

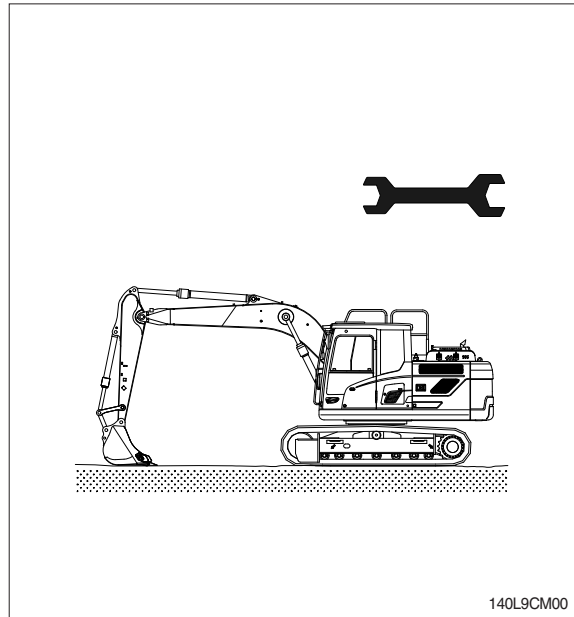
SECTION 9 COMPONENT MOUNTING TORQUE

Group 1	Introduction guide	9-1
Group 2	Engine system	9-2
Group 3	Electric system	9-4
Group 4	Hydraulic system	9-6
Group 5	Undercarriage	9-9
Group 6	Structure	9-10
Group 7	Work equipment	9-14

SECTION 9 COMPONENT MOUNTING TORQUE

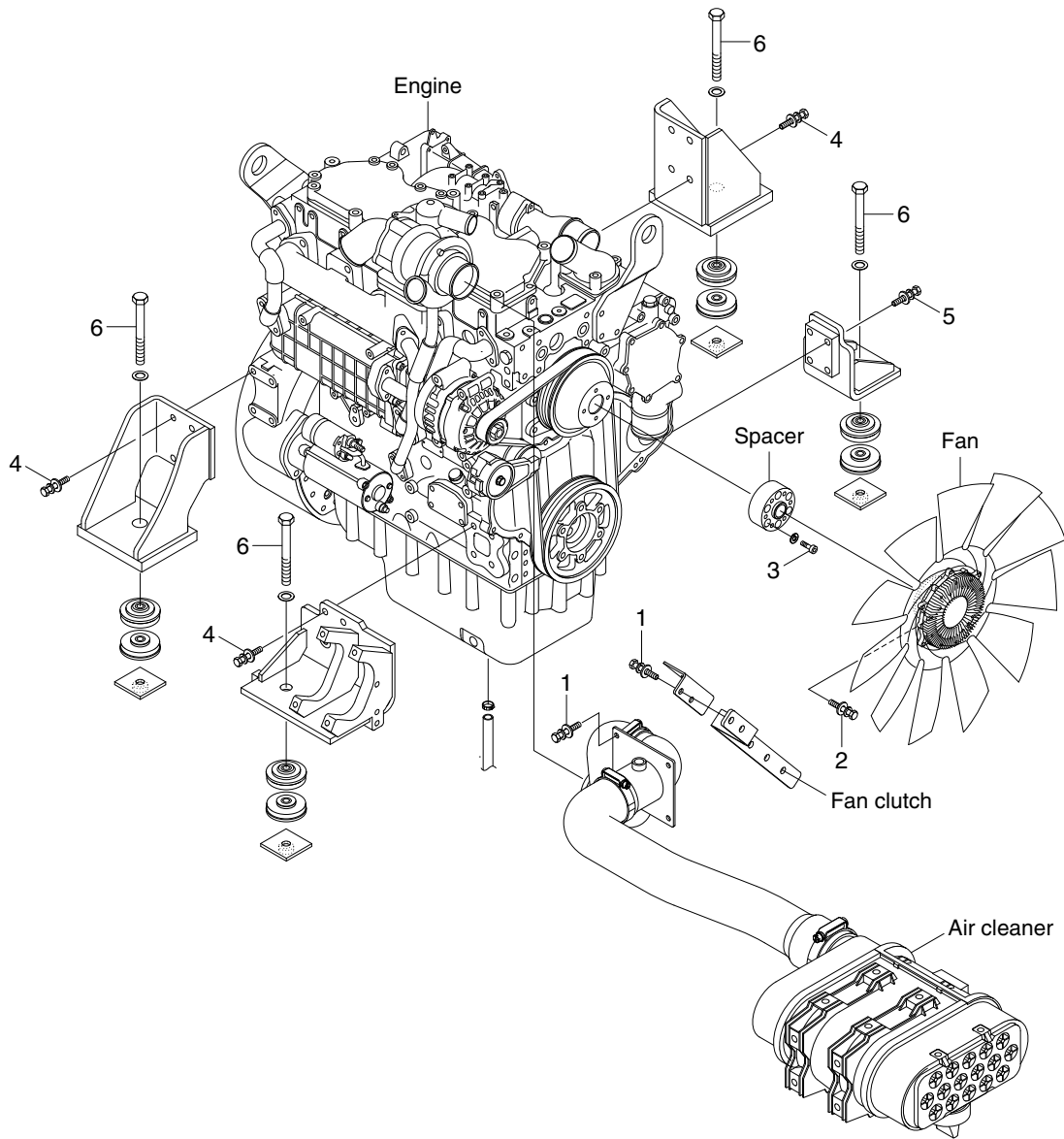
GROUP 1 INTRODUCTION GUIDE

1. This section shows bolt specifications and standard torque values needed when mounting components to the machine.
 2. Use genuine Hyundai spare parts.
We expressly point out that Hyundai will not accept any responsibility for defects resulted from non-genuine parts.
In such cases Hyundai cannot assume liability for any damage.
- ※ Only metric fasteners can be used and incorrect fasteners may result in machine damage or malfunction.
Be careful not to use metric fastener in case inch fastener was used.
 - ※ Before installation, clean all the components with a non-corrosive cleaner.
Bolts and threads must not be worn or damaged.



GROUP 2 ENGINE SYSTEM

1. ENGINE AND ACCESSORIES MOUNTING



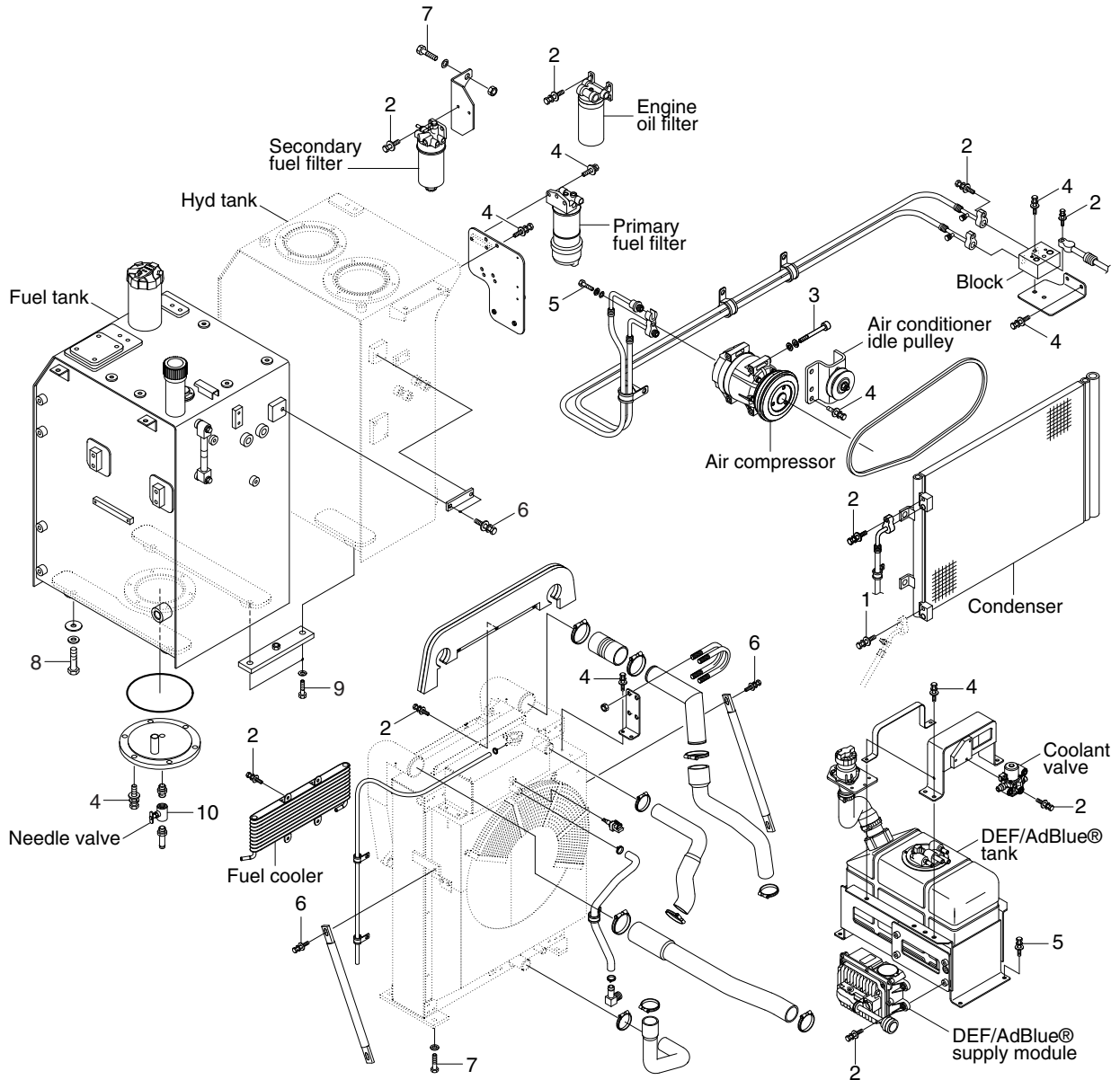
140L9CM01

· Tightening torque

Item	Size	kgf · m	lbf · ft
1	M 8×1.25	2.5±0.5	18.1±3.6
2	M10×1.5	6.9±1.4	49.9±10.1
3	M10×1.5	8.27±1.7	59.8±12.3

Item	Size	kgf · m	lbf · ft
4	M12×1.75	7.9±2.0	57.1±14.5
5	M12×1.75	11.2±1.1	81±8.0
6	M16×2.0	34.0±4.0	246±28.9

2. COOLING SYSTEM AND FUEL TANK MOUNTING



140L9CM02

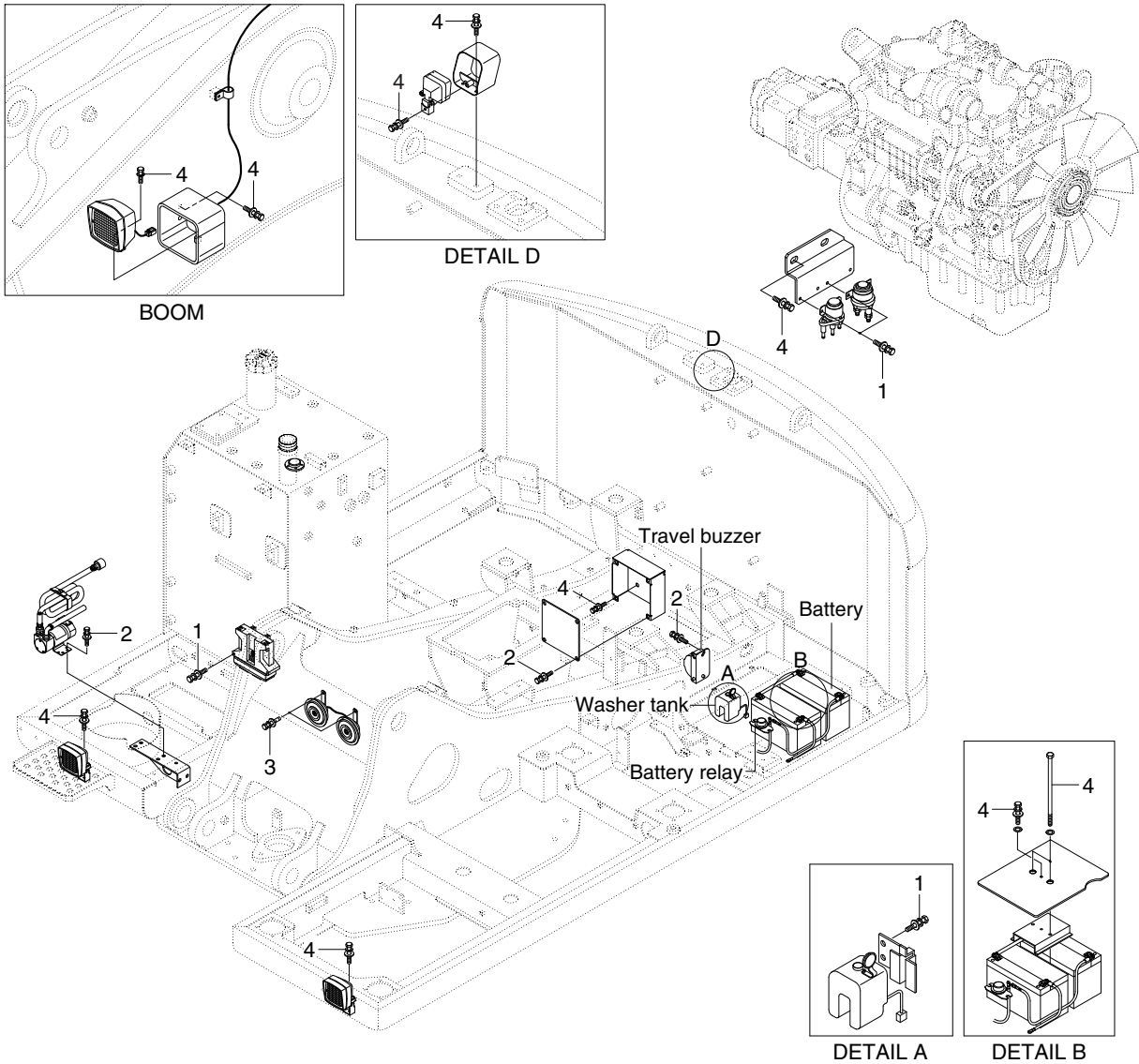
· Tightening torque

Item	Size	kgf · m	lbf · ft
1	M 6×1.0	1.05±0.2	7.6±1.45
2	M 8×1.25	2.5±0.5	18.1±3.6
3	M 8×1.25	4.05±0.8	29.3±5.8
4	M10×1.5	6.9±1.4	49.9±10.1
5	M10×1.25	7.4±1.5	53.5±10.8

Item	Size	kgf · m	lbf · ft
6	M12×1.75	12.8±3.0	92.6±21.7
7	M16×2.0	29.7±4.5	215±32.5
8	M20×2.5	46±5.1	333±36.9
9	M20×2.5	57.9±8.7	419±62.9
10	-	2.3±0.6	16.6±4.3

GROUP 3 ELECTRIC SYSTEM

1. ELECTRIC COMPONENTS MOUNTING 1



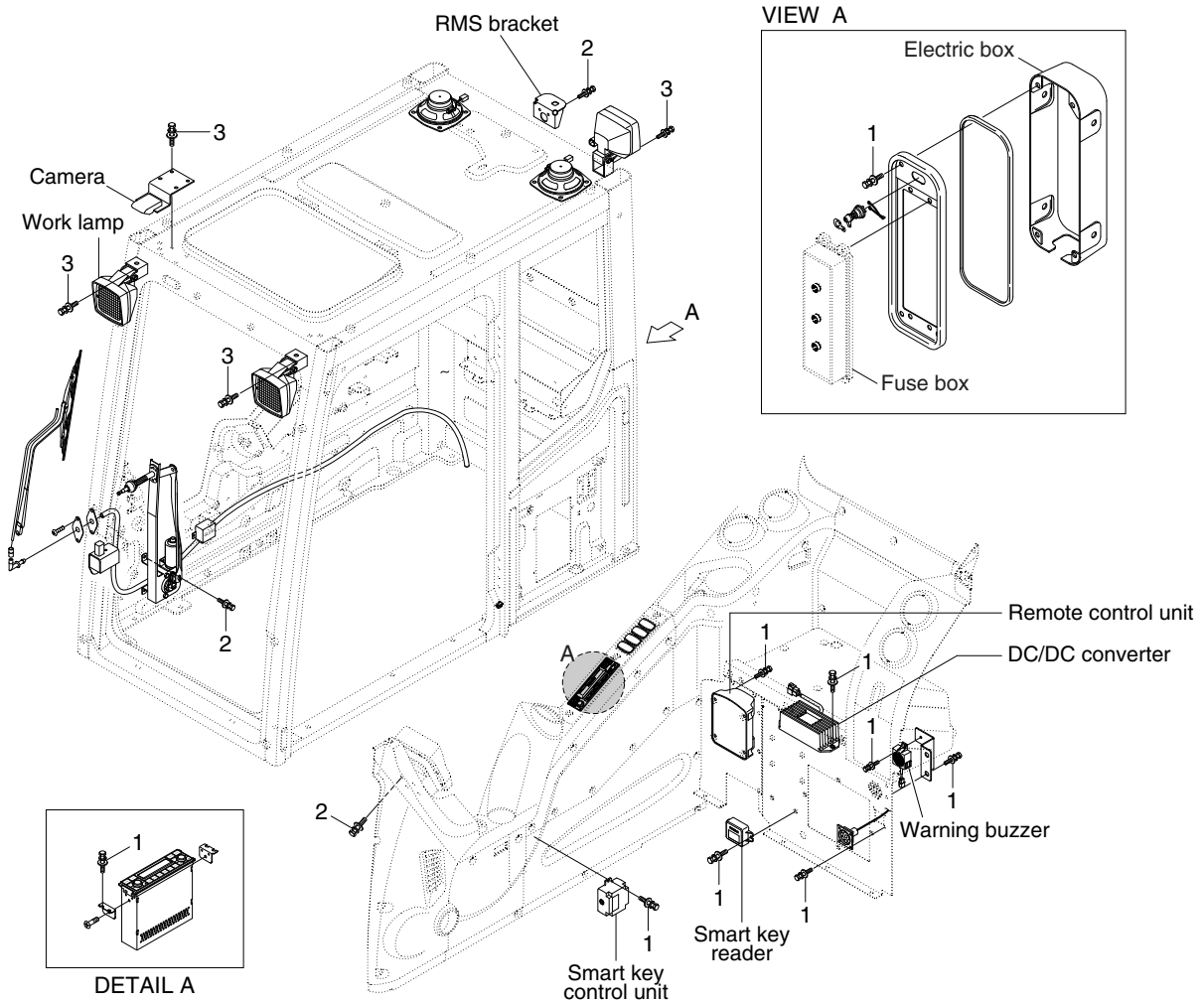
140L9CM03

· Tightening torque

Item	Size	kgf · m	lbf · ft
1	M 6×1.0	1.05±0.2	7.6±1.45
2	M 8×1.25	2.5±0.5	18.1±3.6

Item	Size	kgf · m	lbf · ft
3	M 8×1.25	3.43±0.7	24.8±5.1
4	M10×1.5	6.9±1.4	49.9±10.1

2. ELECTRIC COMPONENTS MOUNTING 2



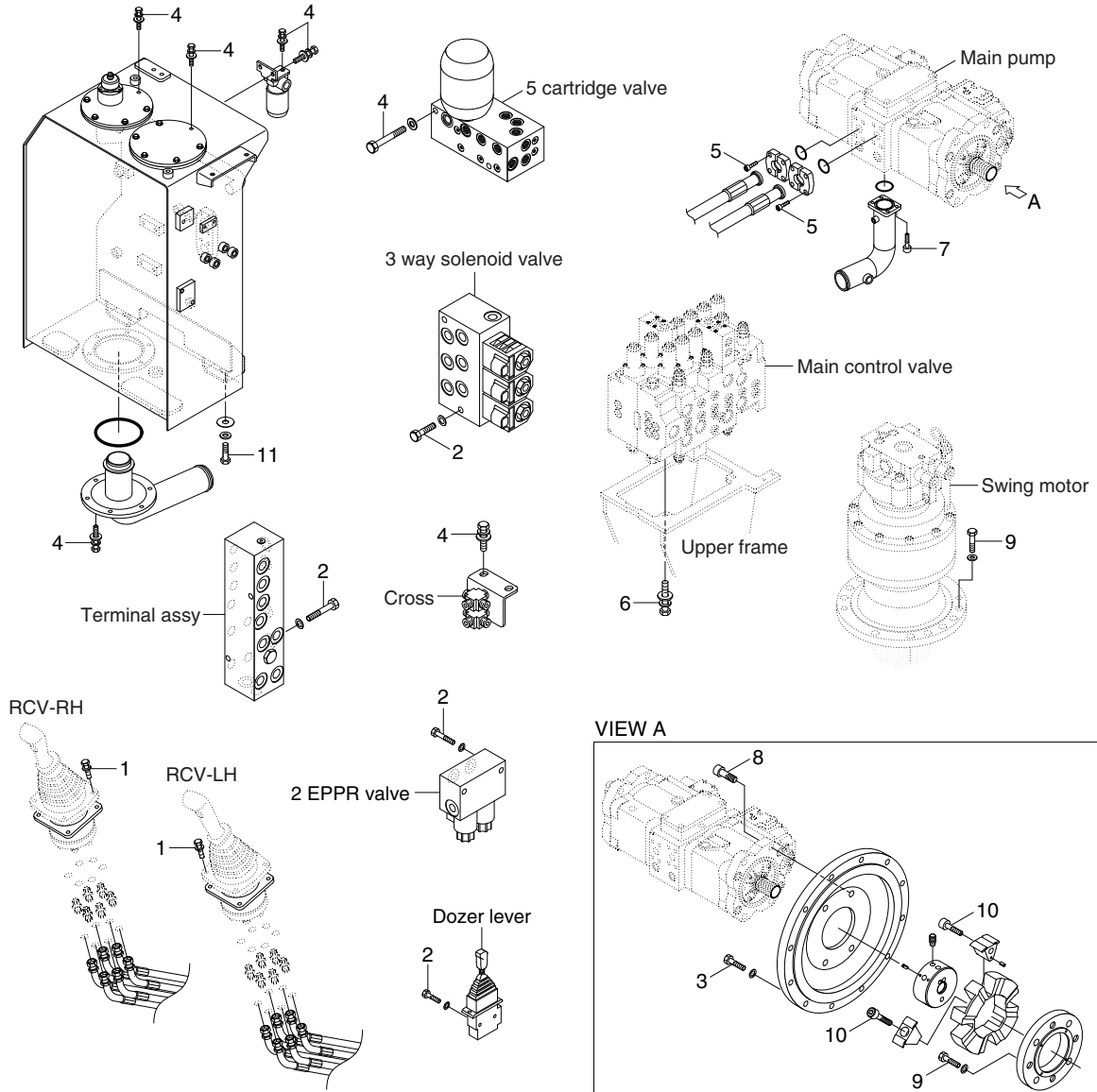
140L9CM04

· Tightening torque

Item	Size	kgf · m	lbf · ft
1	M 6×1.0	1.05±0.2	7.6±1.45
2	M 8×1.25	2.5±0.5	18.1±3.6
3	M10×1.5	6.9±1.4	49.9±10.1

GROUP 4 HYDRAULIC SYSTEM

1. HYDRAULIC COMPONENTS MOUNTING 1



140L9CM05

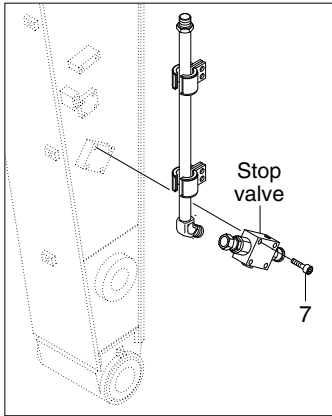
· Tightening torque

Item	Size	kgf · m	lbf · ft
1	M 6×1.0	1.05±0.2	7.6±1.45
2	M 6×1.0	1.44±0.3	10.4±2.2
3	M10×1.5	6.0±1.5	43.4±10.9
4	M10×1.5	6.9±1.4	49.9±10.1
5	M10×1.5	8.27±1.7	59.8±12.3
6	M12×1.75	12.2±1.3	88.2±9.4

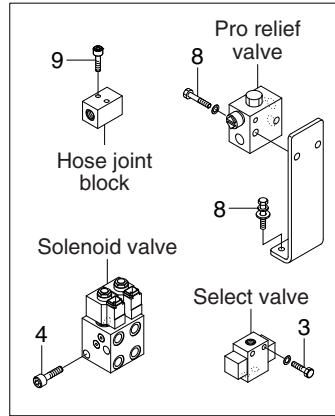
Item	Size	kgf · m	lbf · ft
7	M12×1.75	14.7±2.2	106±15.9
8	M16×2.0	22.0±1.5	159±10.9
9	M16×2.0	29.6±3.2	214±23.1
10	M16×2.0	32.0±1.6	231±11.6
11	M20×2.5	46±5.1	333±36.9

2. HYDRAULIC COMPONENTS MOUNTING 2

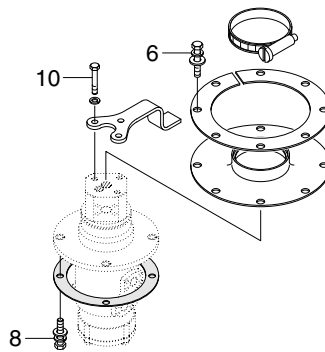
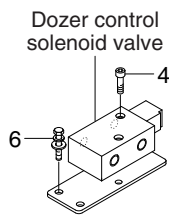
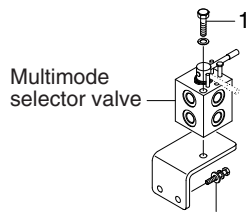
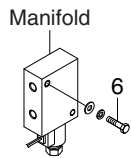
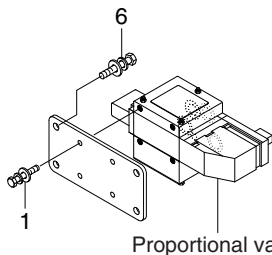
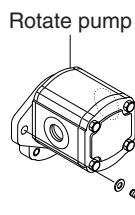
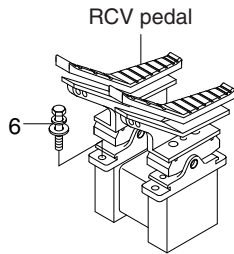
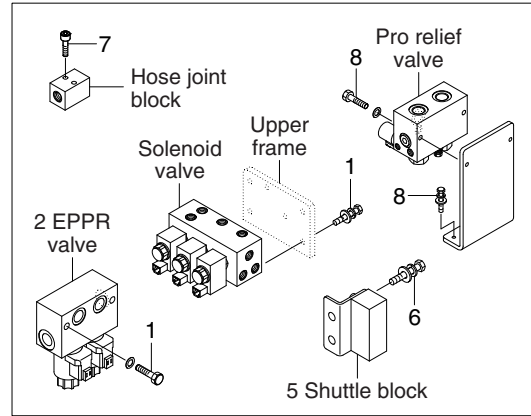
S & D/acting attachment piping



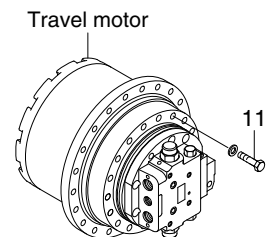
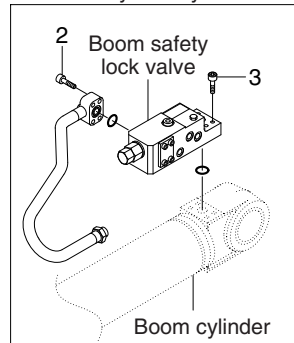
Single acting main piping



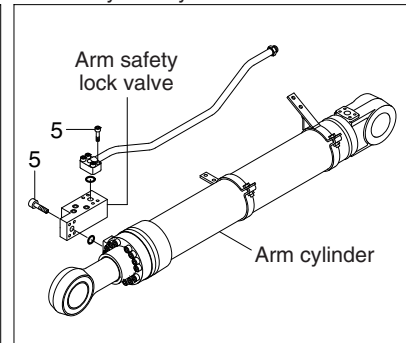
Double acting main piping



Boom safety lock system



Arm safety lock system



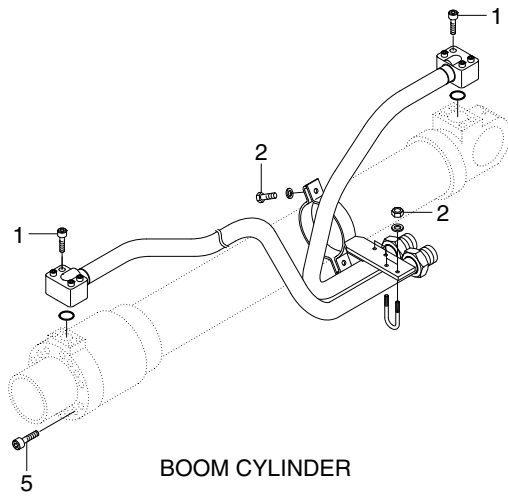
140L9CM06

· Tightening torque

Item	Size	kgf · m	lbf · ft
1	M 8 × 1.25	2.5 ± 0.5	18.1 ± 3.6
2	M 8 × 1.25	2.7 ± 0.3	19.5 ± 2.2
3	M 8 × 1.25	3.43 ± 0.7	24.8 ± 5.1
4	M 8 × 1.25	4.05 ± 0.8	29.3 ± 5.8
5	M 10 × 1.5	5.4 ± 0.5	39.1 ± 3.6
6	M 10 × 1.5	6.9 ± 1.4	49.9 ± 10.1

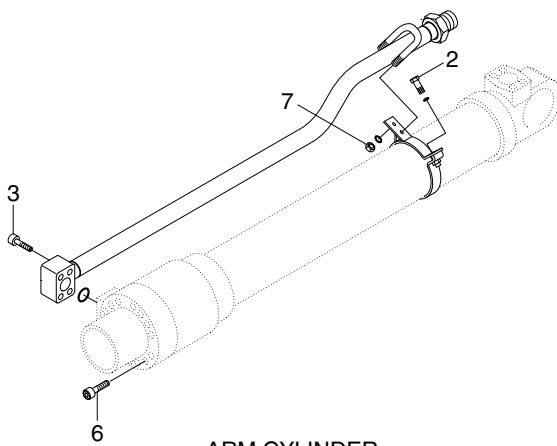
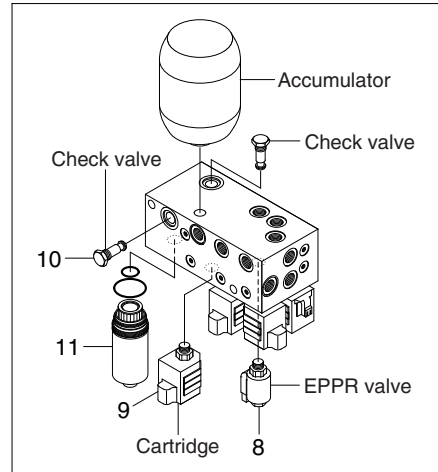
Item	Size	kgf · m	lbf · ft
7	M 10 × 1.5	8.27 ± 1.7	59.8 ± 12.3
8	M 12 × 1.75	12.8 ± 3.0	92.6 ± 21.7
9	M 12 × 1.75	14.7 ± 2.2	106 ± 15.9
10	M 14 × 2.0	19.6 ± 2.9	142 ± 21.0
11	M 16 × 2.0	25.7 ± 4.0	186 ± 28.9

3. HYDRAULIC COMPONENTS MOUNTING 3

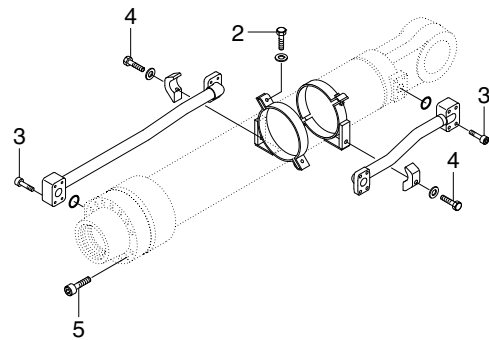


BOOM CYLINDER

Solenoid valve



ARM CYLINDER



BUCKET CYLINDER

140L9CM07

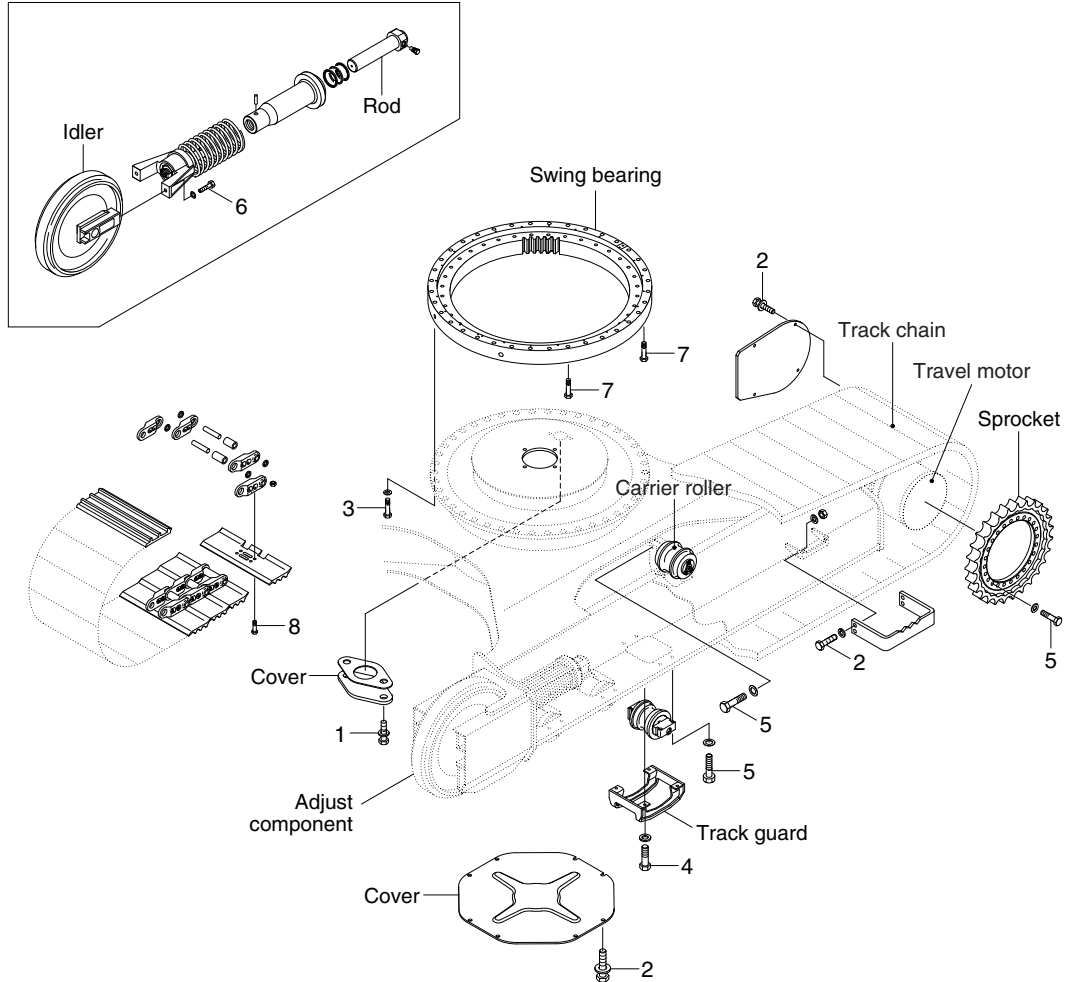
· Tightening torque

Item	Size	kgf · m	lbf · ft
1	M 8×1.25	2.7±0.3	19.5±2.2
2	M10×1.5	3.2±0.3	23.1±2.2
3	M10×1.5	5.4±0.5	39.1±3.6
4	M12×1.75	5.5±0.6	39.8±4.3
5	M14×2.0	15±2.0	108±14.5
6	M16×2.0	23±2.0	166±14.5

Item	Size	kgf · m	lbf · ft
7	M10×1.5	5.0±1.0	36.2±7.2
8	EPPR valve	2.5	18.1
9	Cartridge	3.5	25.3
10	Check valve	4.0	28.9
11	Line filter	2.5	18.1

GROUP 5 UNDERCARRIAGE

ADJUST COMPONENT



140L9CM08

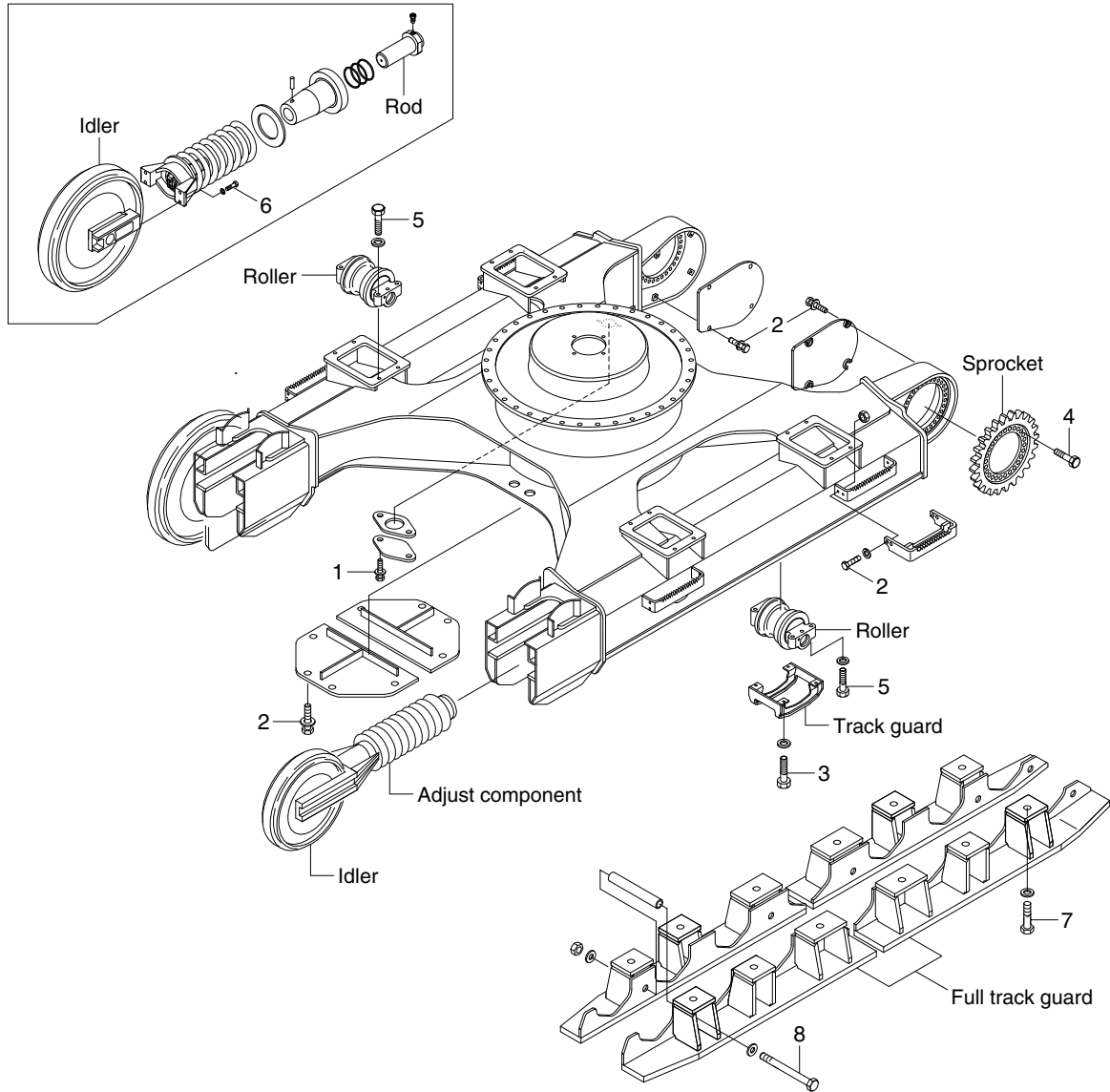
· Tightening torque

Item	Size	kgf · m	lbf · ft
1	M10×1.5	6.9±1.4	49.9±10.1
2	M12×1.75	12.8±3.0	92.6±21.7
3	M16×1.5	31.3±3.2	226±23.1
4	M16×2.0	29.6±3.2	214±23.1

Item	Size	kgf · m	lbf · ft
5	M16×2.0	29.7±3.0	215±23.1
6	M16×2.0	29.7±4.5	215±32.5
7	M18×2.5	41.3±4.5	299±32.5
8	5/8"-18 UNF	42±4.0	304±28.9

UNDERCARRIAGE MOUNTING (HIGH WALKER)

ADJUST COMPONENT



140L9CM09

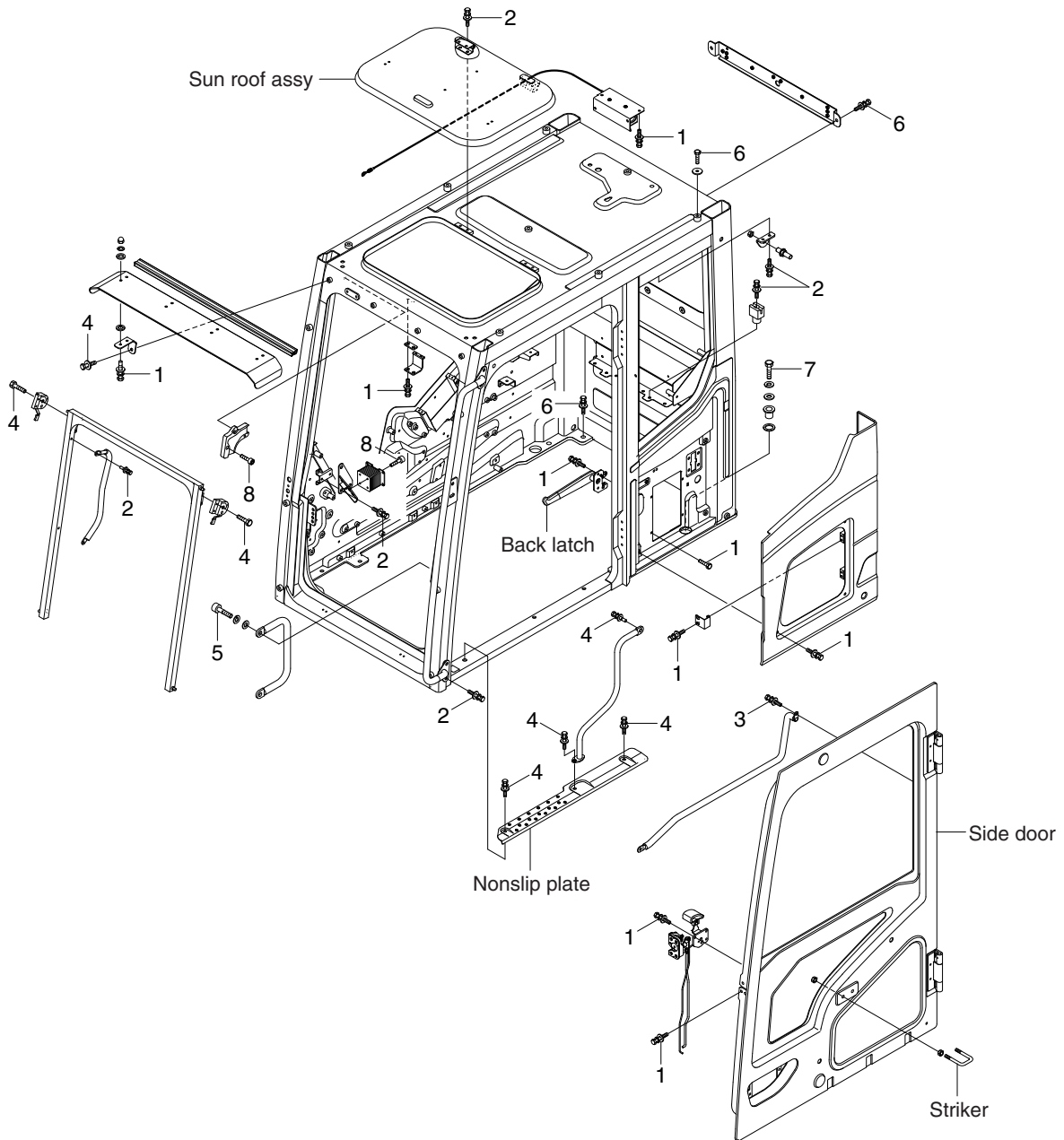
· Tightening torque

Item	Size	kgf · m	lbf · ft
1	M10×1.5	6.9±1.4	49.9±10.1
2	M12×1.75	12.8±3.0	92.6±21.7
3	M16×2.0	29.6±3.2	214±23.1
4	M16×2.0	29.7±3.0	215±21.7

Item	Size	kgf · m	lbf · ft
5	M20×2.5	57.9±6.0	419±43.4
6	M16×2.0	29.7±4.5	215±32.5
7	M20×2.5	57.9±8.7	419±62.9
8	M24×3.0	100±15	723±108

GROUP 6 STRUCTURE

1. CAB AND ACCESSORIES MOUNTING



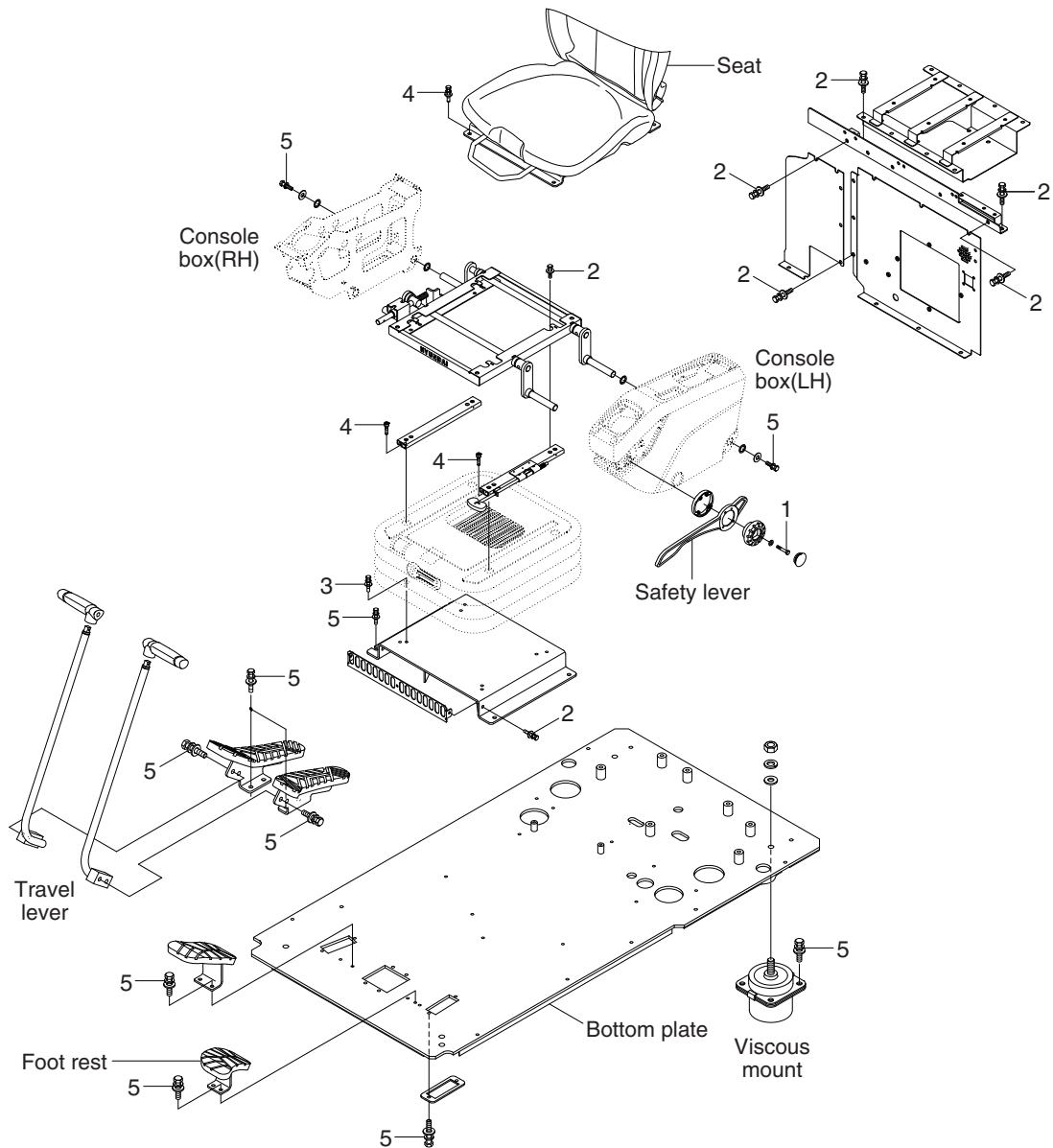
140L9CM10

· Tightening torque

Item	Size	kgf · m	lbf · ft
1	M 6×1.0	1.05±0.2	7.6±1.45
2	M 8×1.25	2.5±0.5	18.1±3.6
3	M 8×1.25	3.43±0.7	24.8±5.1
4	M10×1.5	6.9±1.4	49.9±10.1

Item	Size	kgf · m	lbf · ft
5	M10×1.5	8.27±1.7	59.8±12.3
6	M12×1.75	12.8±3.0	92.6±21.7
7	M24×3.0	100±15	723±108
8	M 6×1.0	1.72±0.35	12.4±2.2

2. CAB INTERIOR MOUNTING



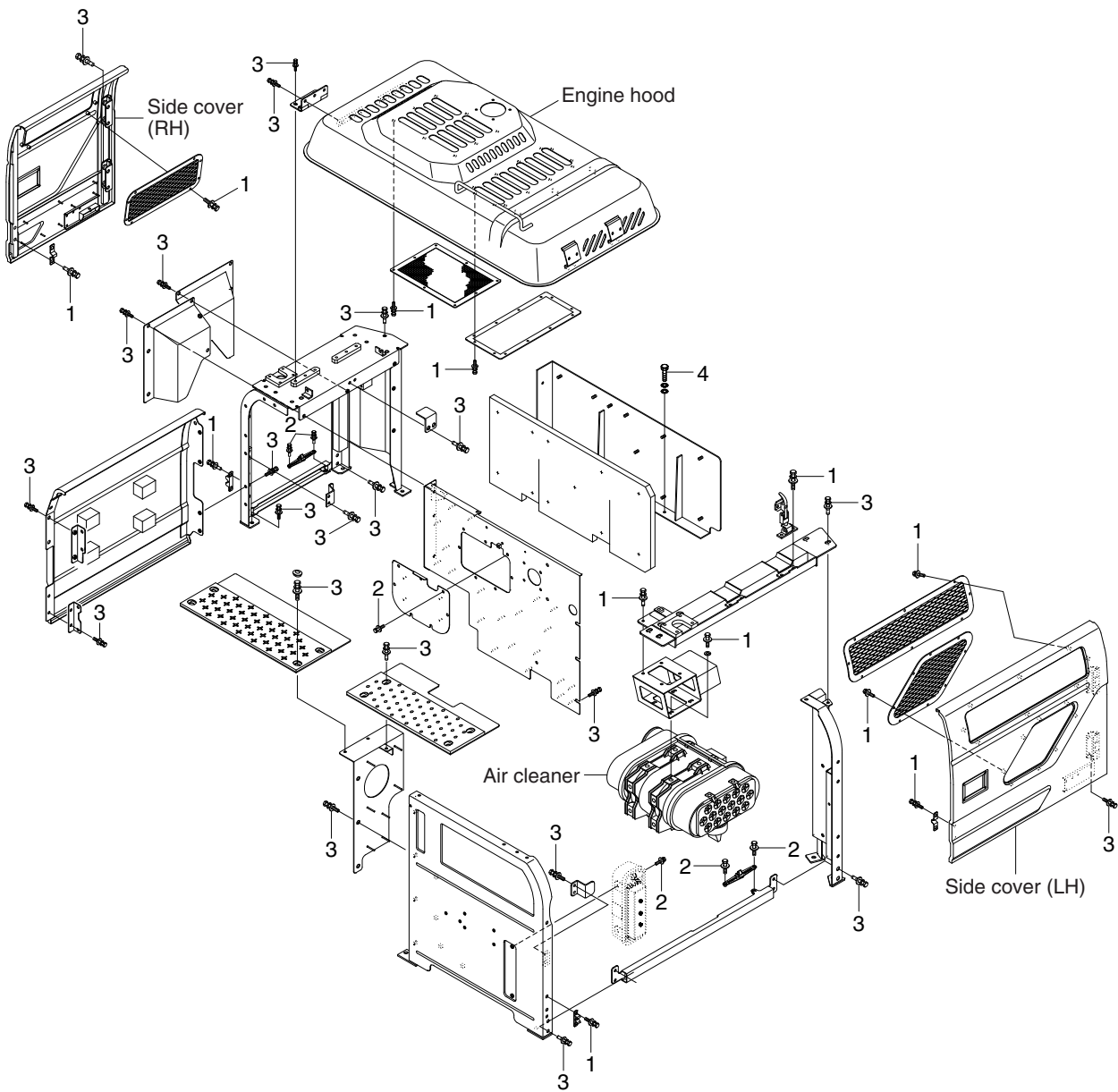
140L9CM11

· Tightening torque

Item	Size	kgf · m	lbf · ft
1	M 6×1.0	1.05±0.2	7.6±1.45
2	M 8×1.25	2.5±0.5	18.1±3.6
3	M 8×1.25	3.43±0.7	24.8±5.1

Item	Size	kgf · m	lbf · ft
4	M 8×1.25	4.05±0.8	29.3±5.8
5	M10×1.5	6.9±1.4	49.9±10.1

3. COWLING MOUNTING



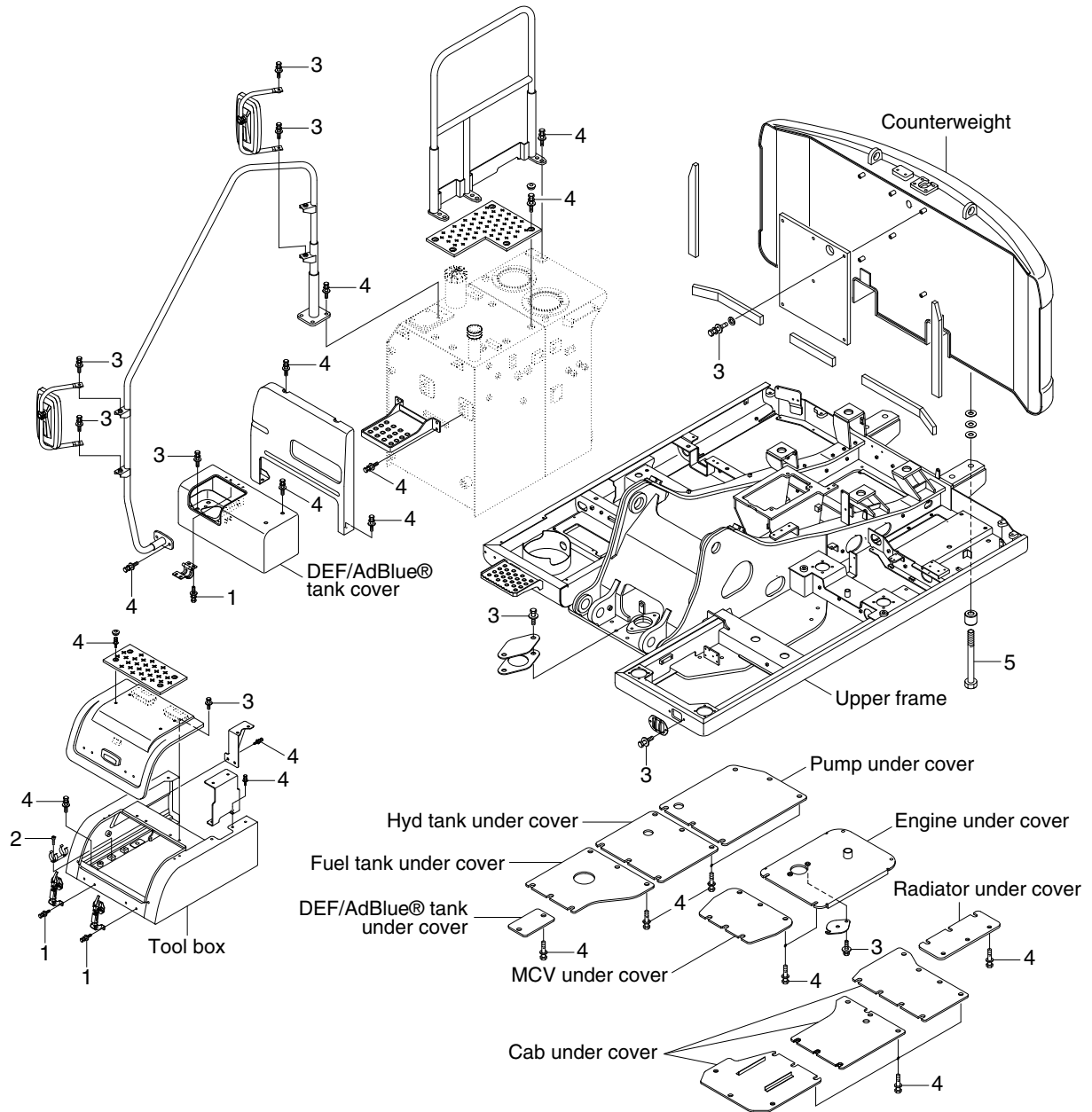
140L9CM12

· Tightening torque

Item	Size	kgf · m	lbf · ft
1	M8×1.25	2.5±0.5	18.1±3.6
2	M10×1.5	6.9±1.4	49.9±10.1

Item	Size	kgf · m	lbf · ft
3	M12×1.75	12.8±3.0	92.6±21.7
4	M16×2.0	29.7±4.5	215±32.5

4. COUNTERWEIGHT AND COVERS MOUNTING



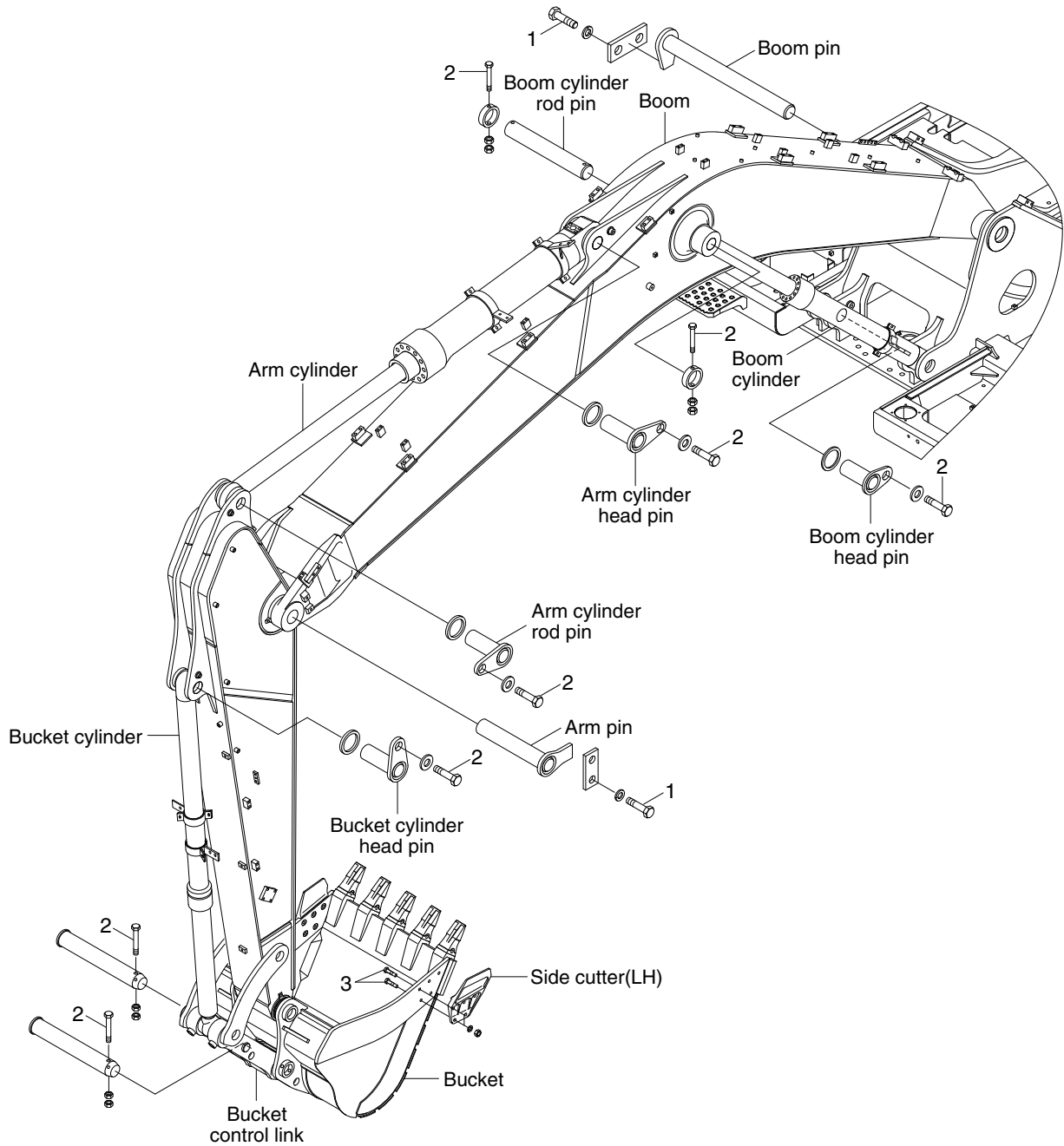
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· Tightening torque

Item	Size	kgf · m	lbf · ft
1	M 8 × 1.25	2.5 ± 0.5	18.1 ± 3.6
2	M 8 × 1.25	4.05 ± 0.8	29.3 ± 5.8
3	M10 × 1.5	6.9 ± 1.4	49.9 ± 10.1

Item	Size	kgf · m	lbf · ft
4	M12 × 1.75	12.8 ± 3.0	92.6 ± 21.7
5	M27 × 3.0	135 ± 15	976 ± 108

GROUP 7 WORK EQUIPMENT



140L9CM14

· Tightening torque

Item	Size	kgf · m	lbf · ft
1	M12×1.75	12.8±3.0	92.6±21.7
2	M16×2.0	29.7±4.5	215±32.5
3	M20×2.5	57.9±8.7	419±62.9