- 15 Cover-pilot A
- 16 Cover-pilot B1
- 17 Cover-pilot B2
- 18 Block-holding
- 19 Block-regeneration
- 20 Plug
- 21 Poppet 1-check valve
- 22 Spring-check valve
- 23 Plug
- 24 Poppet 2-check valve
- 25 Spring-check valve
- 26 Spring seat 1
- 27 Spring seat 2
- 28 Spacer bolt
- 29 Spring-return(L)
- 30 Stopper 1-TS
- 31 Stopper 2-priority
- 32 Spring seat 3
- 33 Poppet-check valve TS
- 34 Spring-check valve TS
- 35 Poppet-lock valve
- 36 Spring-lock valve pilot
- 37 Guide poppet
- 38 Poppet-pilot
- 39 Seat-poppet
- 40 Piston 1
- 41 Guide-piston
- 42 Spring 1-lock valve
- 43 Piston 2
- 44 Spool-regen selector
- 45 Spring-regeneration
- 46 Stopper-regeneration

- 47 Piston-cut off
- 48 Poppet-signal
- 49 Spring-signal
- 50 Plug
- 51 Orifice-signal
- 52 Coin type filter
- 53 Orifice-plug
- 54 Plug
- 55 Plug
- 56 Restrictor-lock valve
- 57 Plug
- 58 Plug
- 59 Plug
- 60 Plug
- 61 Plug
- 62 Plug
- 63 O-ring
- 64 O-ring
- 65 O-ring
- 66 O-ring
- 67 O-ring
- 68 O-ring
- 69 O-ring
- 70 O-ring
- 71 O-ring
- 72 O-ring
- 73 O-ring
- 74 O-ring
- 75 Back-up ring
- 76 Back-up ring
- 77 Back-up ring
- 78 Socket head bolt with washer
- 79 Socket head bolt with washer
- 80 Socket head bolt with washer
- 81 Main relief valve
- 82 Overload relief valve
- 83 Plug-relief valve
- 84 Plug-relief valve
- 85 Negative control valve
- 86 Socket head bolt with washer
- 87 Socket head bolt with washer
- 88 Nipple-check valve
- 89 Spring-bypass cut spool
- 90 Plug-bypass cut spool
- 91 Backup ring

300072MCV02

2. HYDRAULIC CIRCUIT



29072MC51