

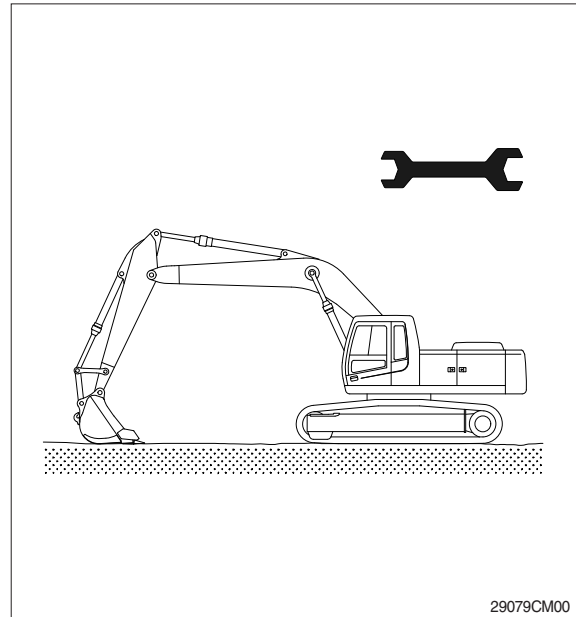
SECTION 9 COMPONENT MOUNTING TORQUE

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SECTION 9 COMPONENT MOUNTING TORQUE

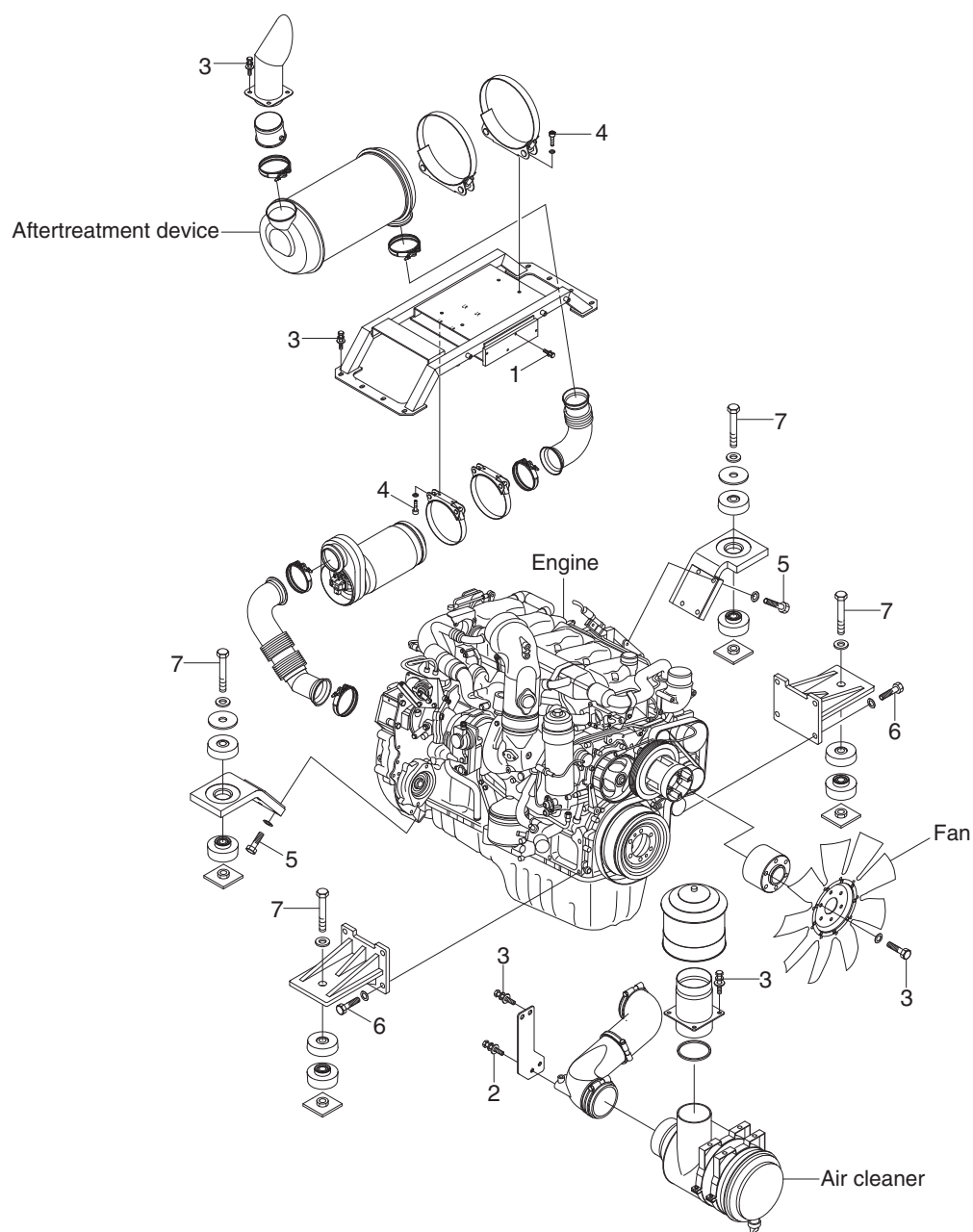
GROUP 1 INTRODUCTION GUIDE

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



GROUP 2 ENGINE SYSTEM

ENGINE AND ACCESSORIES MOUNTING



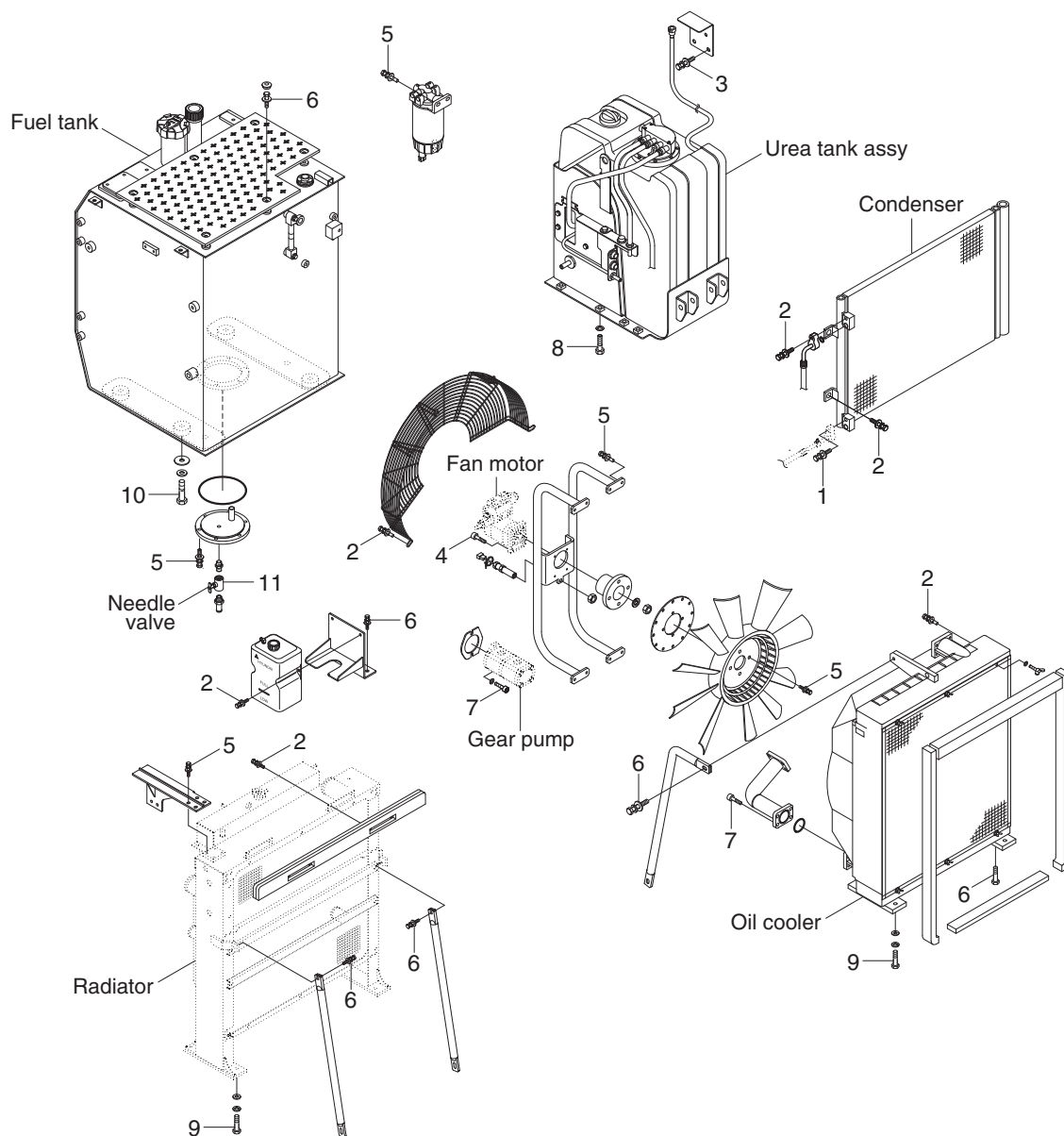
480L9CM01

· 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	3.43±0.7	24.8±5.1
3	M12×1.75	12.8±3.0	92.6±21.7
4	M12×1.75	14.7±2.2	106±15.9

Item	Size	kgf · m	lbf · ft
5	M14×2.0	18±2.0	13.0±14.5
6	M16×1.5	28±3.0	203±21.7
7	M22×2.5	69.6±7.0	503±50.6
-	-	-	-

COOLING SYSTEM AND FUEL TANK MOUNTING



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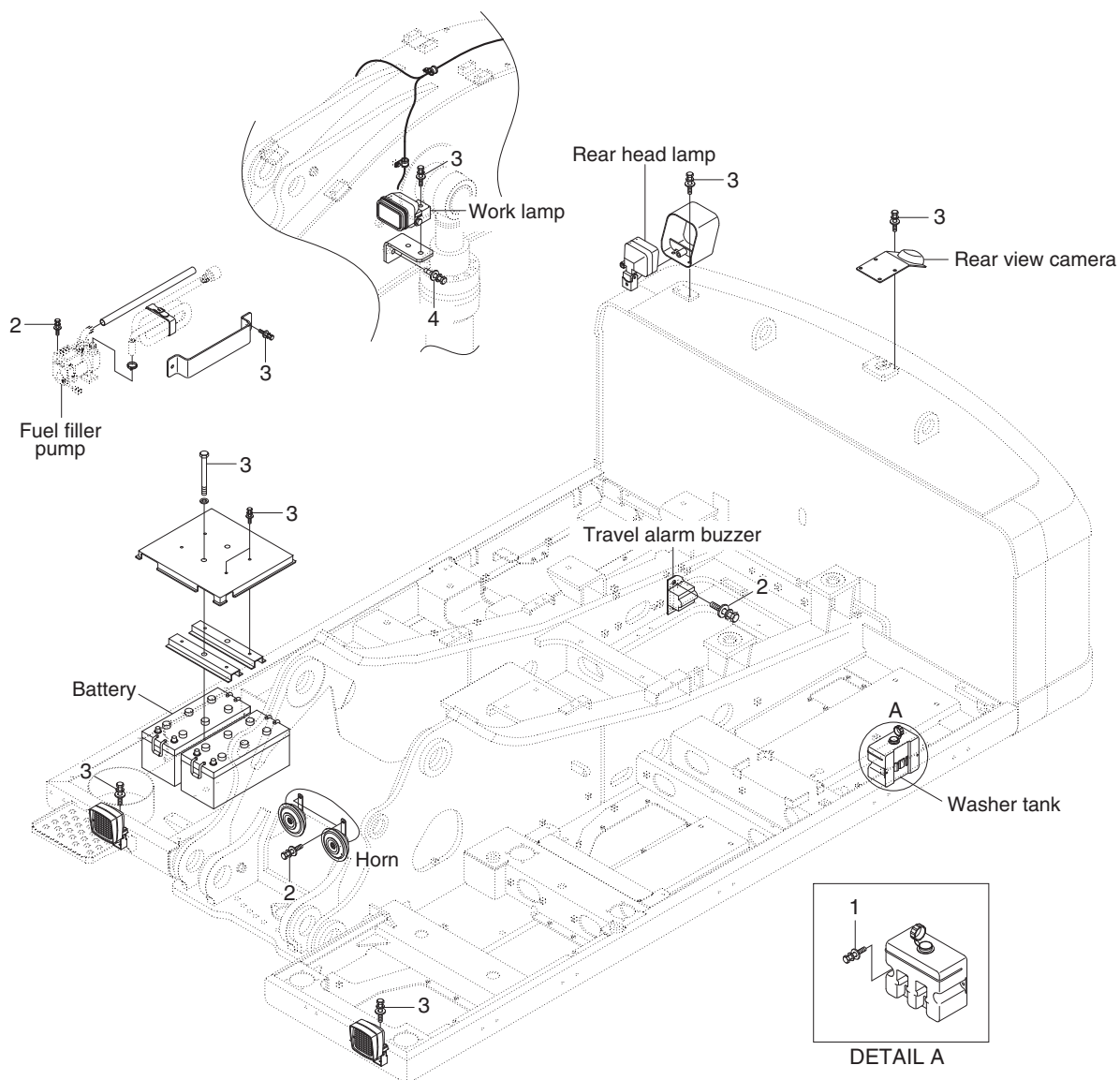
· Tightening torque

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	M 8×1.25	4.05±0.8	29.3±5.8
5	M10×1.5	6.9±1.4	49.9±10.1
6	M12×1.75	12.8±3.0	92.6±21.7

Item	Size	kgf · m	lbf · ft
7	M12×1.75	14.7±2.2	106±15.9
8	M14×2.0	19.6±2.9	142±21.0
9	M16×2.0	29.7±4.5	215±32.5
10	M20×2.5	46±5.1	333±36.9
11	-	2.3±0.6	16.6±4.3
-	-	-	-

GROUP 3 ELECTRIC SYSTEM

ELECTRIC COMPONENTS MOUNTING 1



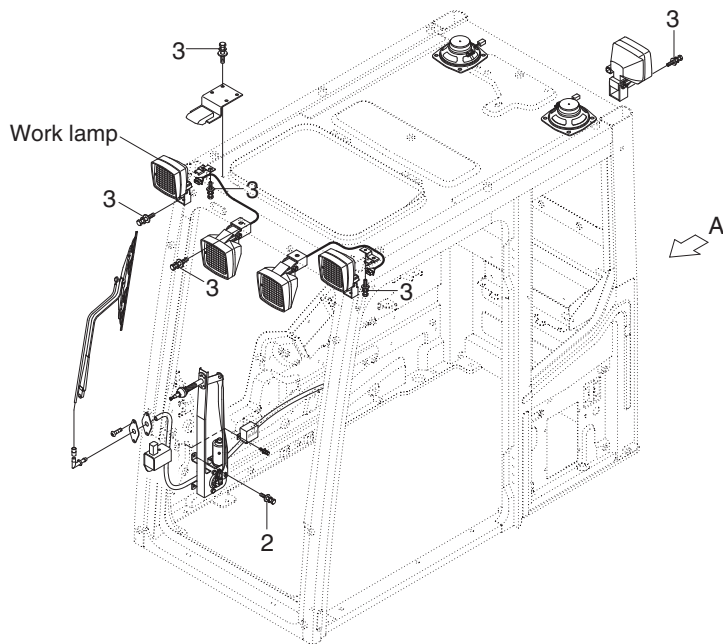
480L9CM03

· Tightening torque

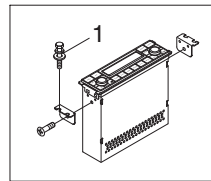
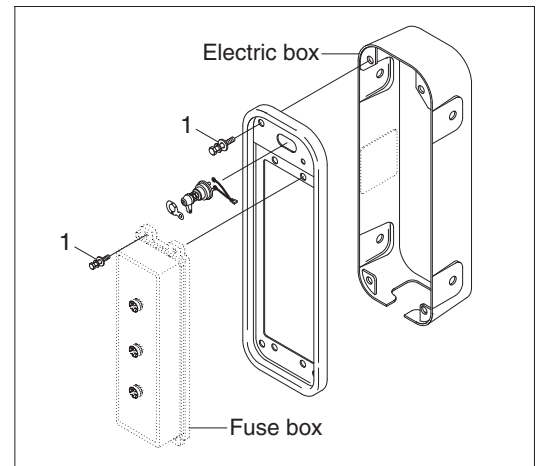
Item	Size	kgf · m	lbf · ft
1	M 6×1.0	1.05±0.2	7.6±1.45
2	M 8×1.25	2.5±0.5	18.1±3.6

Item	Size	kgf · m	lbf · ft
3	M10×1.5	6.9±1.4	49.9±10.1
4	M12×1.75	12.8±3.0	92.6±21.7

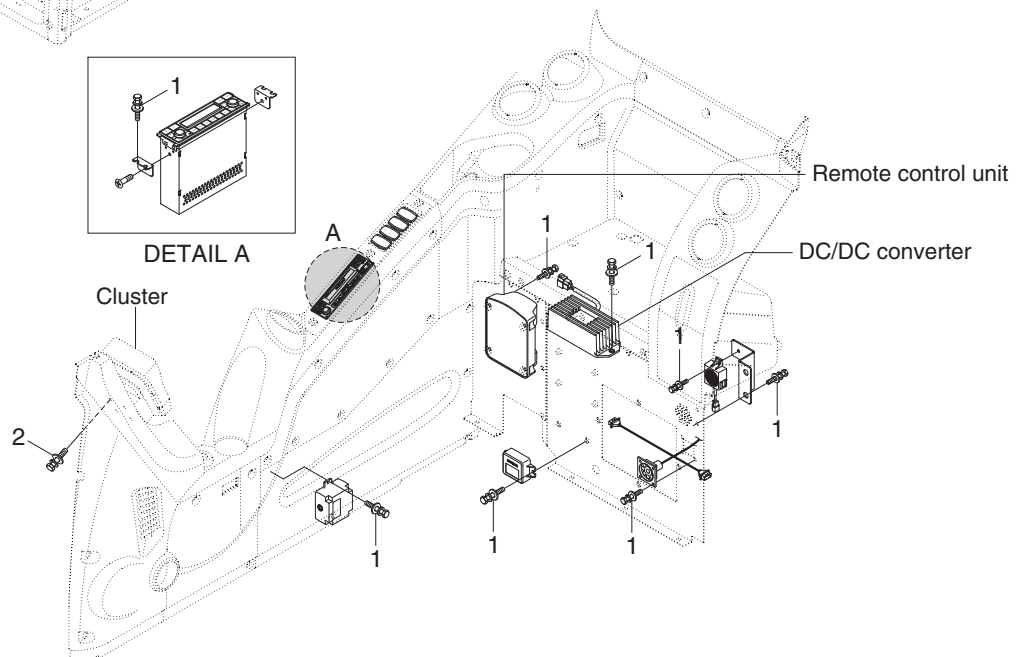
ELECTRIC COMPONENTS MOUNTING 2



VIEW A



DETAIL A



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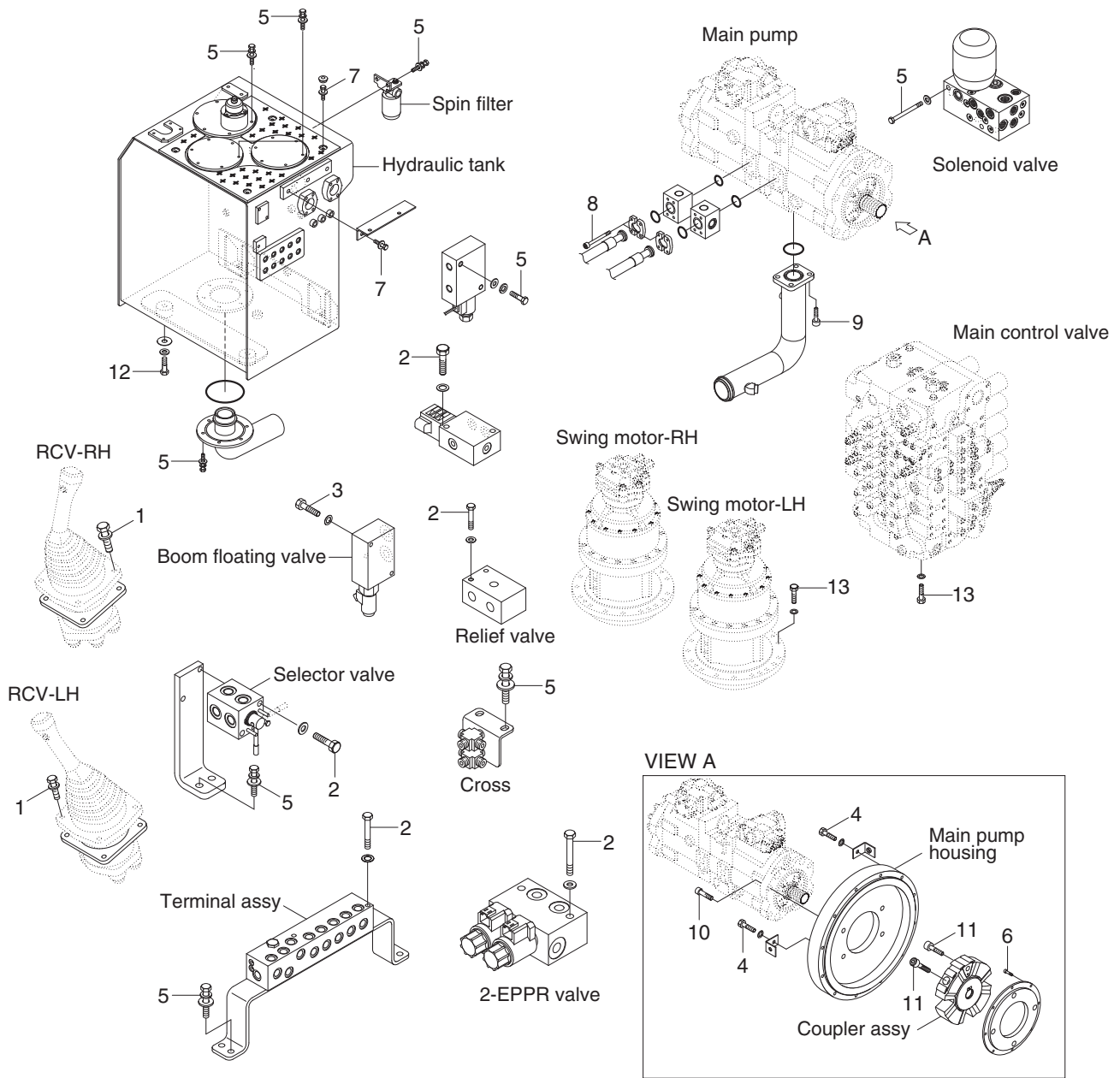
- Tightening torque

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	M10×1.5	6.9±1.4	49.9±10.1

GROUP 4 HYDRAULIC SYSTEM

HYDRAULIC COMPONENTS MOUNTING 1



480L9CM05

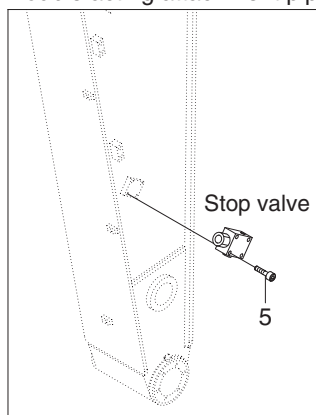
· Tightening torque

Item	Size	kgf · m	lbf · ft
1	M6×1.0	1.05±0.2	7.6±1.45
2	M8×1.25	2.5±0.5	18.1±3.6
3	M8×1.25	3.43±0.7	24.8±5.1
4	M10×1.5	6.7±1.0	48.7±7.2
5	M10×1.5	6.9±1.4	49.9±10.1
6	M10×1.5	8.27±1.7	59.8±12.3
7	M12×1.75	12.8±3.0	92.6±21.7

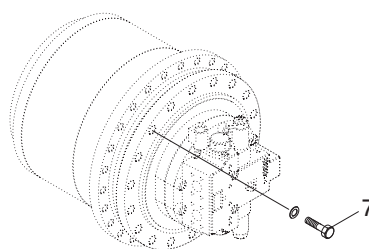
Item	Size	kgf · m	lbf · ft
8	M12×1.75	14.7±2.2	106±15.9
9	M16×2.0	35.6±7.1	257±51
10	M20×2.5	44±6.6	318±47.7
11	M20×2.5	46.5±2.5	336±18.1
12	M20×2.5	57.9±8.0	419±57.9
13	M20×2.5	57.9±8.7	419±62.9
-	-	-	-

HYDRAULIC COMPONENTS MOUNTING 2

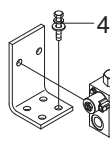
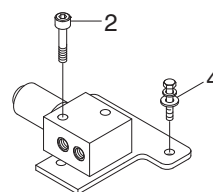
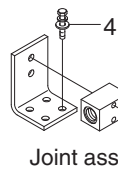
Double acting attachment piping



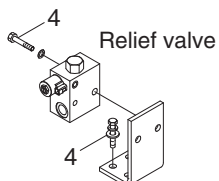
Travel motor



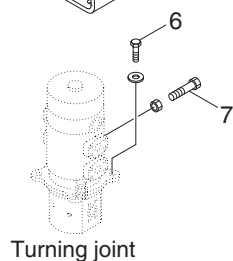
Joint assy



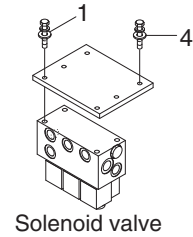
Relief valve



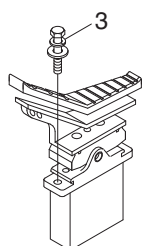
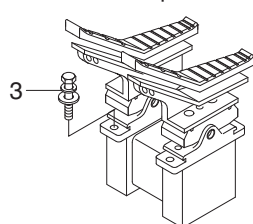
Turning joint



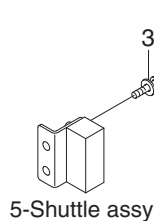
Solenoid valve



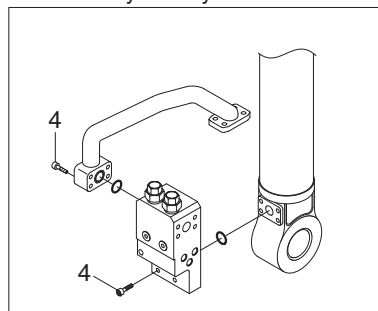
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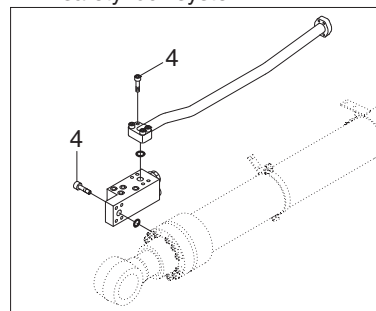
5-Shuttle assy



Boom safety lock system



Arm safety lock system



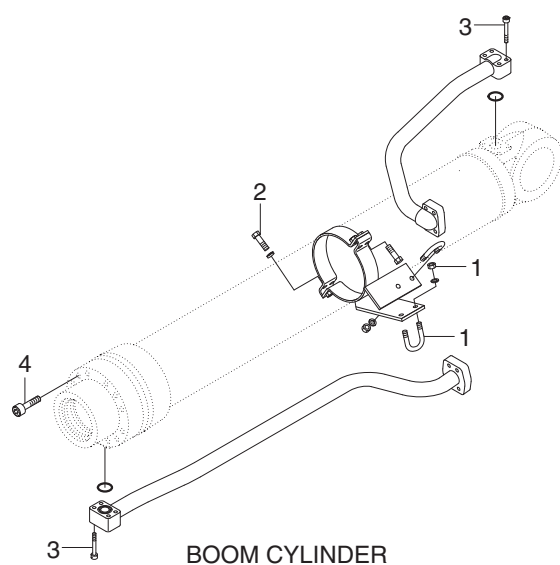
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· Tightening torque

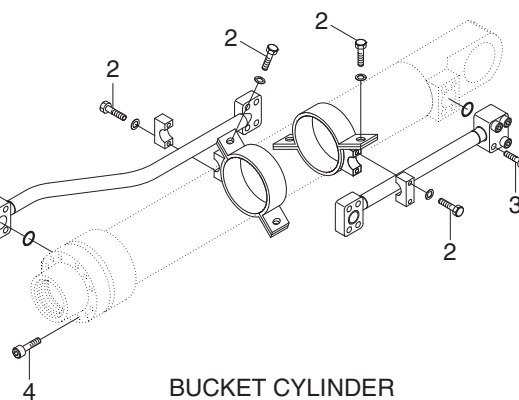
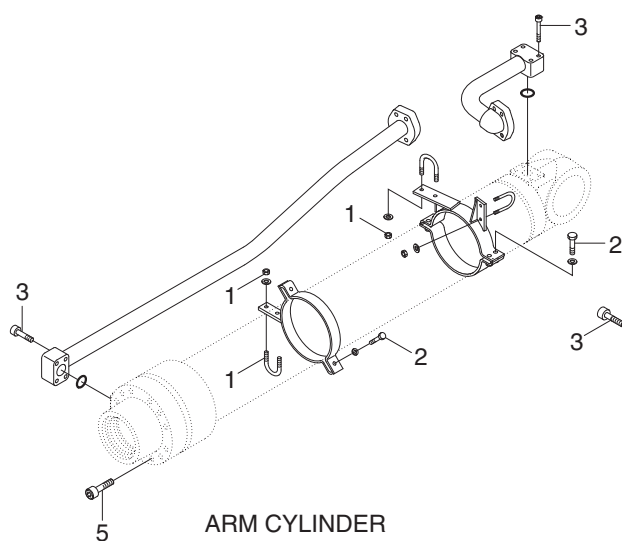
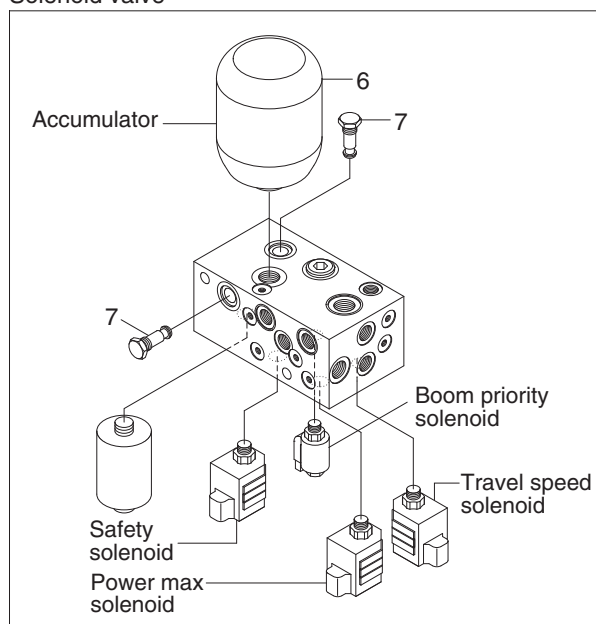
Item	Size	kgf · m	lbf · ft
1	M 8×1.25	2.5±0.5	18.1±3.6
2	M 8×1.25	4.05±0.8	29.3±5.8
3	M10×1.5	6.9±1.4	49.9±10.1
4	M12×1.75	12.8±3.0	92.6±21.7

Item	Size	kgf · m	lbf · ft
5	M12×1.75	14.7±2.2	106±15.9
6	M16×2.0	29.7±4.5	215±32.5
7	M20×2.5	57.9±8.7	419±62.9
-	-	-	-

HYDRAULIC COMPONENTS MOUNTING 3



Solenoid valve



480L9CM07

· Tightening torque

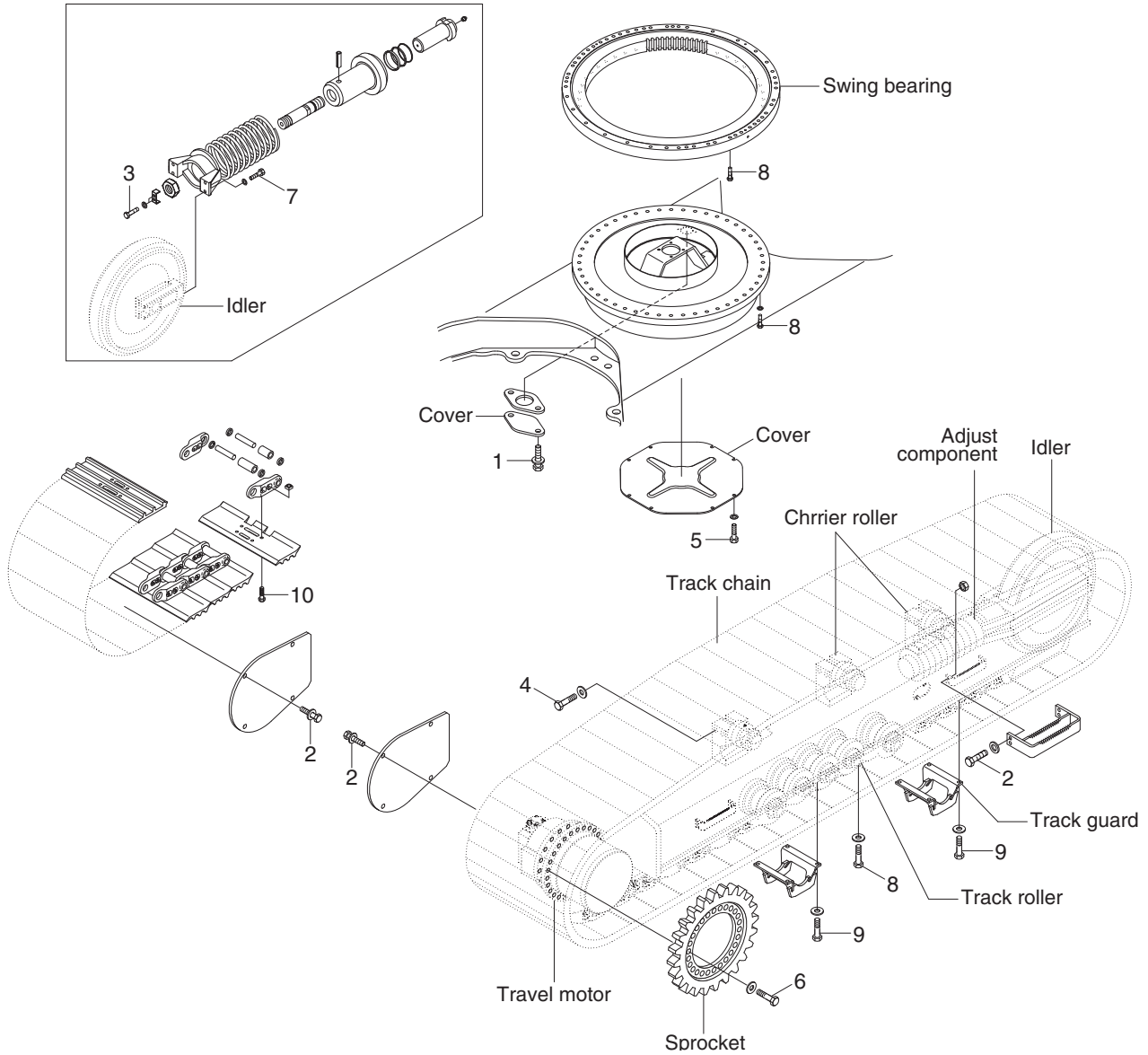
Item	Size	kgf · m	lbf · ft
1	M10×1.5	3.2±0.3	23.1±2.2
2	M12×1.75	5.5±0.6	39.8±4.3
3	M12×1.75	9.4±1.0	68.0±7.2
4	M22×2.5	63±6.0	456±43.4

Item	Size	kgf · m	lbf · ft
5	M24×3.0	79±8.0	571±57.9
6	M22×2.5	4.1	29.6
7	M27×3.0	5.1	36.9
-	-	-	-

GROUP 5 UNDERCARRIAGE

• HX480 L

ADJUST COMPONENT



480L9CM08

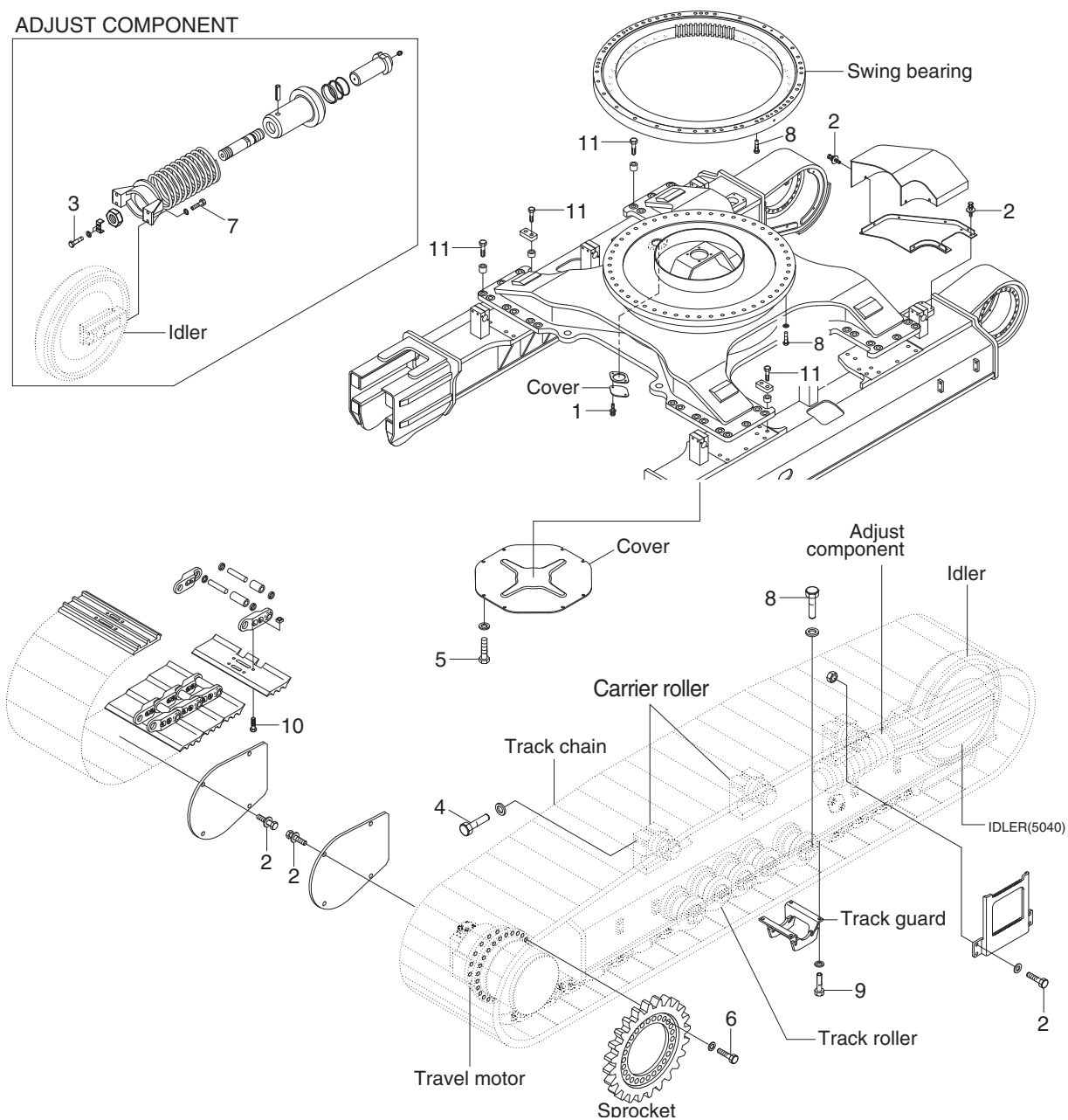
• Tightening torque

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	M14×1.5	21±3.1	152±22.4
4	M16×2.0	29.7±3.0	215±21.7
5	M16×2.0	29.7±4.5	215±32.5

Item	Size	kgf · m	lbf · ft
6	M20×2.5	57.9±6.0	419±43.4
7	M22×1.5	87.2±12.5	631±90.4
8	M24×3.0	100±10	723±72.3
9	M24×3.0	100±15	723±108
10	M24×3.0	140±14	1012±101

• HX520 L

ADJUST COMPONENT



520L9CM08

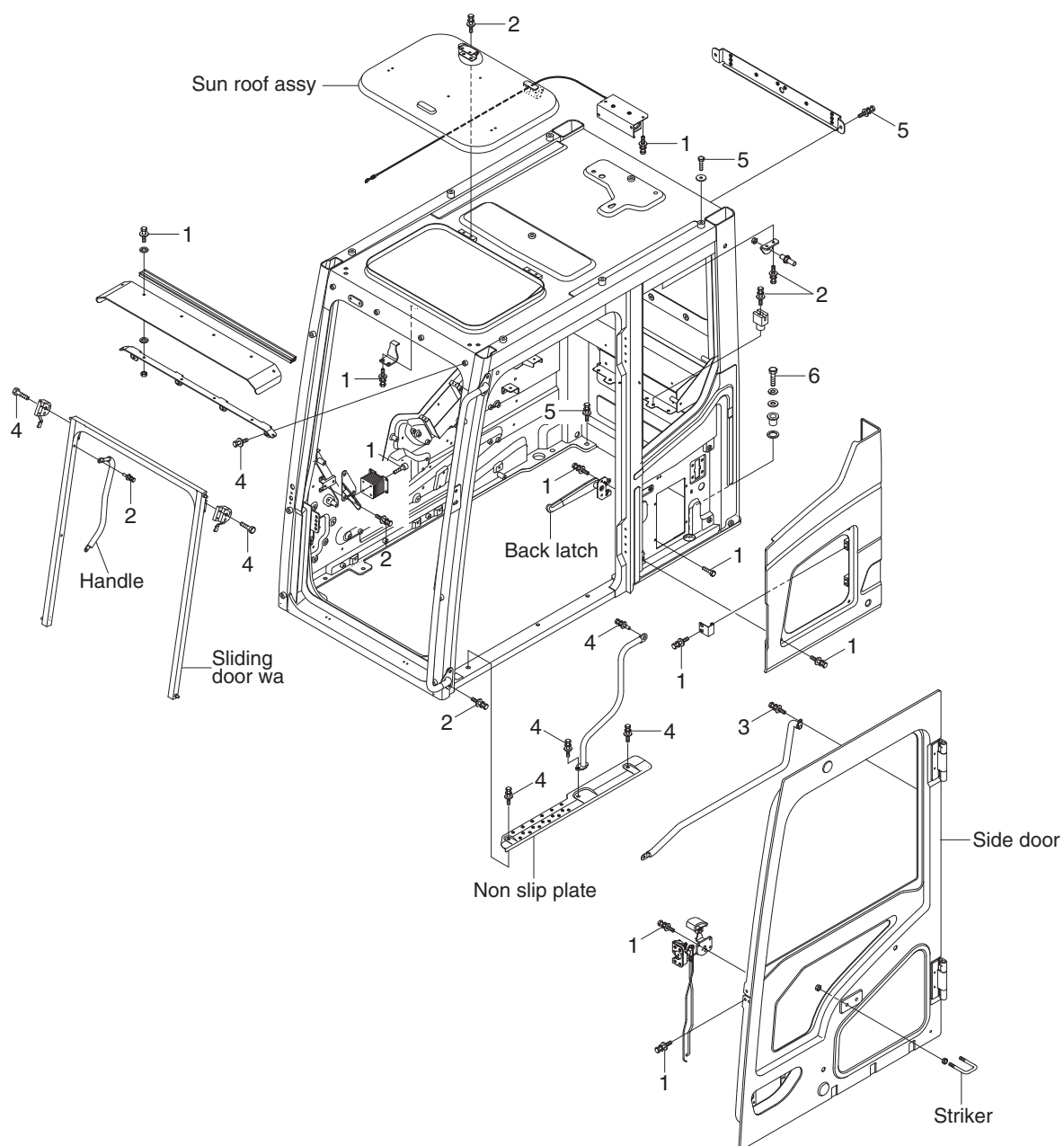
• Tightening torque

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	M14×1.5	21±3.1	152±22.4
4	M16×2.0	29.7±3.0	215±21.7
5	M16×2.0	29.7±4.5	215±32.5
6	M20×2.5	57.9±6.0	419±43.4

Item	Size	kgf · m	lbf · ft
7	M22×1.5	87.2±12.5	631±90.4
8	M24×3.0	100±10	723±72.3
9	M24×3.0	100±15	723±108
10	M24×3.0	140±14	1012±101
11	M33×3.5	220±20	1590±145
-	-	-	-

GROUP 6 STRUCTURE

CAB AND ACCESSORIES MOUNTING



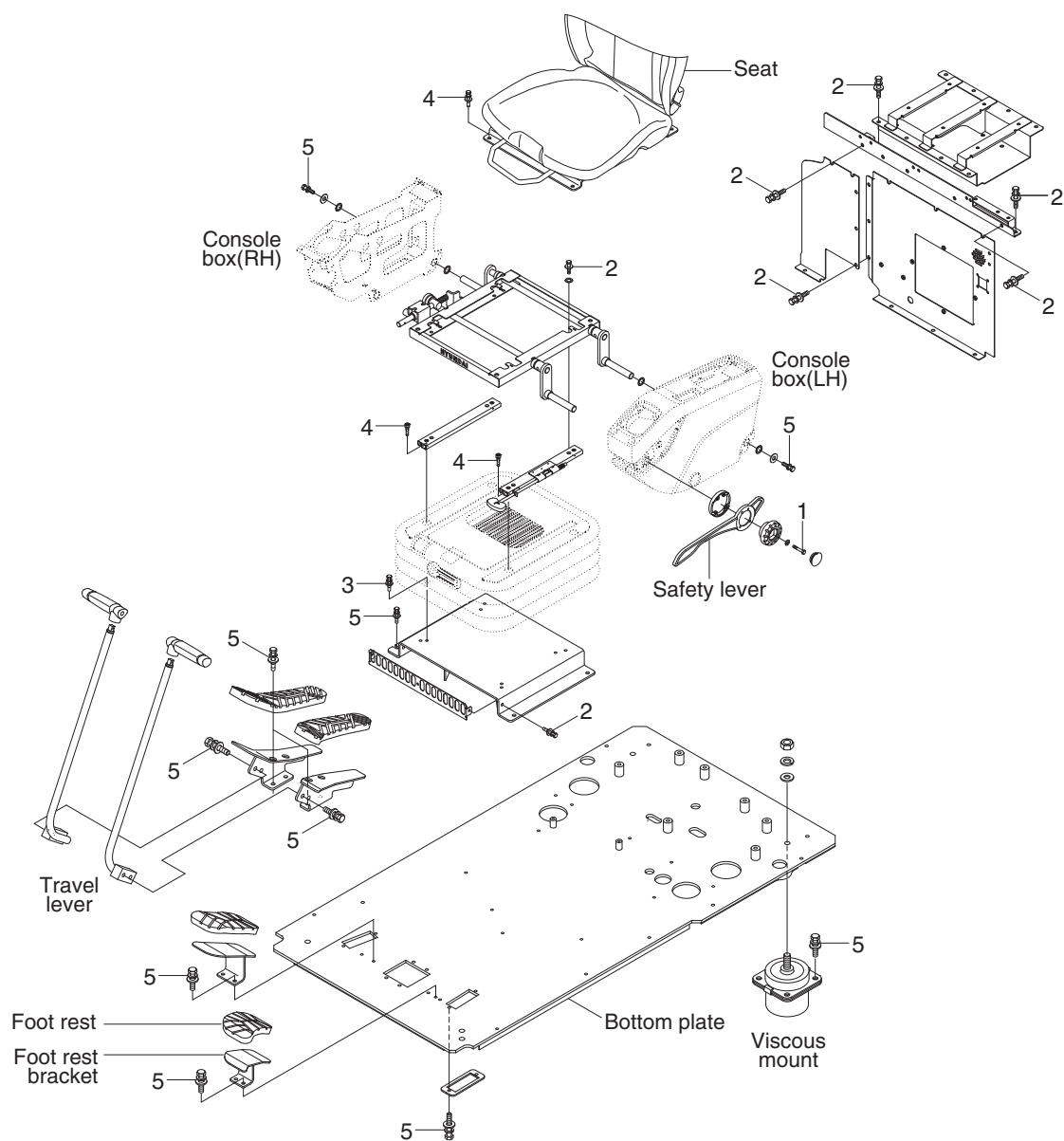
480L9CM09

· 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	M10×1.5	6.9±1.4	49.9±10.1
5	M12×1.75	12.8±3.0	92.6±21.7
6	M24×3.0	100±15	723±109

CAB INTERIOR MOUNTING



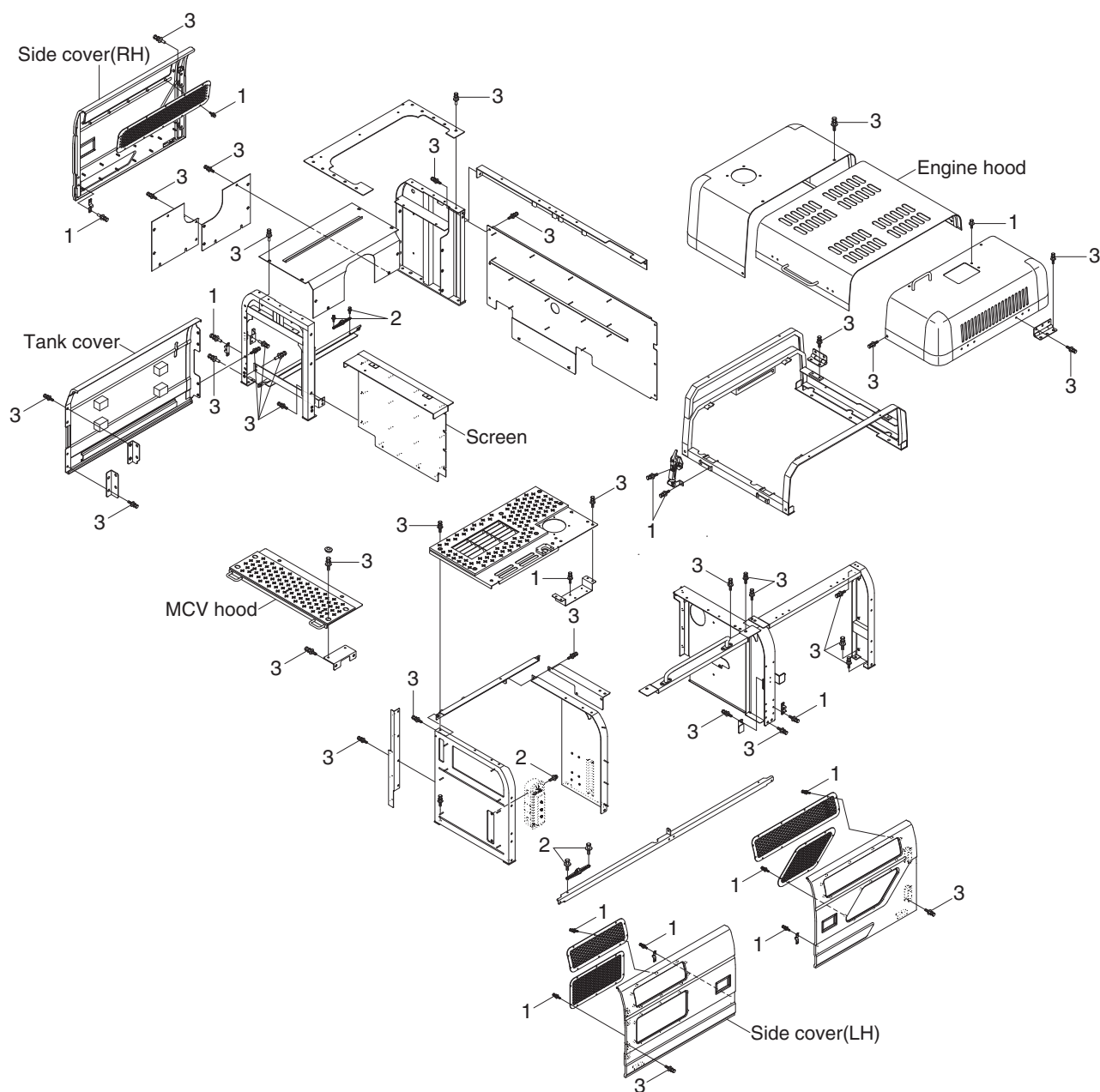
480L9CM10

· 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
-	-	-	-

COWLING MOUNTING



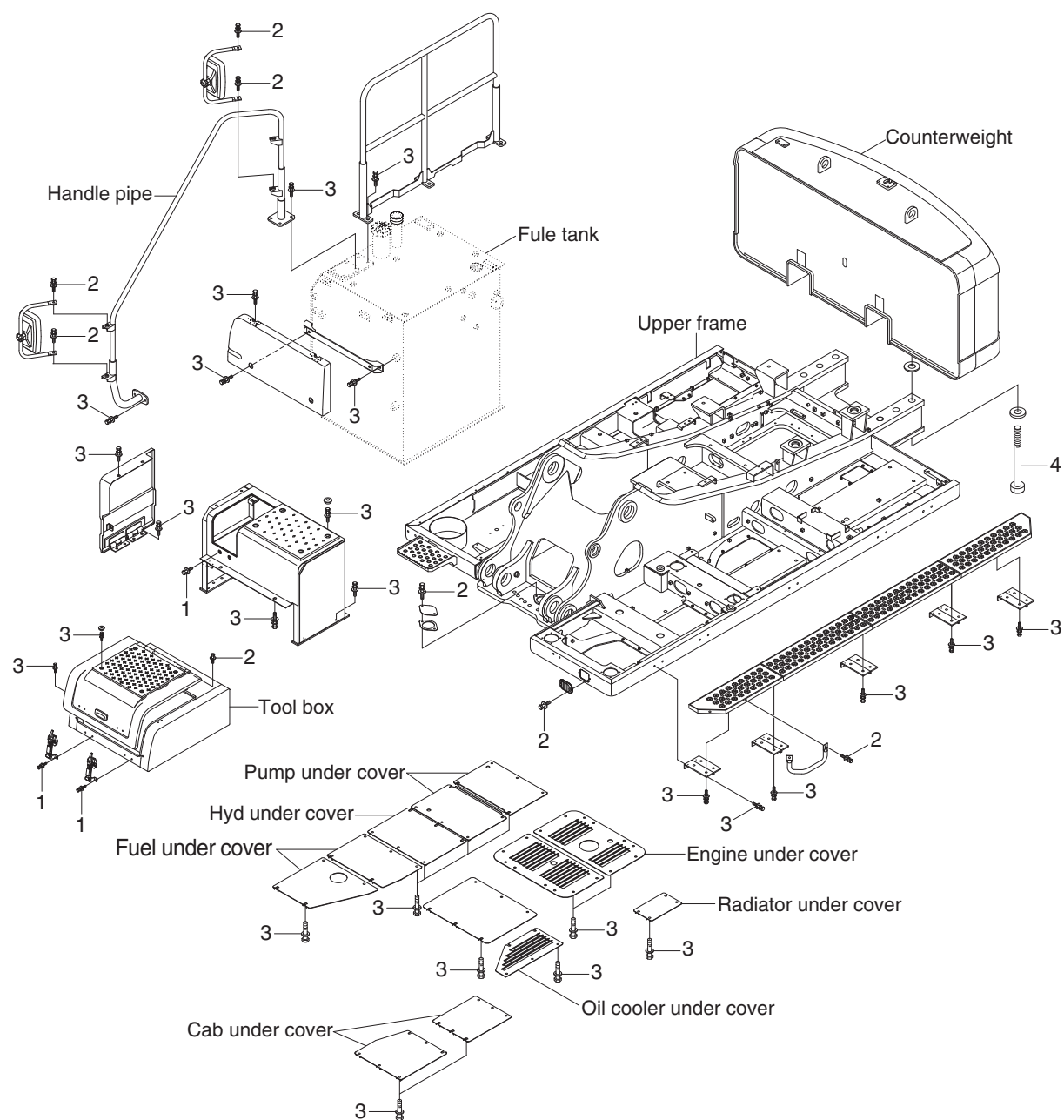
480L9CM11

· 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

Item	Size	kgf · m	lbf · ft
3	M12×1.75	12.8±3.0	92.6±21.7

COUNTERWEIGHT AND COVERS MOUNTING



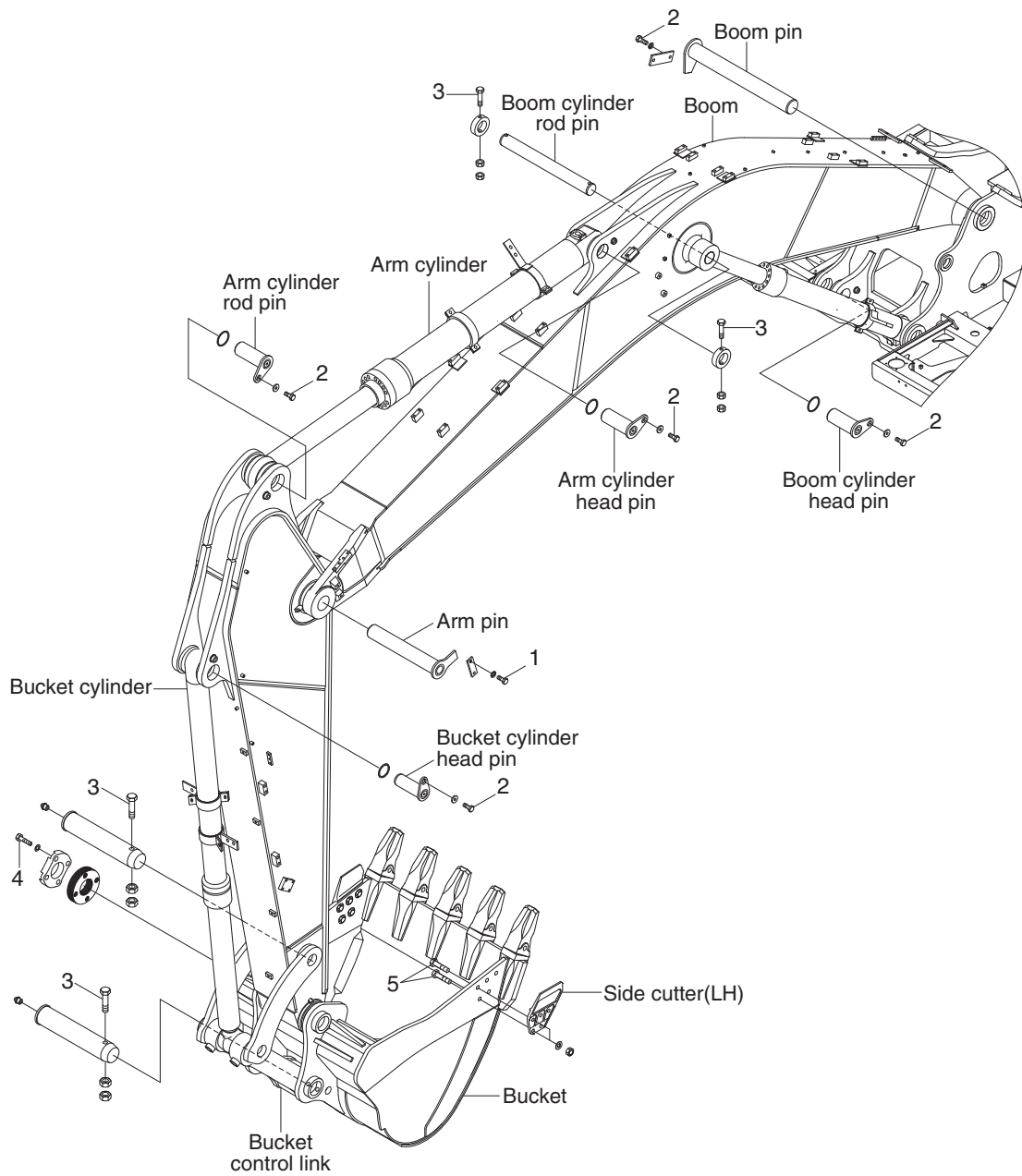
480L9CM12

· 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

Item	Size	kgf · m	lbf · ft
3	M12×1.75	12.8±3.0	92.6±21.7
4	M42×3.0	390±40	2821±289

GROUP 7 WORK EQUIPMENT



480L9CM13

· Tightening torque

Item	Size	kgf · m	lbf · ft
1	M16×2.0	29.7±4.5	215±32.5
2	M20×2.5	57.9±8.7	419±62.9
3	M24×3.0	100±15	723±108

Item	Size	kgf · m	lbf · ft
4	M27×3.0	140±15	1013±108
5	M30×3.5	199±30	1439±217
-	-	-	-