Std Valves & cables - ss10 QSM

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COVERSHEET

Planned document changes:

Breifly:

Add DC2 aggregate cable with DT, 8001201, for connecting QSC without adapter cable POS.17.

Document changes:

Date:	Change:	Rev. after change:
2020-11-02	Photo valve connections replaced.	D
2020-08-20	EC226 ePS protection replaced.	C
2020-03-13	EC209 added.	B
2020-02-25	ePS cables replaced. Photos replaced. Spare parts added.	A
2019-08-14	New instruction.	-

Std Valves & cables - ss10 QSM

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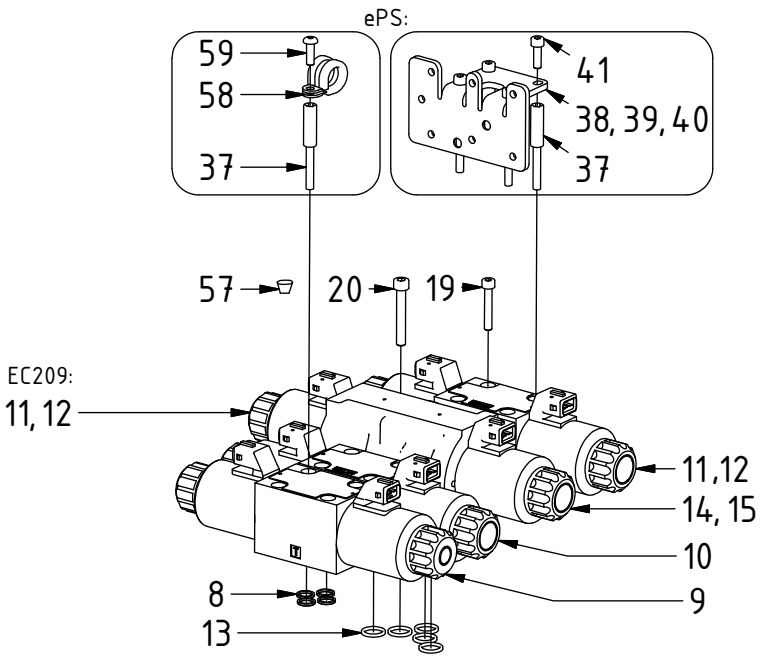
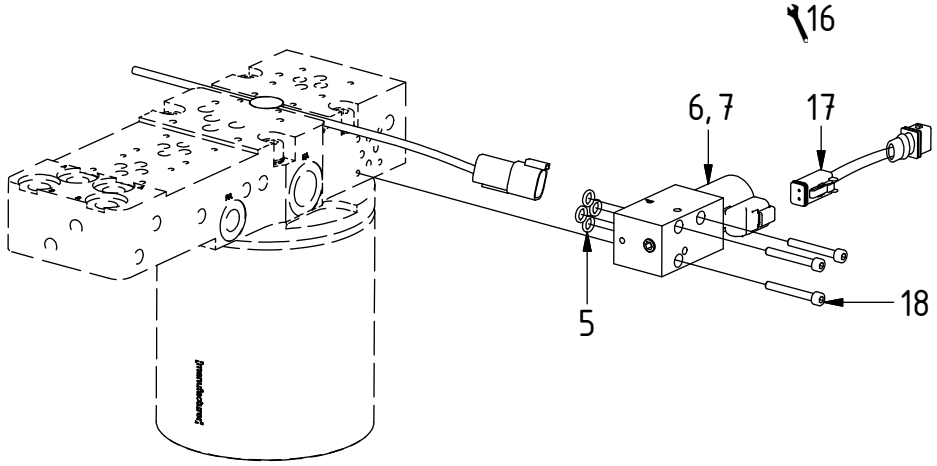
EC209, EC214, EC219, EC226, EC233





POS	DESCRIPTION	PART	QTY	COMMENTS
1	Std Valves & cables is applied alongside control system assembly			See "Control system" (hoses) (209, 214, 219, 226, 233) QSM
5	O-ring square 7,66x1,68	7000579	4	
6	Directional valve NG4 IQS 12V DT	1042047	1	(POS.5 included)
7	Directional valve NG4 IQS 24V DT	1042190	1	(POS.5 included)
8	O-ring 9,25x1,78	710901	12	
9	Directional valve prop 12V open T	7000092	1	(POS.8 included)
10	Directional valve prop 12V	730190	1	
11	Directional valve NG6 12V	730101	1	QTY: 2 for EC209 (POS.8 included)
12	Directional valve NG6 24V	730103	1	QTY: 2 for EC209 (POS.8 included)
13	O-ring square 12,42x1,68	750704	5	
14	Directional valve NG10 12V	730340	1	(POS.13 included)
15	Directional valve NG10 24V	730339	1	(POS.13 included)
16	For connecting QSC			See p.14 (only affects DC2 assy.)
17	Adapter cable DT-JT	1017478	1	
18	MC6S M5x40 12.9	610405	3	Torque: 9,7Nm
19	MC6S M5x30 12.9	610403	12	Torque: 9,7Nm
20	MC6S M6x40 12.9	610418	4	Torque: 17Nm
37	Valve spacer ePS	1034402	5	
38	Bracket ePS 209	1057538	1	
39	Bracket ePS 214-233	1038119	1	For Topcon/LEICA/Novatron
40	Bracket ePS 214-233 (Trimble only)	1038117	1	For Trimble
41	MC6S M5x16 12.9	610401	4	Torque: 9,7Nm
57	Plastic plug (red) for valves	790156	12	
58	Rubber steel clamp ø16	6000009	1	
59	K6S M5x16 10.9 FZB	611818	1	

POS in order of assembly

Std Valves & cables - ss10 QSM

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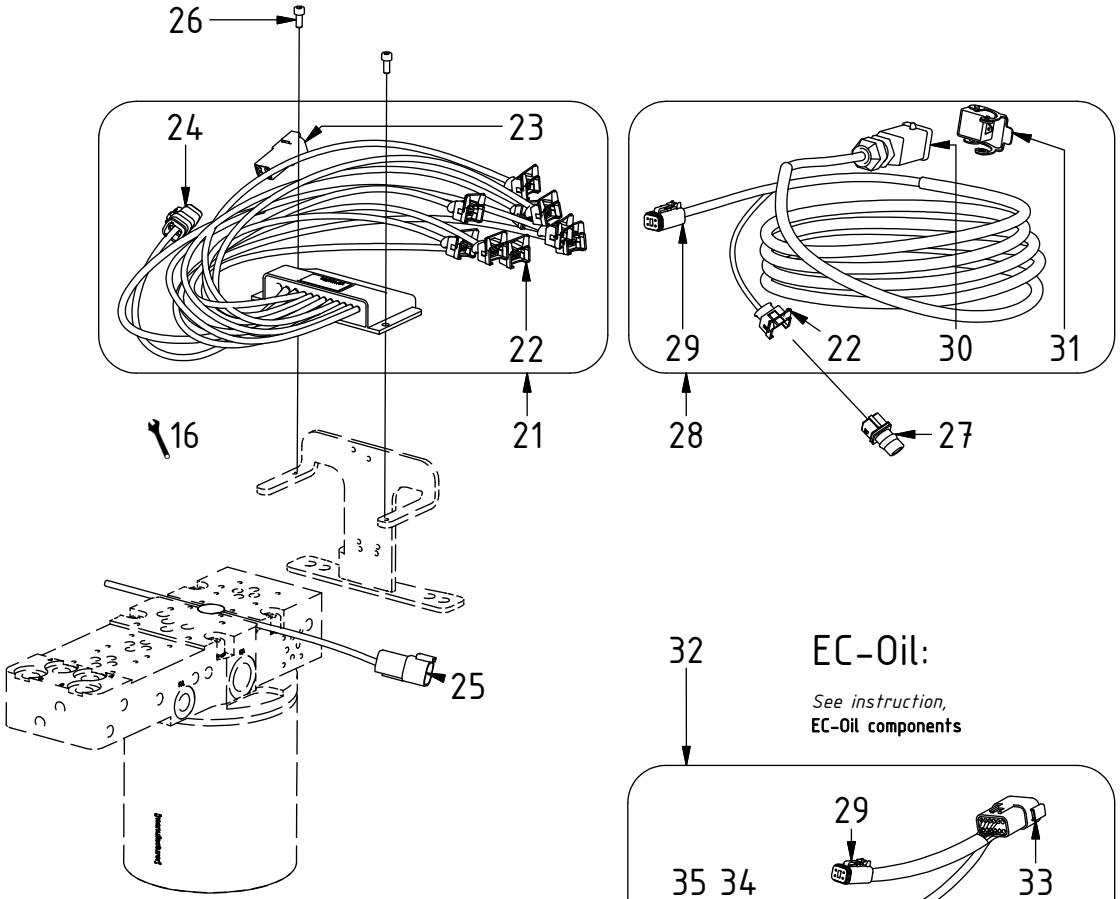
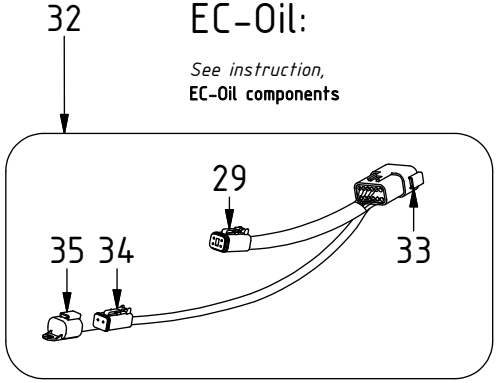
DC2



POS	DESCRIPTION	PART	QTY	COMMENTS
16	For connecting QSC			See p.14 (only affects DC2 assy.)
21	Tiltrotator module DC2 Q-Safe	842137	1	
22	Connector JT	810218	9	
23	Connector Deutsch DT04-4P	820108	1	
24	Connector Deutsch DTM06-6S	8000053	1	
25	Q-Safe connector			
26	MC6S M5x12 12.9	6000077	2	
27	Plug JT	1045154	1	Plug JT connector
28	Aggregate cable DC2 Complete QSC	8000175	1	
29	Deutsch 4way female	820218	1	
30	ILME contact 12P DC2 Complete	841192	1	
31	ILME cover 12P contact with jumper	810208	1	
32	Adapter cable ECO W DC2 DTM	1048529	1	For EC-Oil. Replace POS.28
33	Connector Deutsch DTM04-12P	8000177	1	
34	Connector Deutsch DT06-2S	820219	1	
35	Protection plug DT	8000086	1	Plug DT connector
42	Adapter cable DC2 ePS	8000783	1	Between POS.21 & 28 / 32 for ECO
43	Adapter cable ePS rotation sensor	8000784	1	
44	Cable Tilt angle sensor ECO W DC2	1048530	1	For EC-Oil with ePS
45	Deutsch housing 6 way male pin	810649	1	
46	Protection ePS/MACS EC209-EC219	1033565	1	
47	Protection ePS/MACS EC233	1040940	1	
48	Protection ePS EC226 V2	1055677	1	

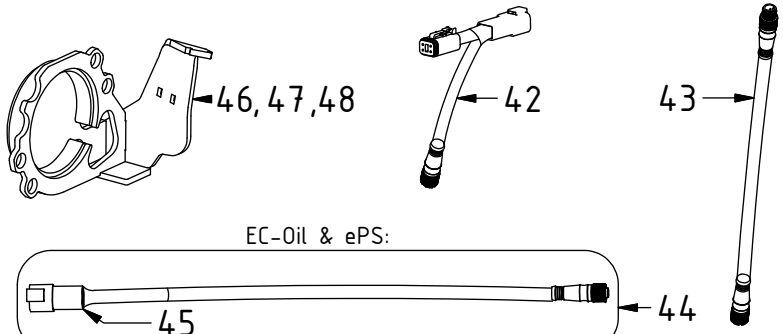
POS in order of assembly



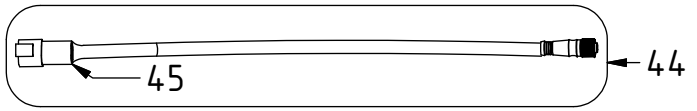
EC-Oil:

See instruction,
EC-Oil components

ePS:



EC-Oil & ePS:



Std Valves & cables - ss10 QSM

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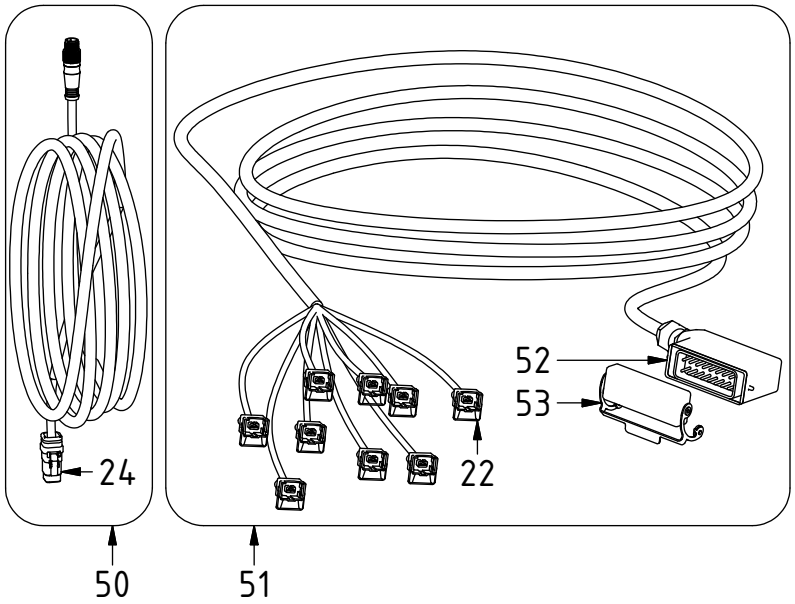
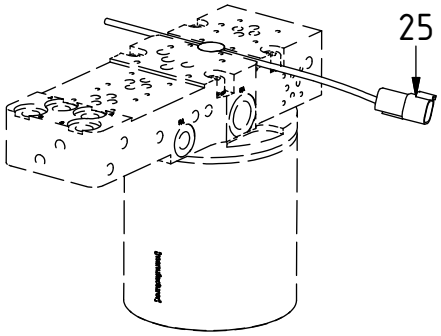
EC209, EC214, EC219, EC226, EC233

POS in order of assembly

POS	DESCRIPTION	PART	QTY	COMMENTS
22	Connector JT	810218	9	
24	Connector Deutsch DTM06-6S	8000053	1	
25	Q-Safe connector			Attach to POS.50 or See EC-Oil comp.
33	Connector Deutsch DTM04-12P	8000177	1	
43	Adapter cable ePS rotation sensor	8000784	1	
45	Deutsch housing 6 way male pin	810649	1	
46	Protection ePS/MACS EC209-EC219	1033565	1	
47	Protection ePS/MACS EC233	1040940	1	
48	Protection ePS EC226 V2	1055677	1	
49	Ag.cable SVAB ePS w. 120 ohm ter.	8000824	1	
50	Cable QS QLM tiltrotator SVAB	842148	1	
51	Aggregate cable SVAB Complete	1015196	1	
52	ILME contact 16P Complete	810203	1	
53	ILME cover 16P contact with jumper	810235	1	
54	Adapter cable ECO (DTM) SVAB	1029599	2	For EC-Oil. Replace POS.50-51
55	Ad.cable ePS ECOW SVAB 120 ohm	8000825	1	For EC-Oil ePS. Replace POS.49

ss10 (SVAB)

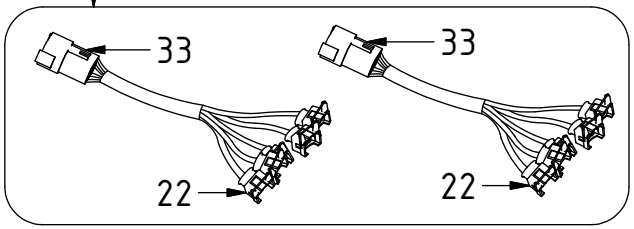




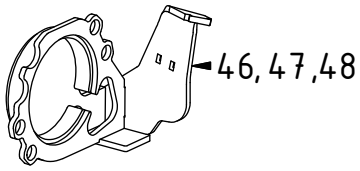
54

EC-Oil:

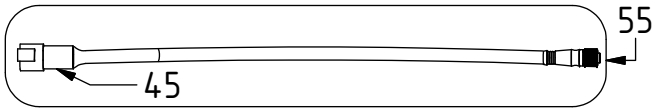
See instruction,
EC-Oil components



ePS:



EC-Oil & ePS:



Std Valves & cables - ss10 QSM

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EC209, EC214, EC219, EC226, EC233

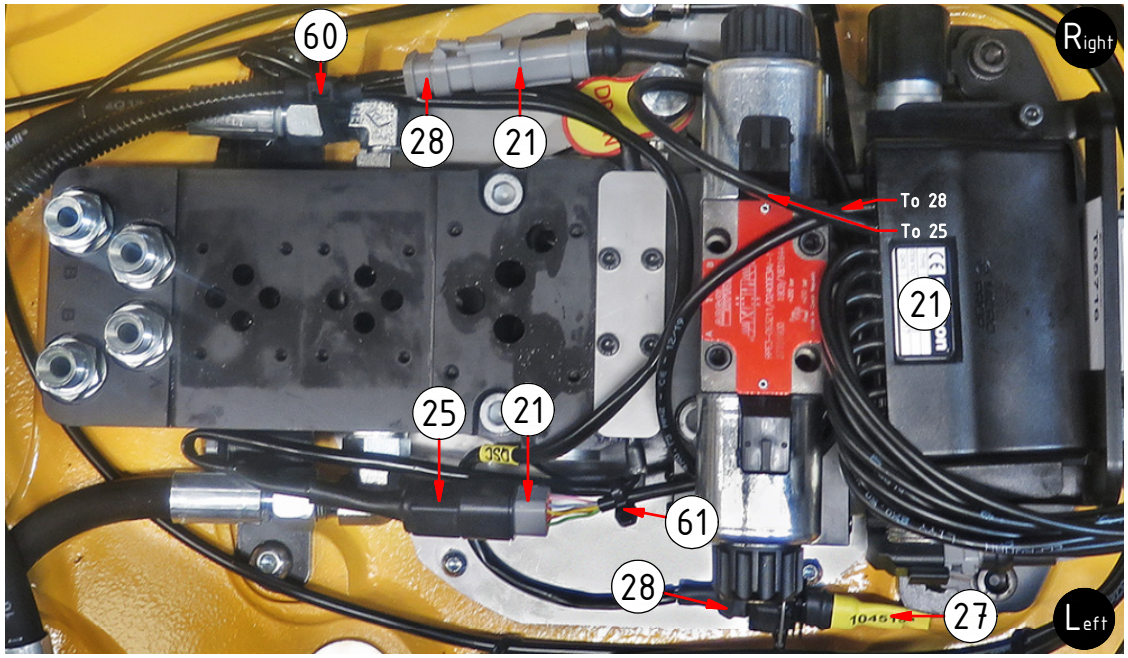
DC2

Std

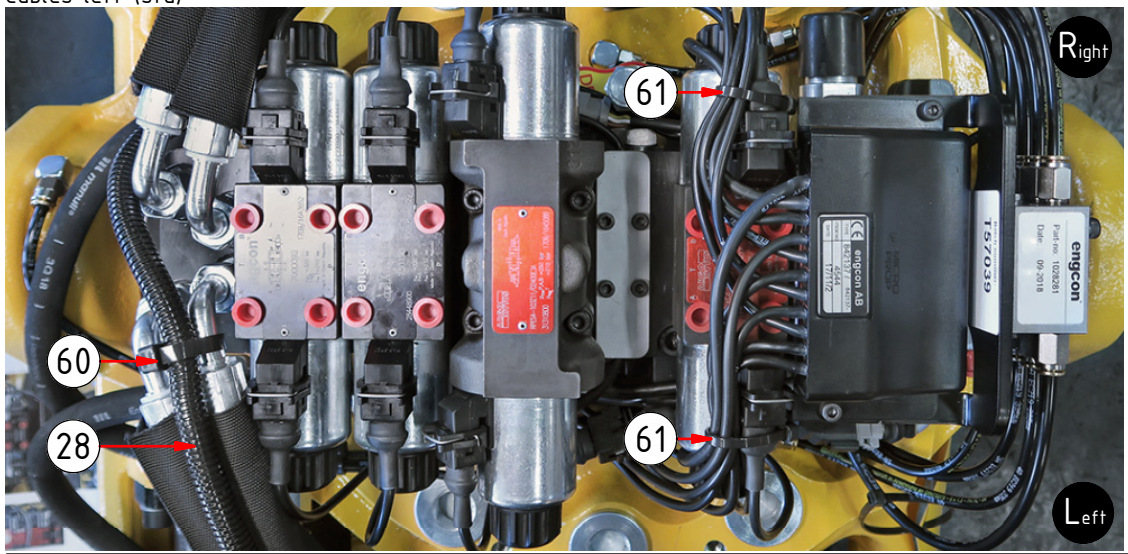
POS	DESCRIPTION	PART	QTY	COMMENTS
16	For connecting QSC			See p.14 (only affects DC2 assy.)
21	Tiltrotator module DC2 Q-Safe	842137	1	
25	Q-Safe connector			
27	Plug JT	1045154	1	Plug JT connector
28	Aggregate cable DC2 Complete QSC	8000175	1	
60	Cable tie 7,8x360	1021587	1	
61	Cable tie 4,8x360	1021586	1	

POS in order of assembly

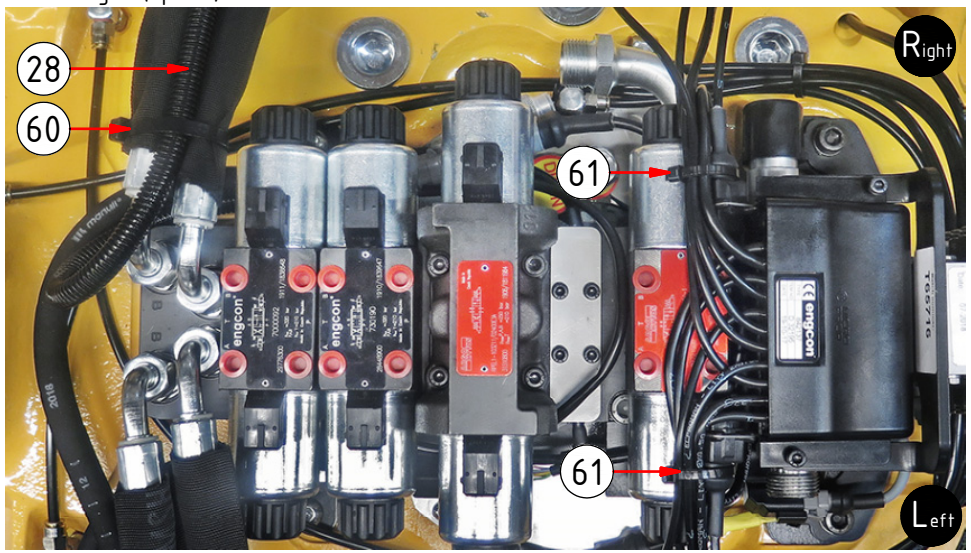
Cables/connectors:



Cables left (std)



Cables right (option)



Dashed lines for overview, mounts on other pages/assemblies. indicates instruction. represents hose.

Valves/JT on page 13.

Std Valves & cables - ss10 QSM

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POS	DESCRIPTION	PART	QTY	COMMENTS

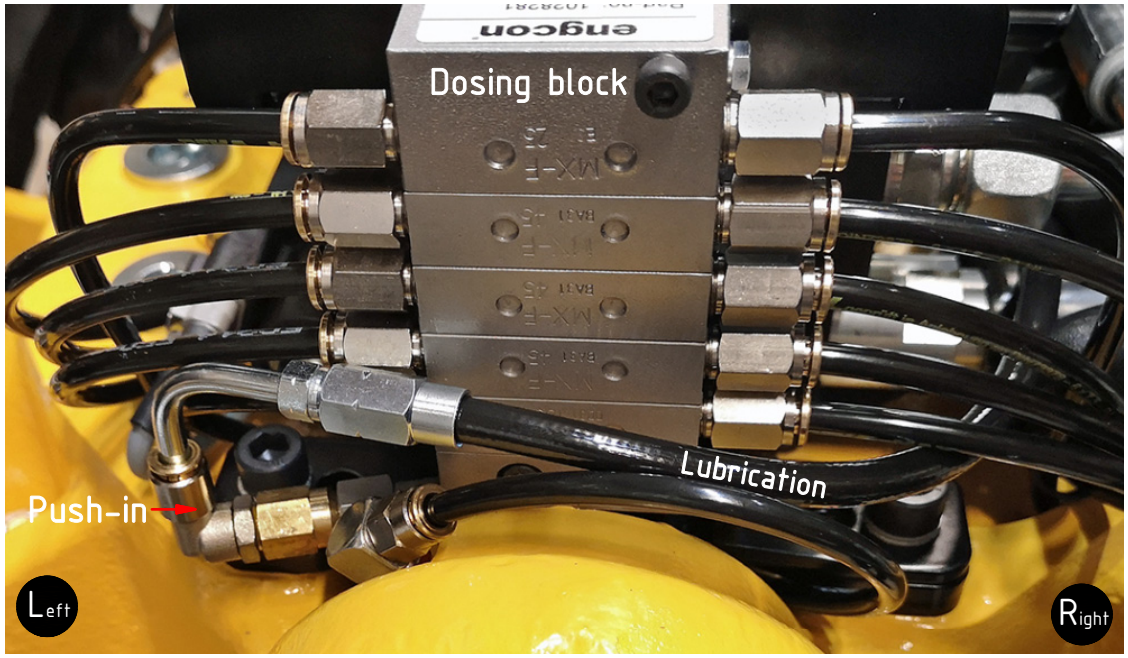
POS in order of assembly

See instruction,
EC-Oil components

DC2

Top EC-Oil Lubrication

Lubrication from block:



Continue to page 7 for EC-Oil cables & connectors.

Std Valves & cables - ss10 QSM

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See instruction,
EC-Oil components

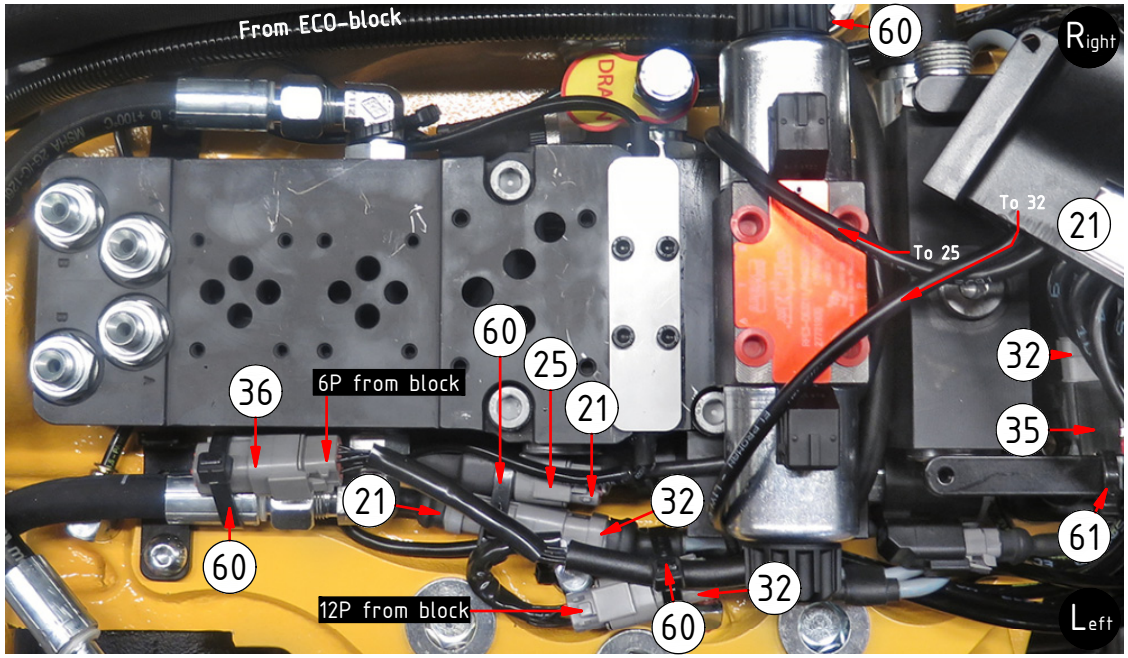
DC2

Top EC-Oil

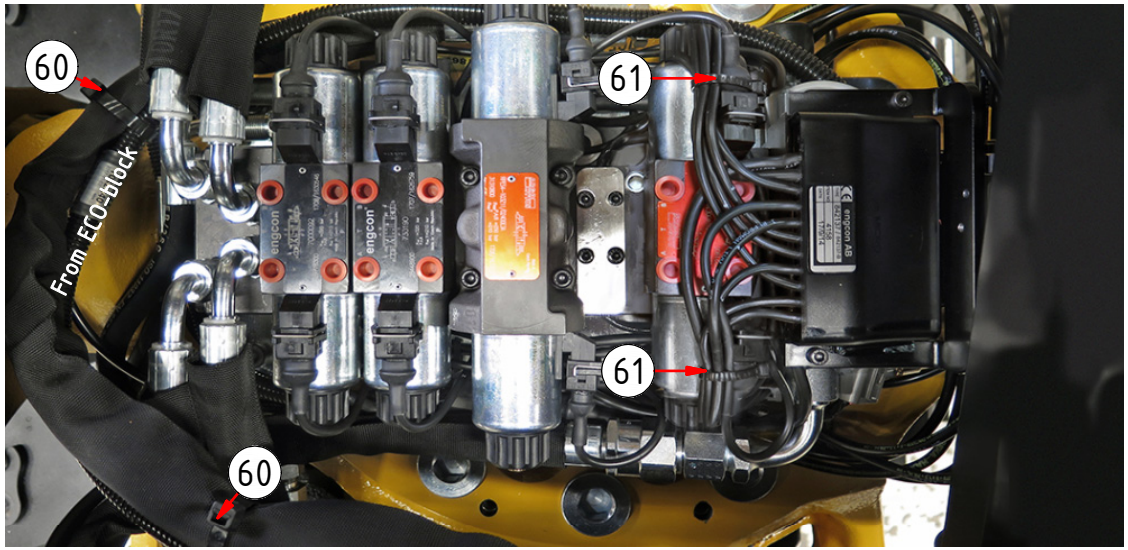
POS	DESCRIPTION	PART	QTY	COMMENTS
21	Tiltrotator module DC2 Q-Safe	842137	1	
25	Q-Safe connector			
32	Adapter cable ECO W DC2 DTM	1048529	1	For EC-Oil. Replace POS.28
35	Protection plug DT	8000086	1	Plug DT connector
36	Protection plug DTM	8000090	1	
42	Adapter cable DC2 ePS	8000783	1	Between POS.21 & 32
43	Adapter cable ePS rotation sensor	8000784	1	
44	Cable Tilt angle sensor ECO W DC2	1048530	1	For EC-Oil with ePS
60	Cable tie 7,8x360	1021587	1	
61	Cable tie 4,8x360	1021586	1	

POS in order of assembly

Cables/connectors:

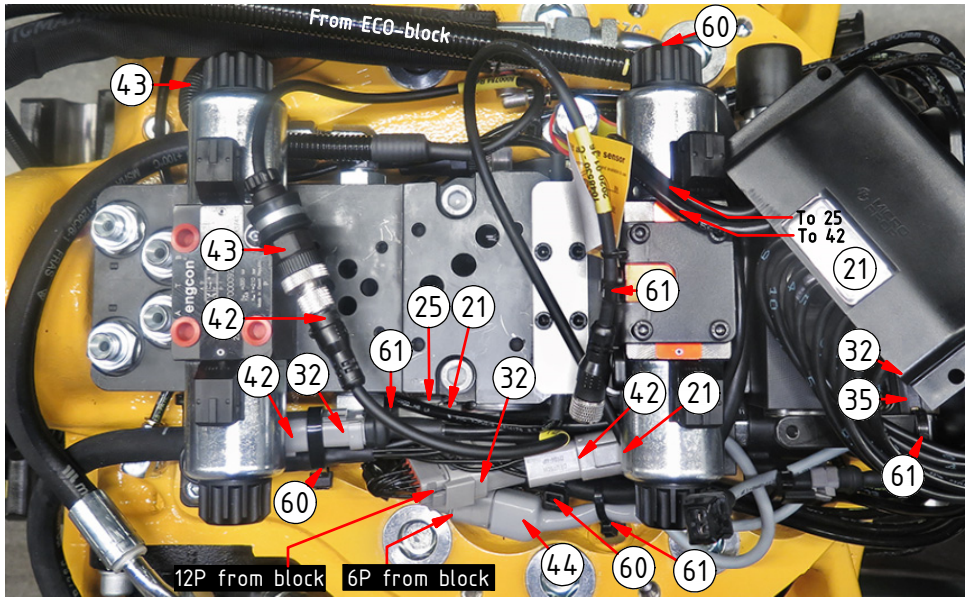


Cables:



Top EC-Oil & ePS:

Cables/connectors:



Continue to page 9 for ePS sensor connection.

Dashed lines for overview, mounts on other pages/assemblies. indicates instruction. represents hose.

Valves/JT on page 13.

Std Valves & cables - ss10 QSM

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EC209, EC214, EC219, EC226, EC233

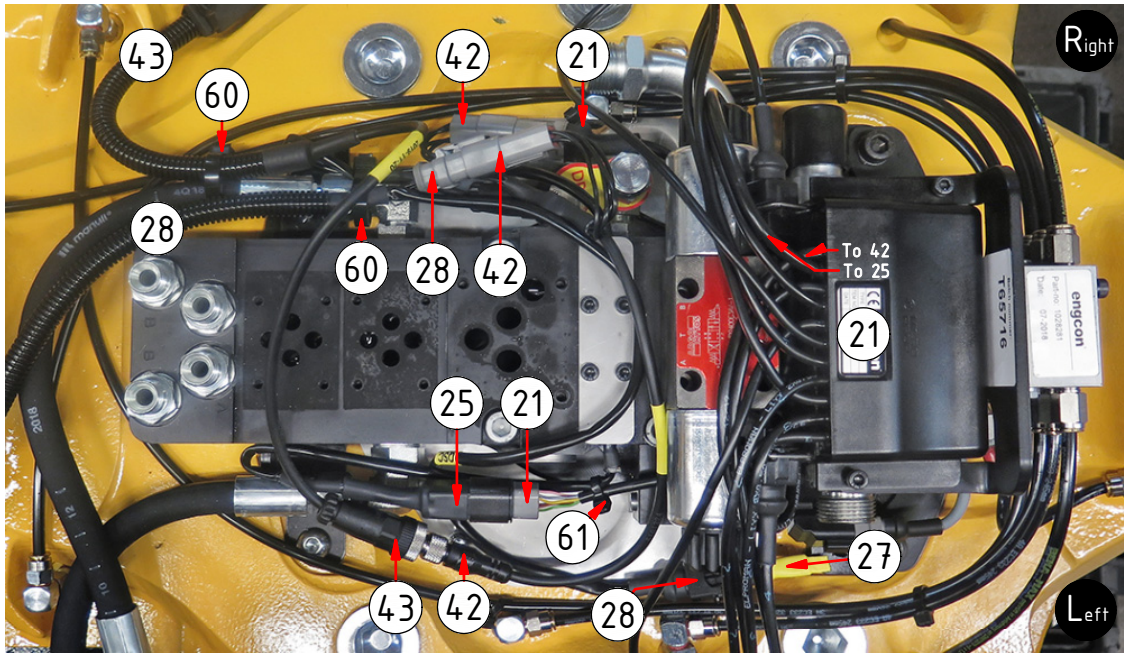
DC2

ePS

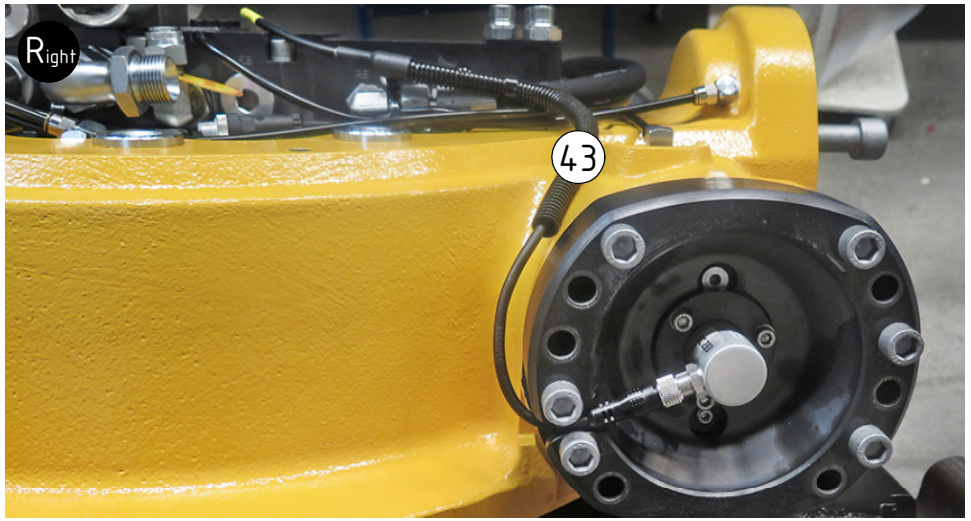
POS	DESCRIPTION	PART	QTY	COMMENTS
21	Tiltrotator module DC2 Q-Safe	842137	1	
25	Q-Safe connector			
27	Plug JT	1045154	1	Plug JT connector
28	Aggregate cable DC2 Complete QSC	8000175	1	
42	Adapter cable DC2 ePS	8000783	1	
43	Adapter cable ePS rotation sensor	8000784	1	
60	Cable tie 7,8x360	1021587	1	
61	Cable tie 4,8x360	1021586	1	

POS in order of assembly

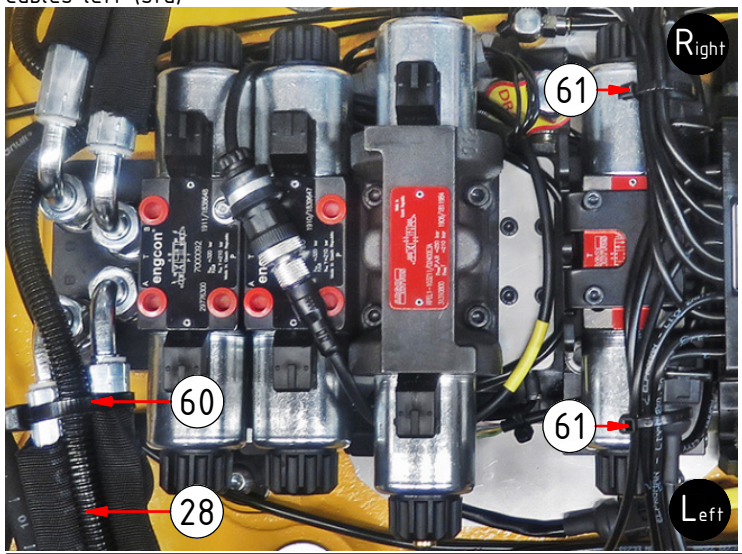
Cables/connectors:



Sensor connection:

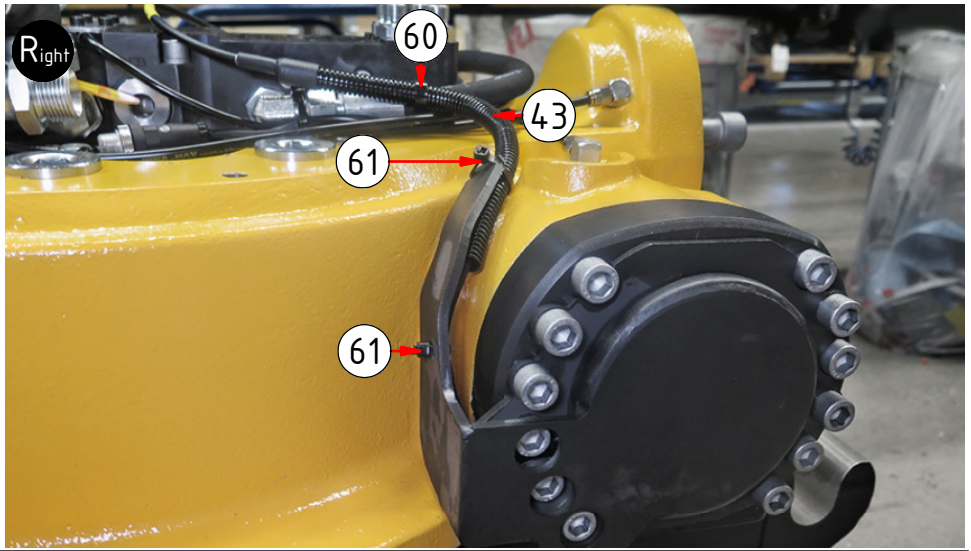


Cables left (std)



Cables right (option)

Sensor cable:



Dashed lines for overview, mounts on other pages/assemblies. indicates instruction. represents hose.

Valves/JT on page 13.

Std Valves & cables - ss10 QSM

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EC209, EC214, EC219, EC226, EC233

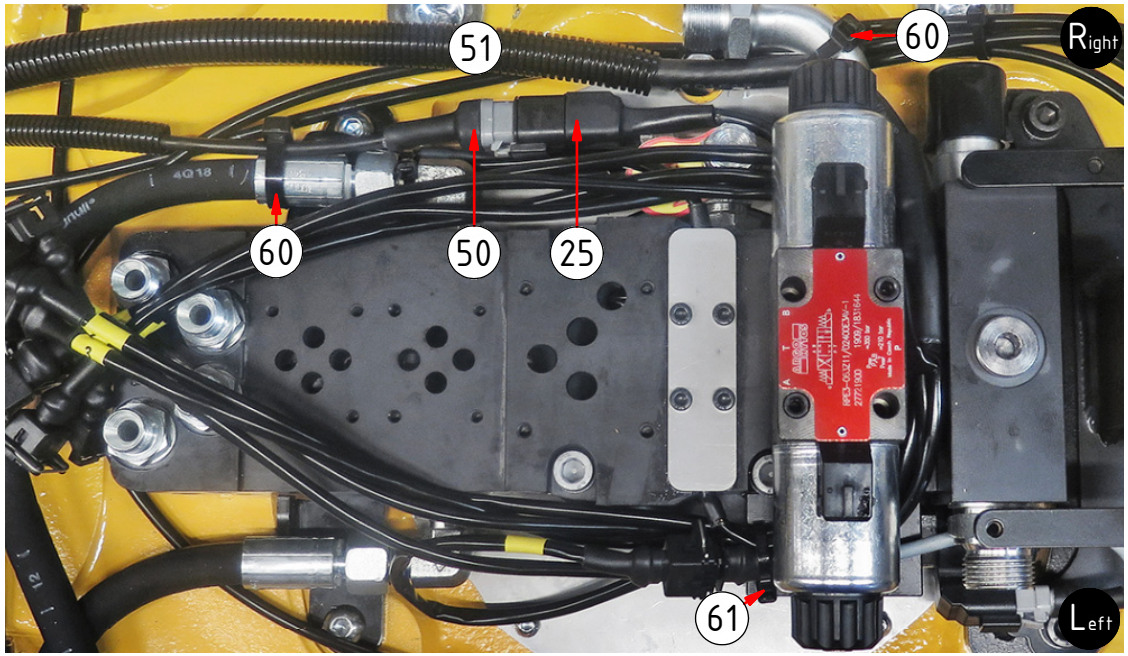
ss10 (SVAB)

Std

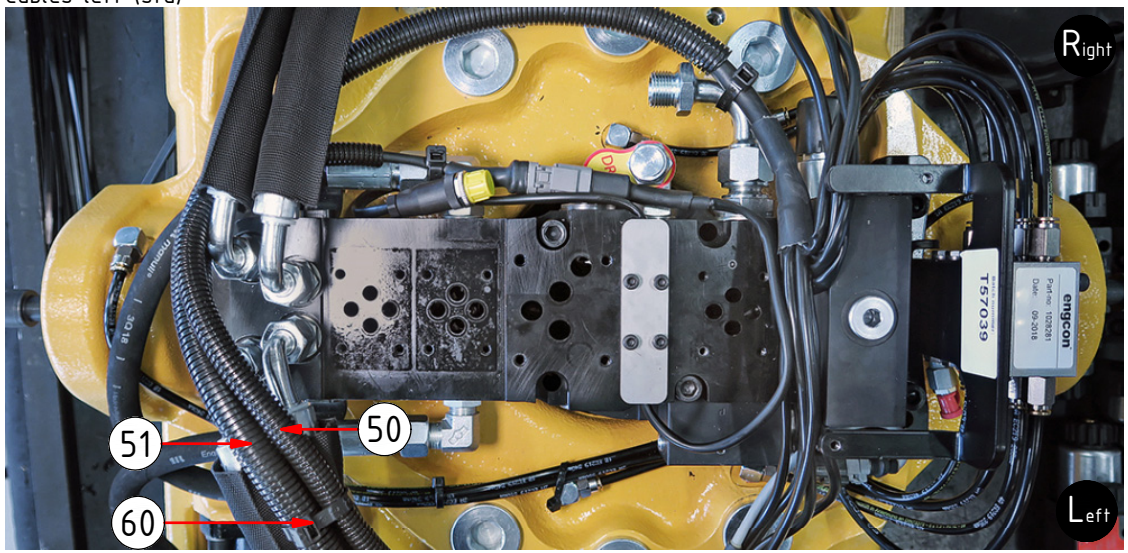
POS	DESCRIPTION	PART	QTY	COMMENTS
25	Q-Safe connector			
50	Cable QS QLM tiltrotator SVAB	842148	1	
51	Aggregate cable SVAB Complete	1015196	1	
60	Cable tie 7,8x360	1021587	1	
61	Cable tie 4,8x360	1021586	1	

POS in order of assembly

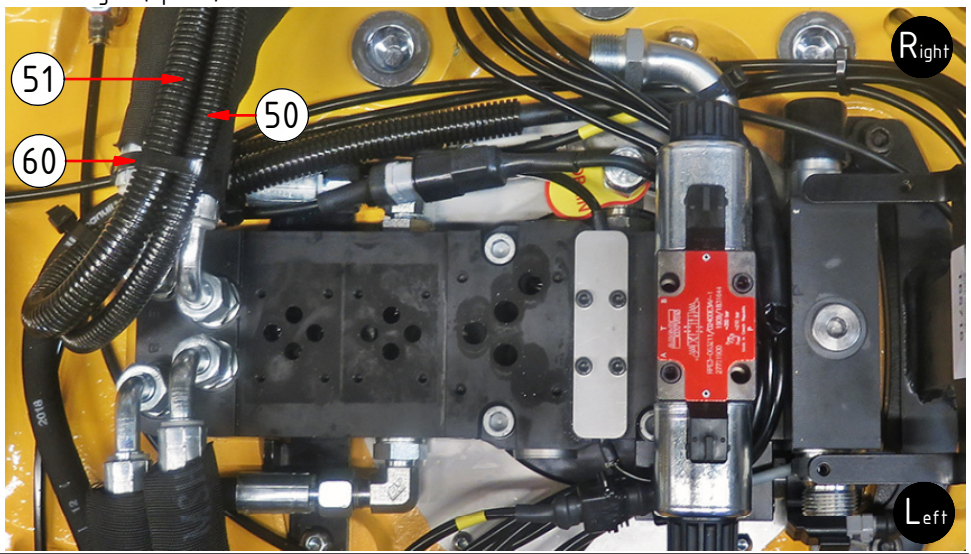
Cables/connectors:



Cables left (std)



Cables right (option)



Std Valves & cables - ss10 QSM

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EC209, EC214, EC219, EC226, EC233

POS	DESCRIPTION	PART	QTY	COMMENTS

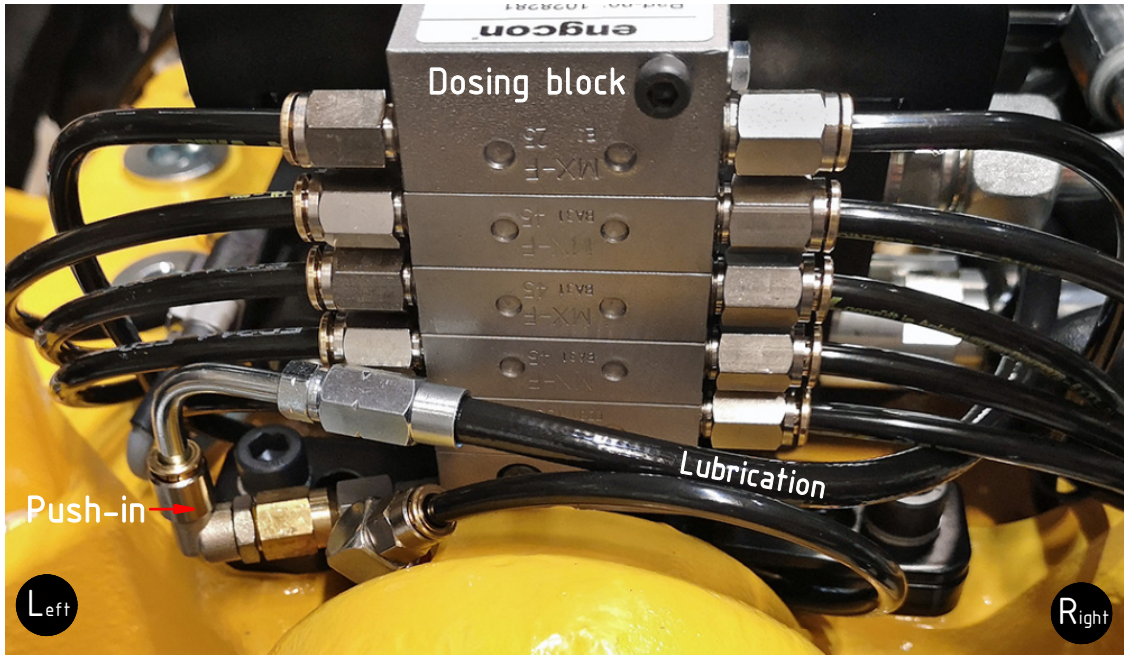
POS in order of assembly

See instruction,
EC-Oil components

ss10 (SVAB)

Top EC-Oil Lubrication

Lubrication from left block:



Continue to page 11 for EC-Oil cables & connectors.

Std Valves & cables - ss10 QSM

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EC209, EC214, EC219, EC226, EC233

See instruction,
EC-Oil components

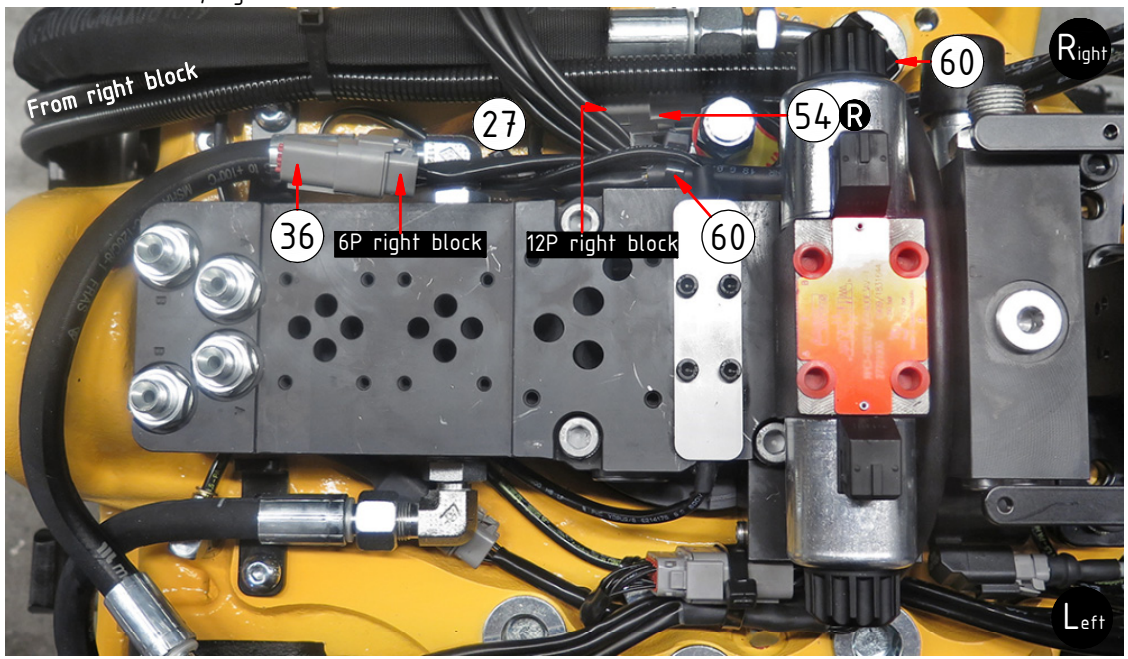
ss10 (SVAB)

Top EC-Oil

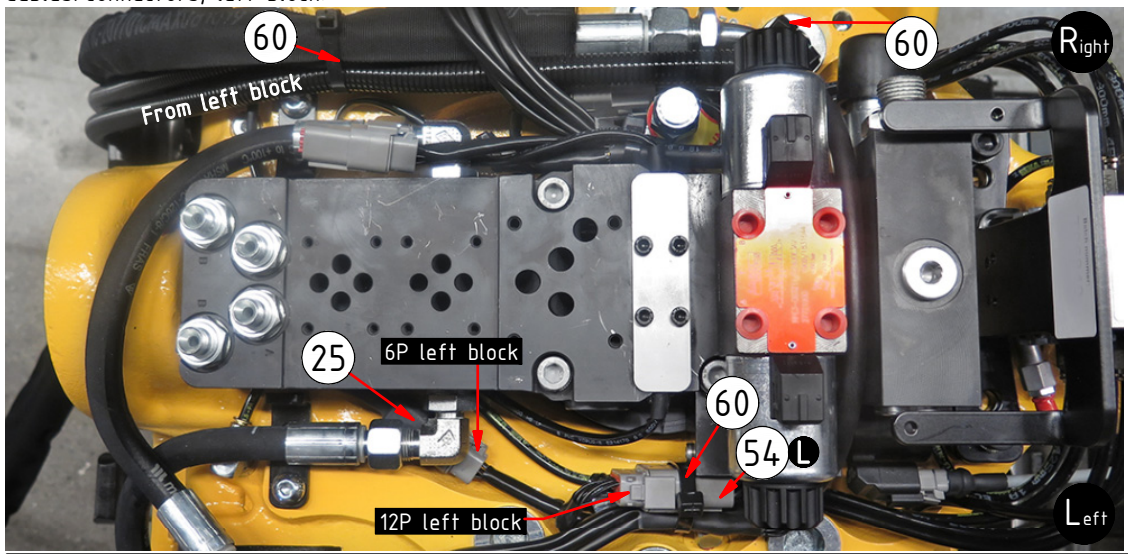
POS	DESCRIPTION	PART	QTY	COMMENTS
25	Q-Safe connector			Attach to 6P from Left block
27	Plug JT	1045154	1	Plug JT connector "1" to Right
36	Protection plug DTM	8000090	1	No ePS: attach to 6P from Right block
43	Adapter cable ePS rotation sensor	8000784	1	
49	Ag.cable SVAB ePS w. 120 ohm ter.	8000824	1	
54	Adapter cable ECO (DTM) SVAB	1029599	2	For EC-Oil. Replace POS.50-51
55	Ad.cable ePS ECOW SVAB 120 ohm	8000825	1	For EC-Oil ePS. Replace POS.49
60	Cable tie 7,8x360	1021587	1	
61	Cable tie 4,8x360	1021586	1	

POS in order of assembly

Cables/connectors, right block:

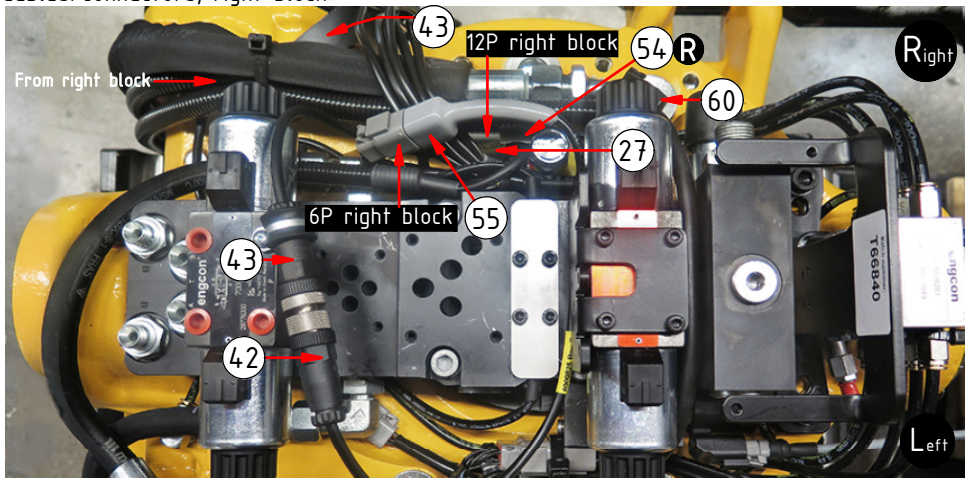


Cables/connectors, left block:

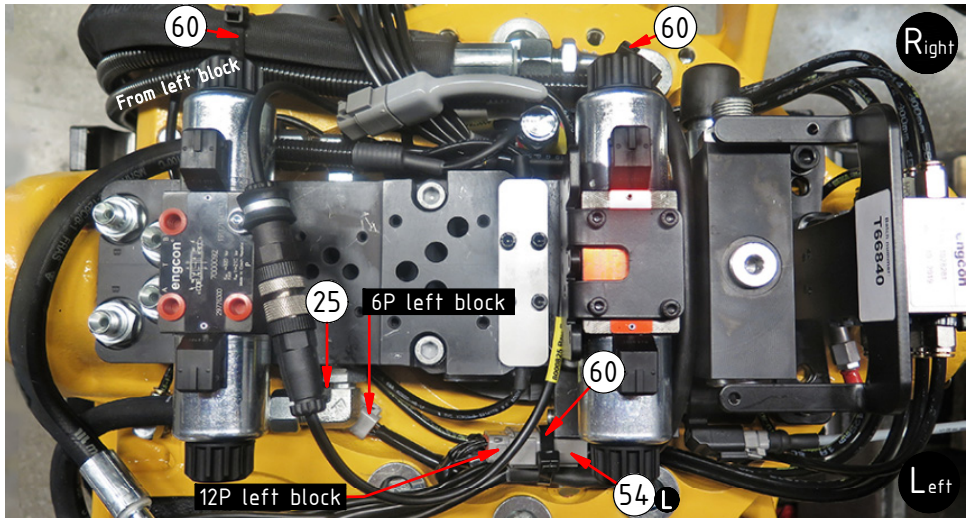


Top EC-Oil & ePS:

Cables/connectors, right block:



Cables/connectors, left block:



Continue to page 12 for ePS sensor connection.

Std Valves & cables - ss10 QSM

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EC209, EC214, EC219, EC226, EC233

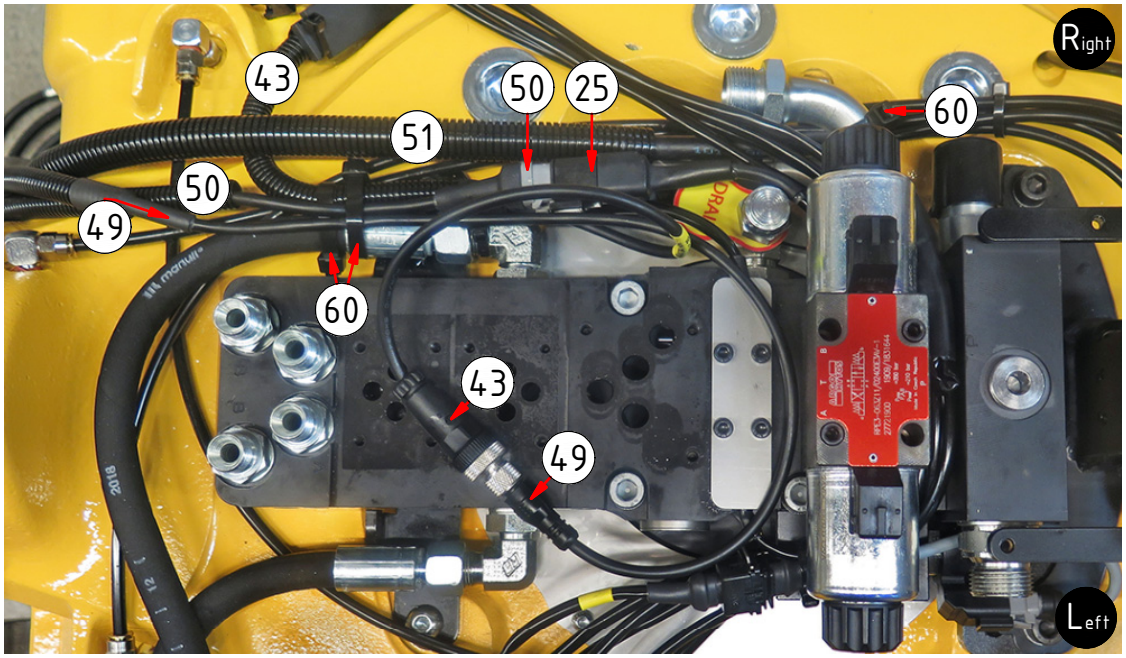
ss10 (SVAB)

ePS

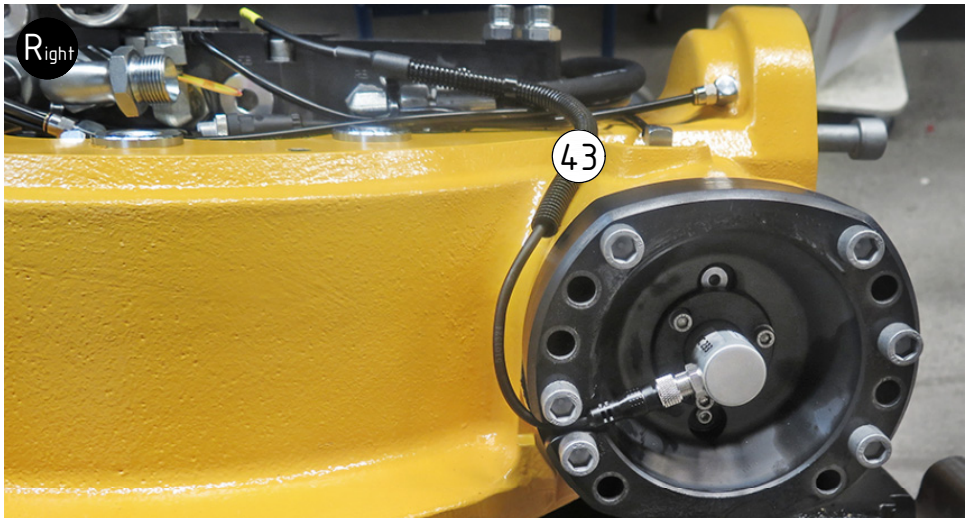
POS	DESCRIPTION	PART	QTY	COMMENTS
25	Q-Safe connector			
43	Adapter cable ePS rotation sensor	8000784	1	
49	Ag.cable SVAB ePS w. 120 ohm ter.	8000824	1	
50	Cable QS QLM tiltrotator SVAB	842148	1	
51	Aggregate cable SVAB Complete	1015196	1	
60	Cable tie 7,8x360	1021587	1	
61	Cable tie 4,8x360	1021586	1	

POS in order of assembly

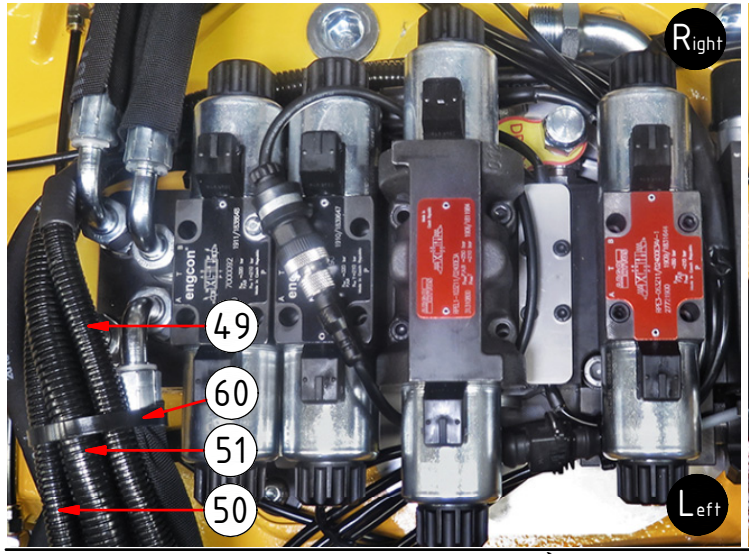
Cables/connectors:



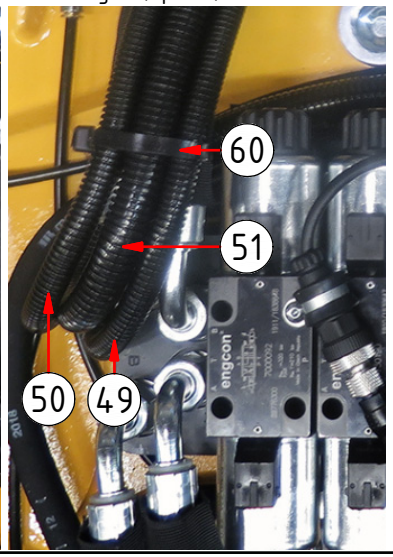
Sensor connection:



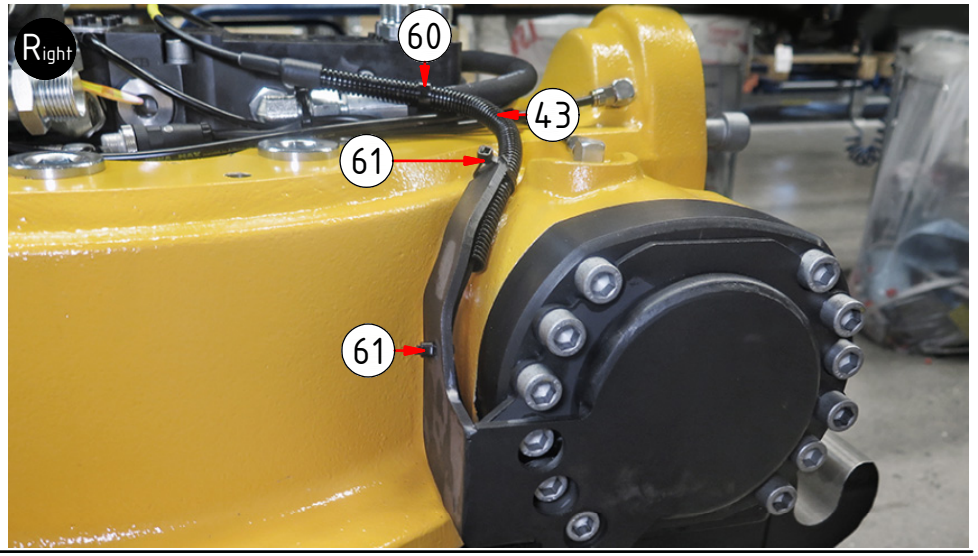
Cables left (std)



Cables right (option)



Sensor cable:



Dashed lines for overview, mounts on other pages/assemblies. indicates instruction. represents hose.

Std Valves & cables - ss10 QSM

engcon®

EC209, EC214, EC219, EC226, EC233

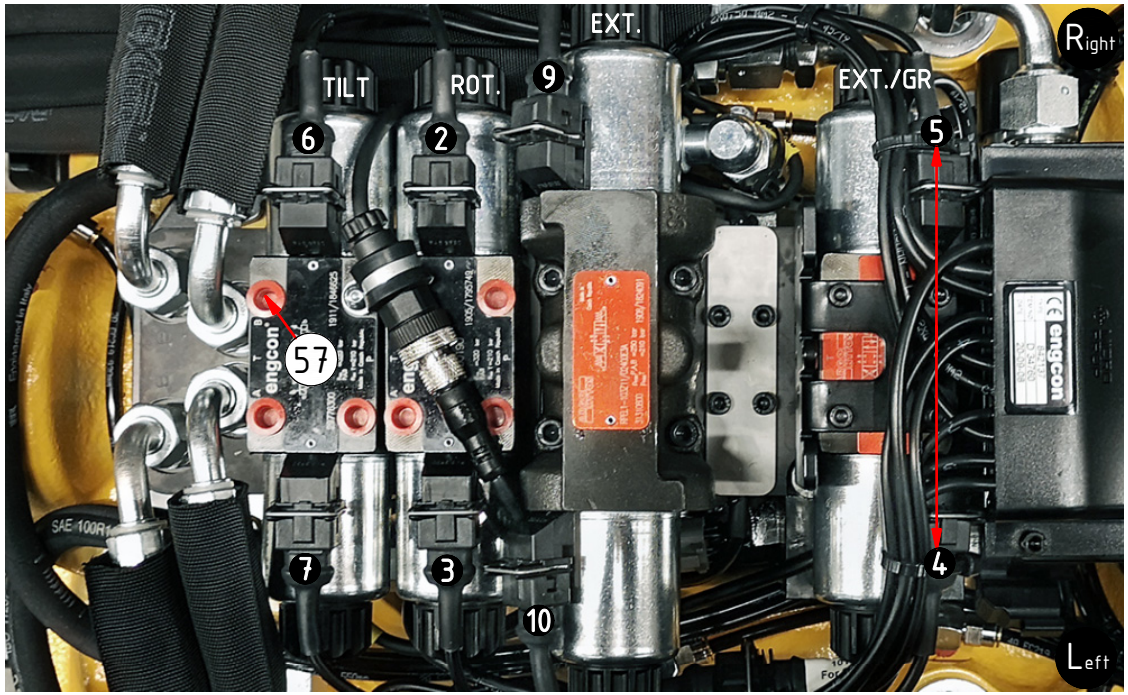
DC2 & ss10 (SVAB)

Valve connections

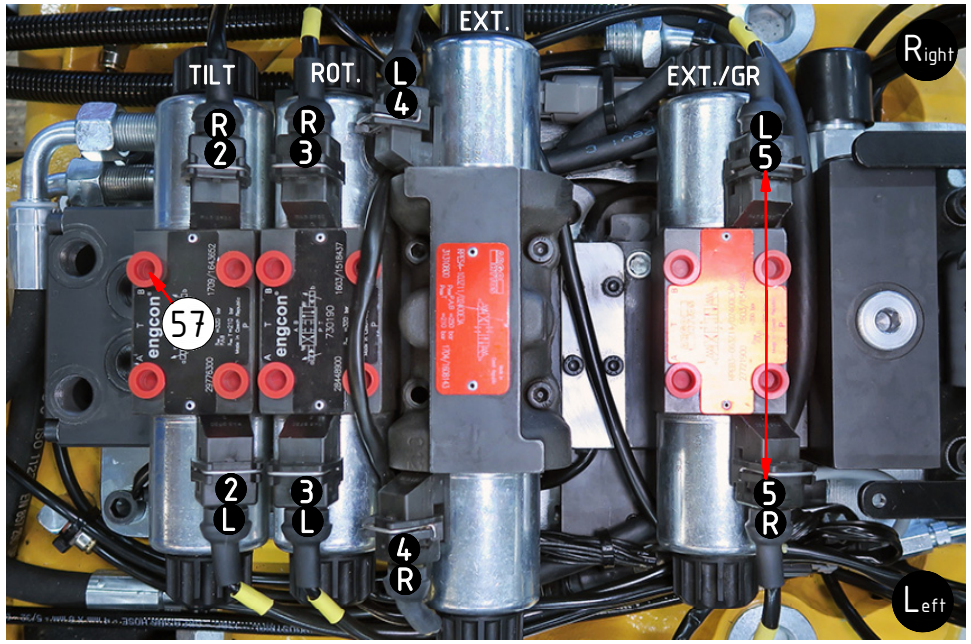
POS	DESCRIPTION	PART	QTY	COMMENTS
16	For connecting QSC			See p.14 (only affects DC2 assy.)
17	Adapter cable DT-JT	1017478	1	
57	Plastic plug (red) for valves	790156	12	

POS in order of assembly

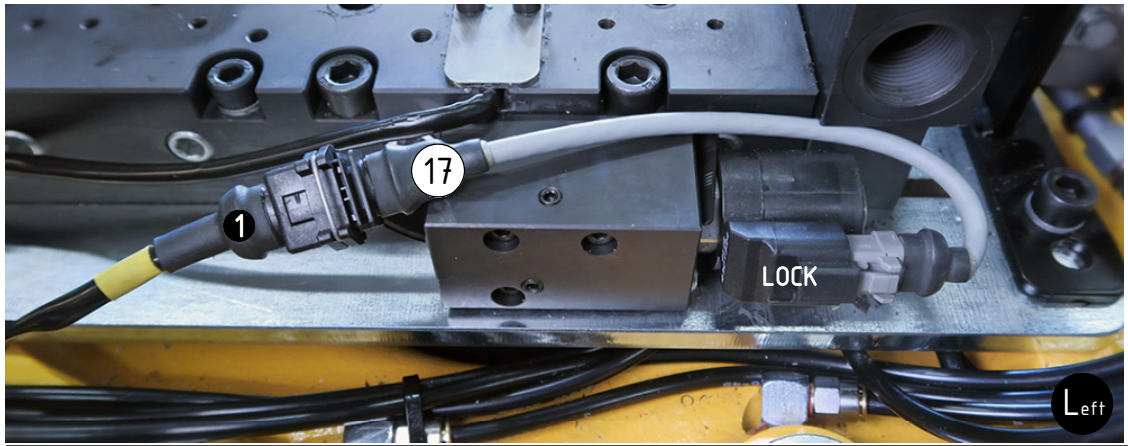
Std, ePS, DC2 Top EC-Oil
JT marked with numbers:



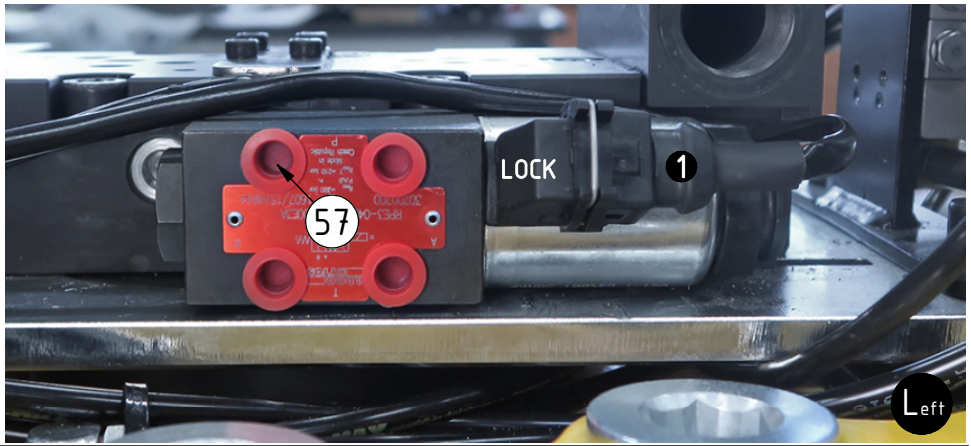
ss10 (SVAB) Top EC-Oil
JT marked with numbers:
("1" from R is not connected)



Lock valve IQS DT:



Lock valve JT:



Dashed lines for overview, mounts on other pages/assemblies. indicates instruction. represents hose.

Std Valves & cables - ss10 QSM

EC209, EC214, EC219, EC226, EC233

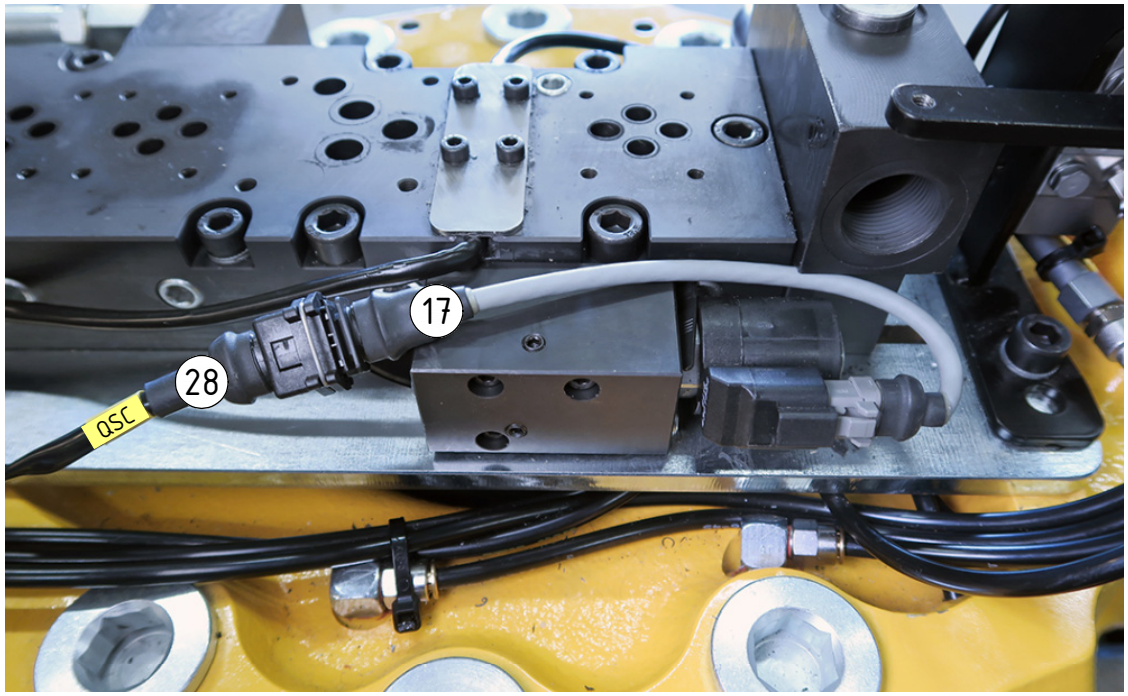
Connecting QSC

DC2

POS	DESCRIPTION	PART	QTY	COMMENTS
17	Adapter cable DT-JT	1017478	1	
27	Plug JT	1045154	1	Plug JT connector
28	Aggregate cable DC2 Complete QSC	8000175	1	
32	Adapter cable ECO W DC2 DTM	1048529	1	For EC-Oil. Replace POS.28
35	Protection plug DT	8000086	1	Plug DT connector
56	Jumper JT QSC connected	1018662	1	Plug JT "1" when QSC is connected

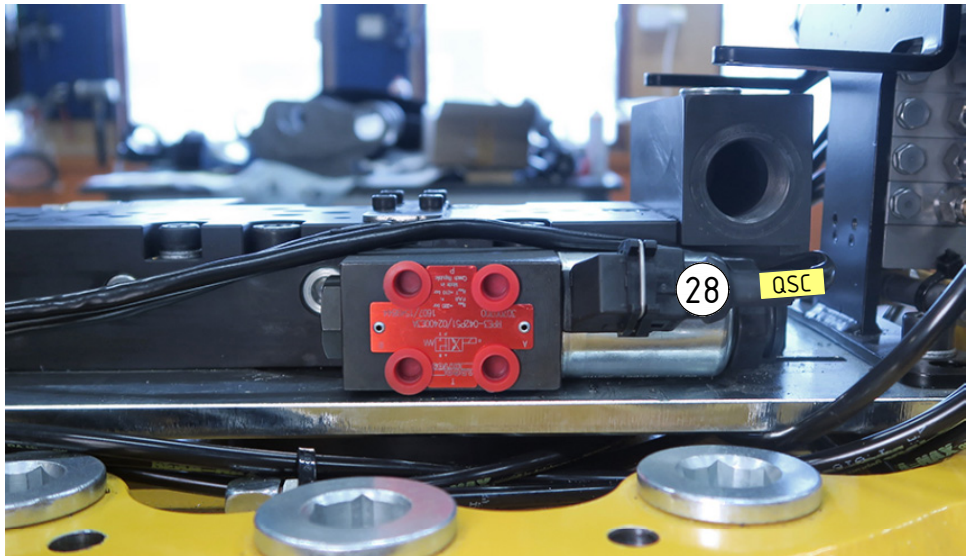
POS in order of assembly

Lock valve IQS DT:



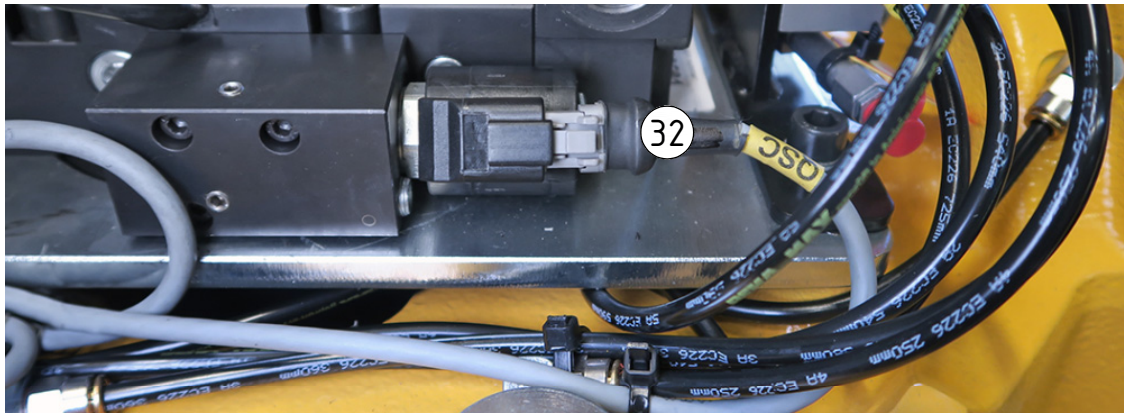
Jumper POS.56 on JT "1". POS.27 removed.

Lock valve JT:



Jumper POS.56 on JT "1". POS.27 removed.

Top EC-Oil
Lock valve IQS DT:



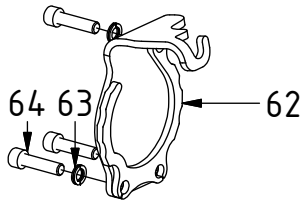
Jumper POS.56 on JT "1". POS.35 removed. POS.17 removed.

Std Valves & cables - ss10 QSM

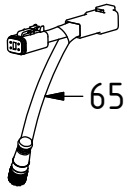
engcon®

Related spare parts

EC226 ePS:

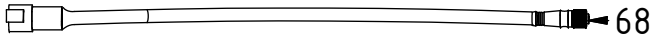


DC2 ePS:



ss10 (SVAB) ePS:

ss10 (SVAB) EC-Oil ePS:



POS	DESCRIPTION	PART	QTY	COMMENTS
42	Adapter cable DC2 ePS	8000783	1	
43	Adapter cable ePS rotation sensor	8000784	1	
48	Protection ePS EC226 V2	1055677	1	
49	Ag.cable SVAB ePS w. 120 ohm ter.	8000824	1	
55	Ad.cable ePS ECOW SVAB 120 ohm	8000825	1	For EC-Oil ePS. Replace POS.49
62	Protection ePS/MACS EC226	1016554	1	Replaced by POS.48 from 2020-07
63	Washer NL10	611041	3	
64	MC6S M10x40 12.9	610453	3	
65	Adapter cable DC2 ePS DT DT M12	842173	1	Replaced by POS.42 from 2019-10
66	Adap. cable SVAB ePS rot. sensor	842188	1	Replaced by POS.43 from 2019-10
67	Agg. cable SVAB ePS rot. sensor	842187	1	Replaced by POS.49 from 2019-10
68	Adapter cable ePS ECO W SVAB	1042245	1	Replaced by POS.55 from 2019-10

POS in order of assembly