

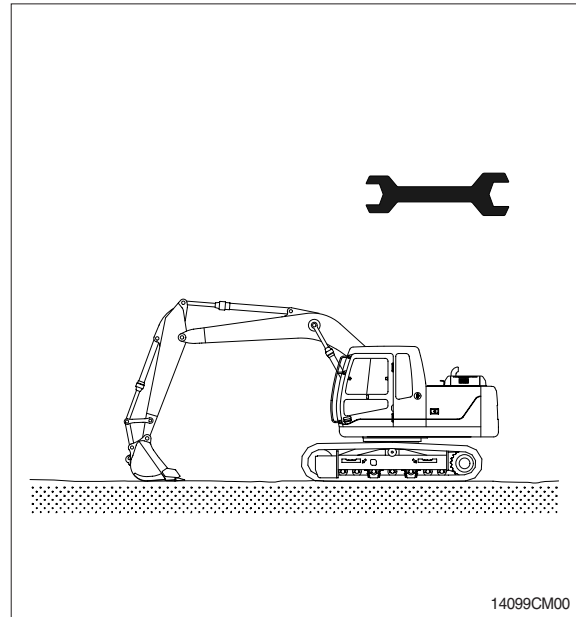
SECTION 9 COMPONENT MOUNTING TORQUE

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

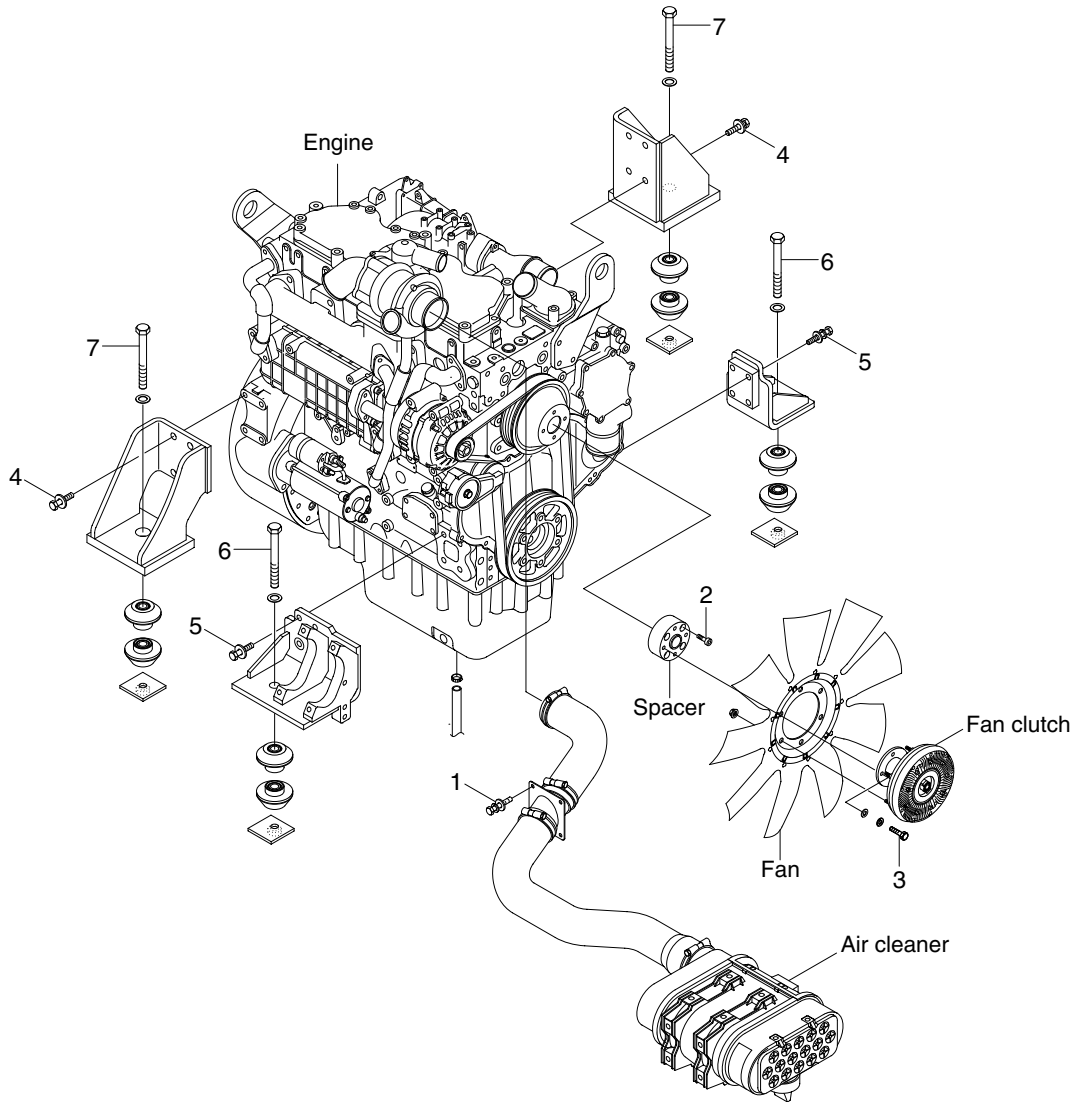
GROUP 1 INTRODUCTION GUIDE

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.
 - ※ 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



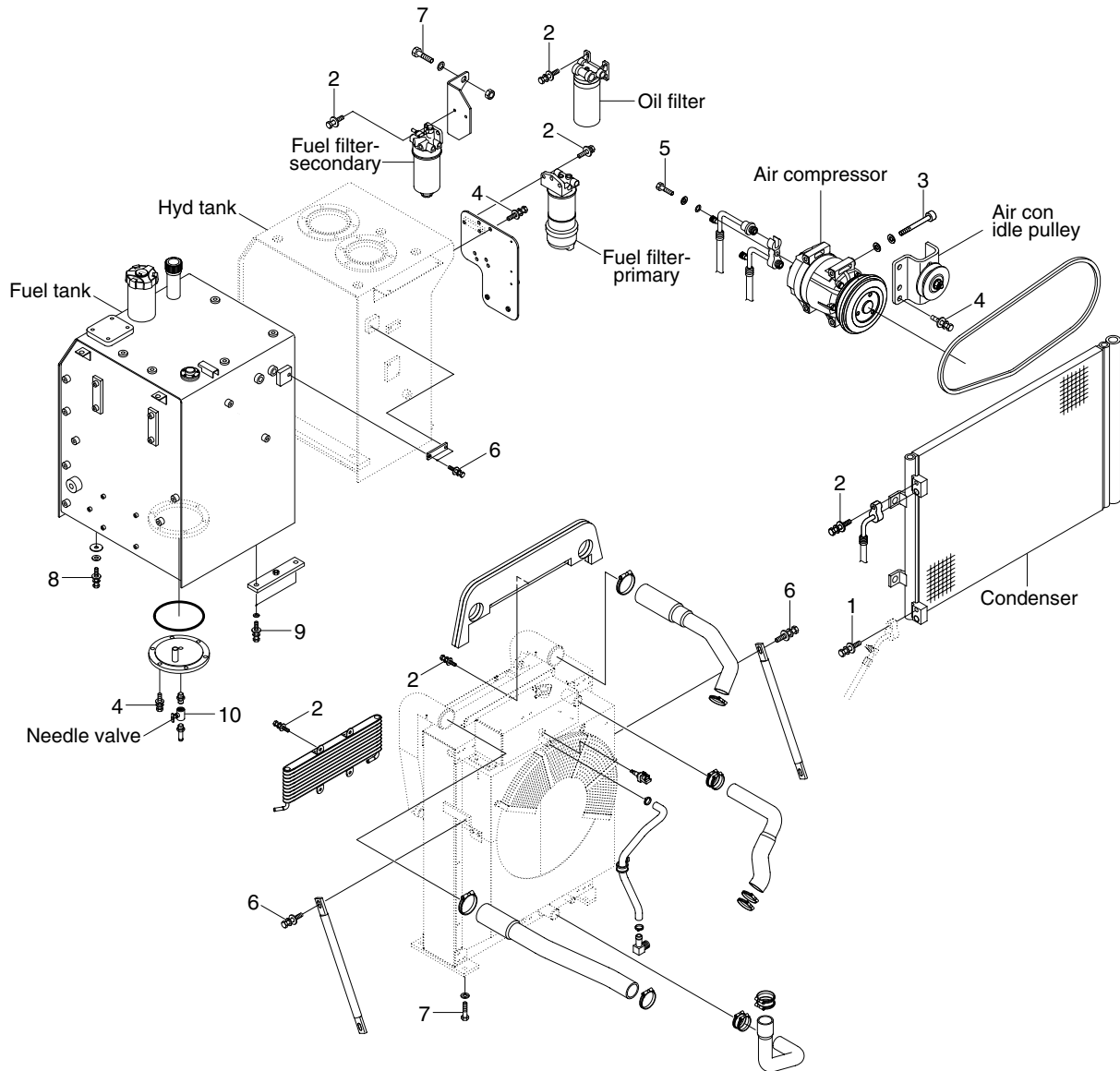
14099ACM01

· 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	4.4±0.9	31.8±6.5
4	M12×1.75	7.9±2.0	57.1±14.5

Item	Size	kgf · m	lbf · ft
5	M12×1.75	11.2±1.1	81±8.0
6	M20×2.5	52.1±5.0	377±36.2
7	M30×3.0	90±9.0	651±65.1

2. COOLING SYSTEM AND FUEL TANK MOUNTING



14099ACM02

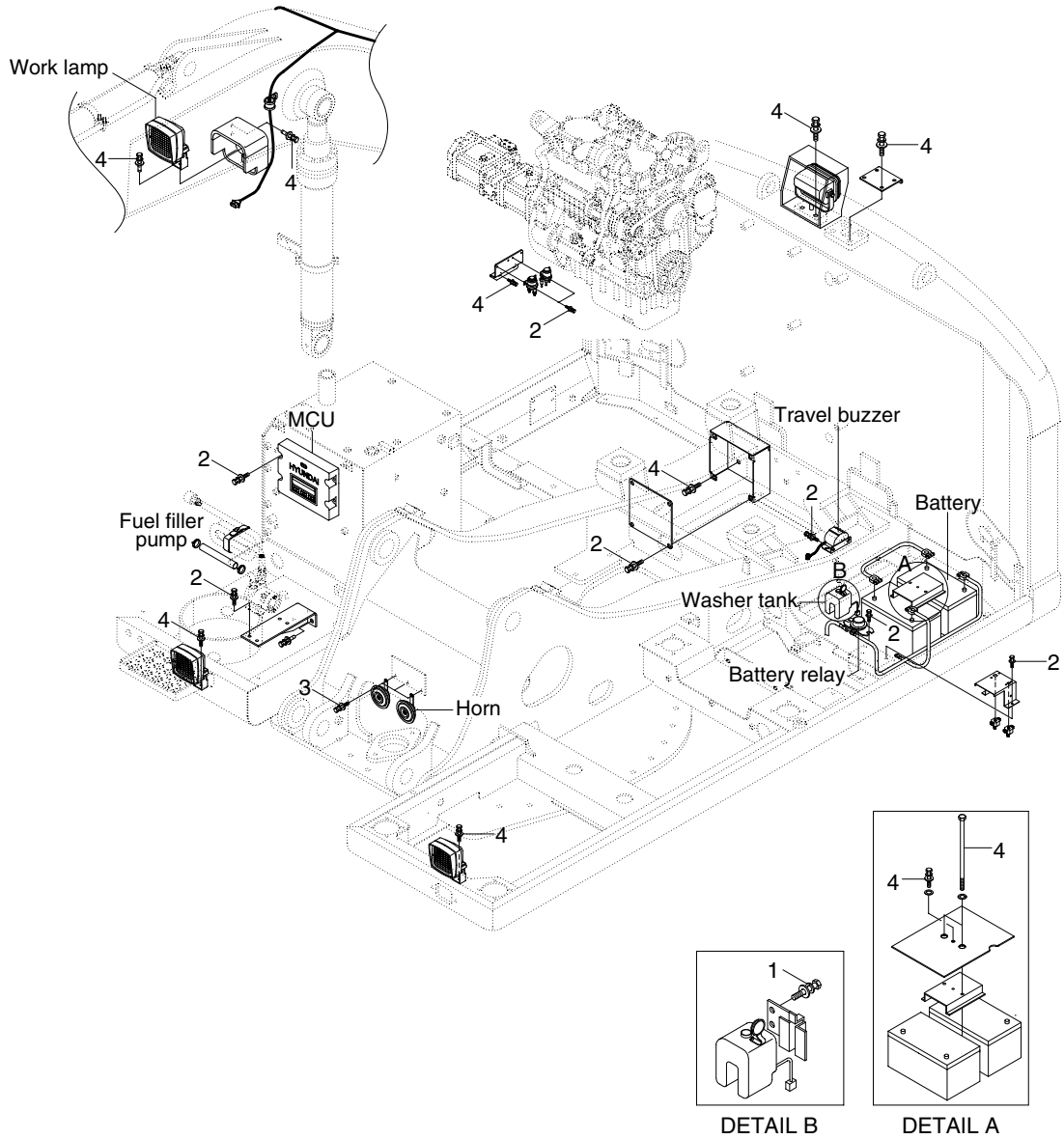
· Tightening torque

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



14099ACM03

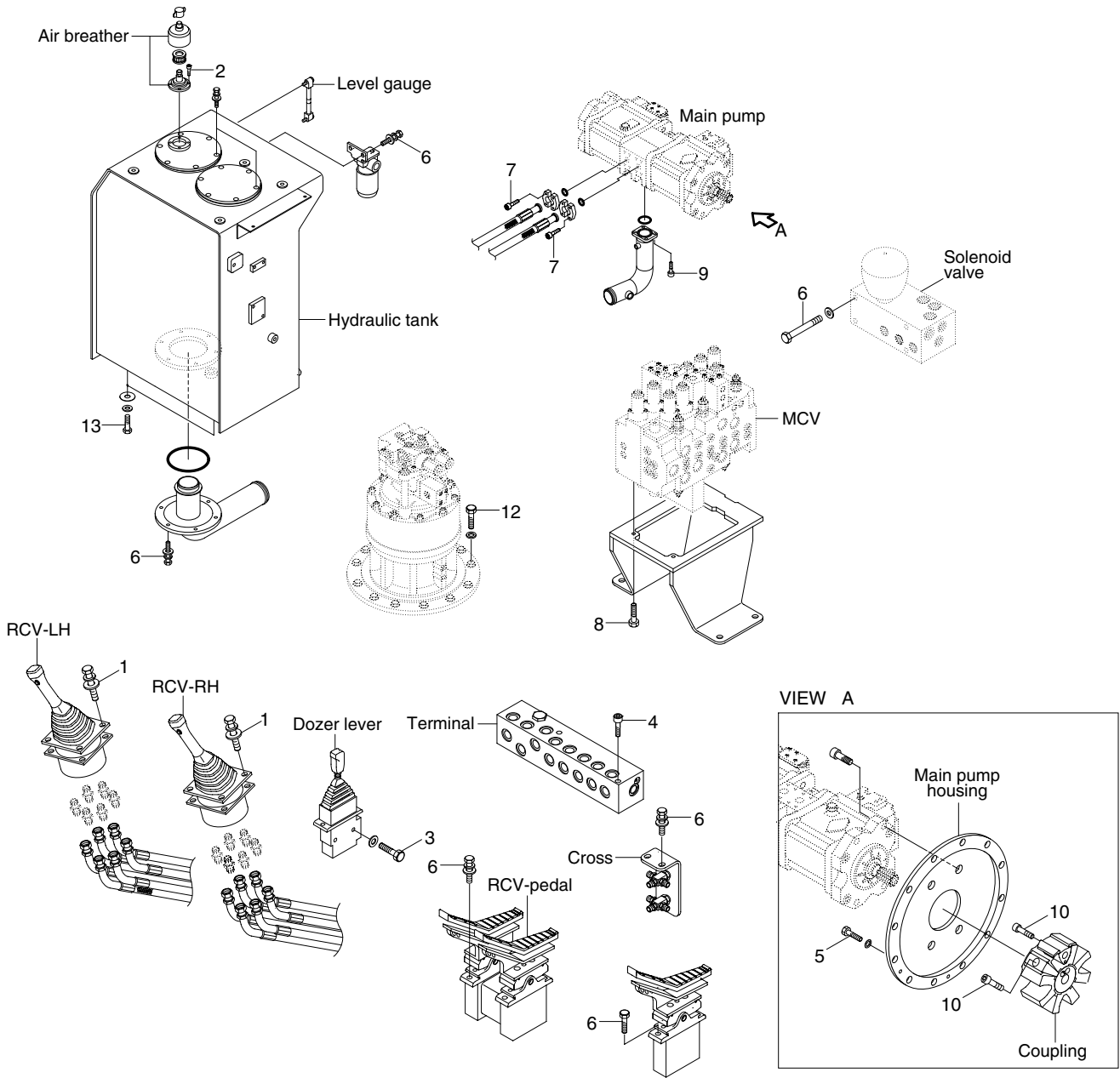
• Tightening torque

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

GROUP 4 HYDRAULIC SYSTEM

1. HYDRAULIC COMPONENTS MOUNTING 1



14099ACM05

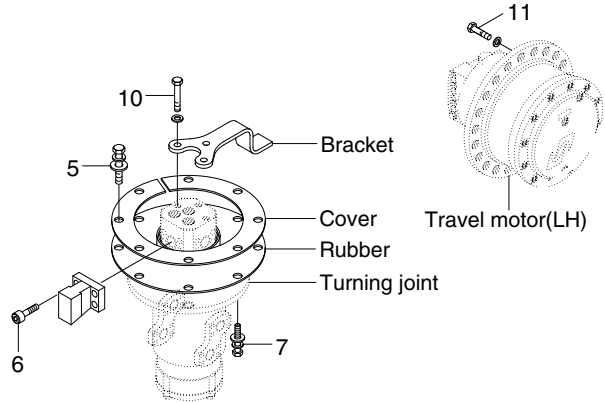
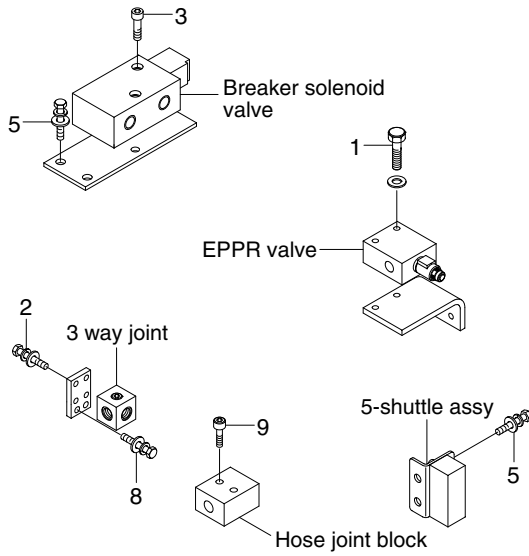
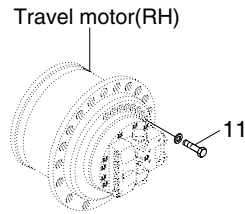
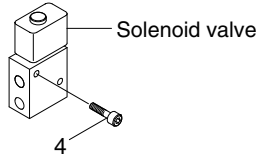
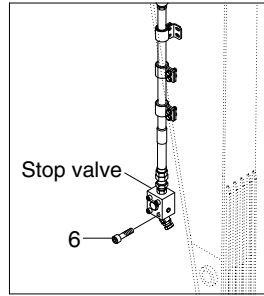
· Tightening torque

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	M 8×1.25	2.5±0.5	18.1±3.6
4	M 8×1.25	4.05±0.8	29.3±5.8
5	M10×1.5	6.0±0.3	43.4±2.2
6	M10×1.5	6.9±1.4	49.9±10.1
7	M10×1.5	8.27±1.7	59.8±12.3

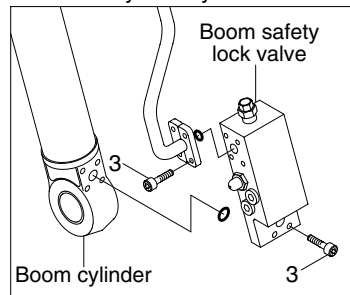
Item	Size	kgf · m	lbf · ft
8	M12×1.75	12.2±1.3	88.2±9.4
9	M12×1.75	14.7±2.2	106±15.9
10	M16×2.0	22±1.0	159±7.2
11	M16×2.0	22.5±0.5	163±3.6
12	M16×2.0	29.6±3.2	214±23.1
13	M20×2.5	46±5.1	333±36.9
-	-	-	-

2. HYDRAULIC COMPONENTS MOUNTING 2

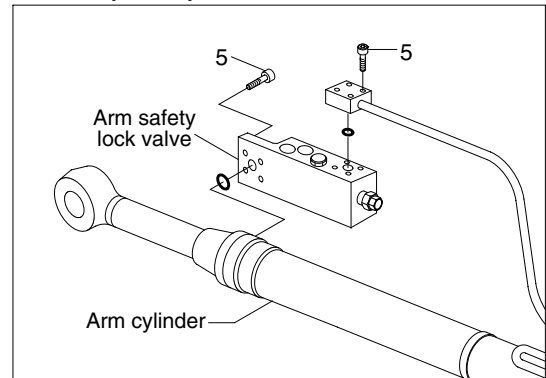
ATTACH PIPING



Boom safety lock system



Arm safety lock system



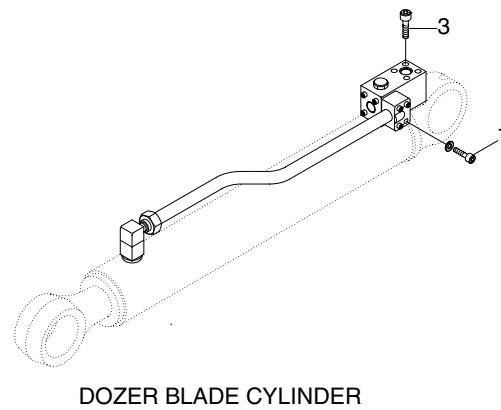
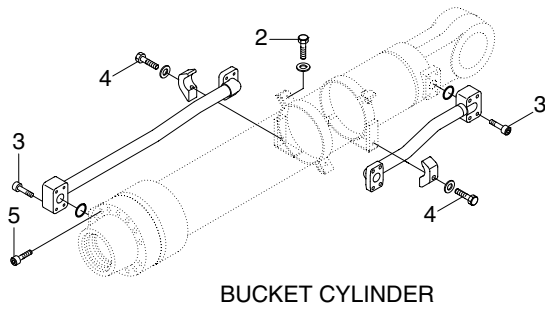
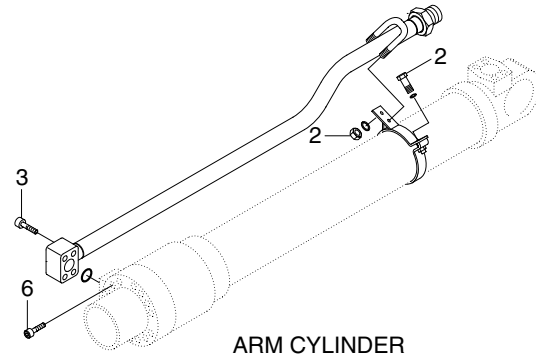
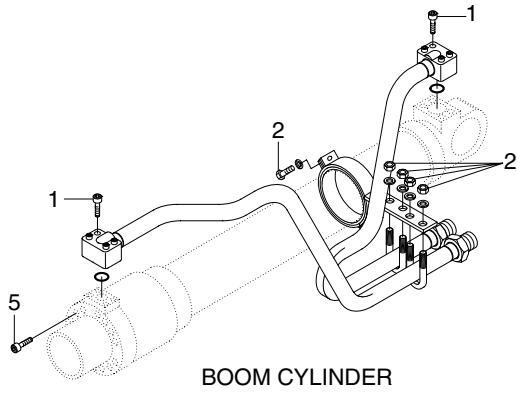
14099ACM06

· Tightening torque

Item	Size	kgf · m	lbf · ft
1	M 6×1.0	1.44±0.3	10.4±2.2
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	M10×1.5	8.27±1.7	59.8±12.3

Item	Size	kgf · m	lbf · ft
7	M12×1.75	12.3±1.3	88.9±9.4
8	M12×1.75	12.8±3.0	92.6±21.7
9	M12×1.75	14.7±2.2	106±15.9
10	M14×2.0	19.6±2.9	142±21.0
11	M16×2.0	25.7±4.0	186±28.9
-	-	-	-

3. HYDRAULIC COMPONENTS MOUNTING 3



14099CM07

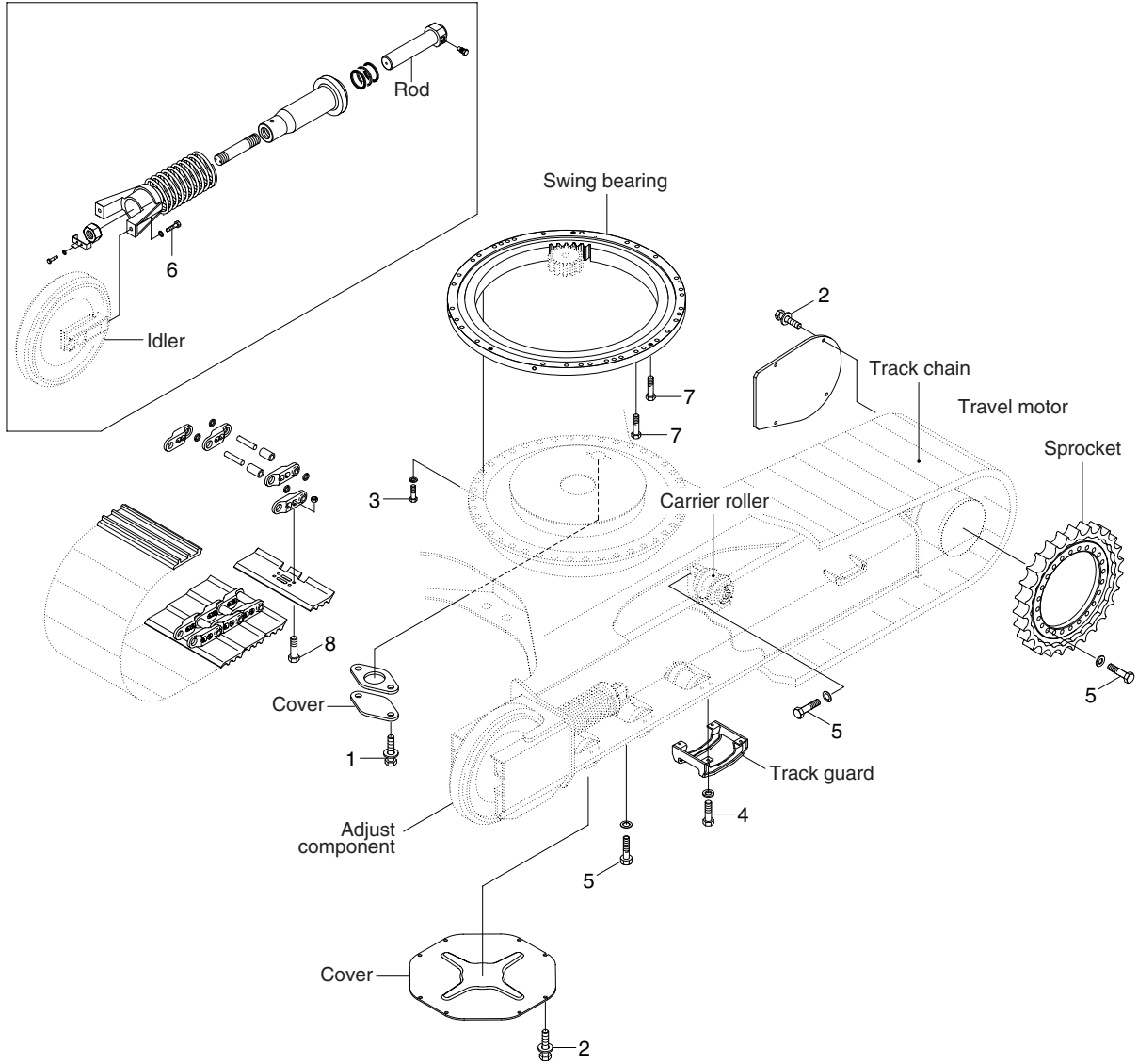
· Tightening torque

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

Item	Size	kgf · m	lbf · ft
4	M12×1.75	9.3±1.9	67.3±13.7
5	M14×2.0	15±2.0	108±14.5
6	M16×2.0	23±2.0	166±14.5

GROUP 5 UNDERCARRIAGE

ADJUST COMPONENT



14099ACM08

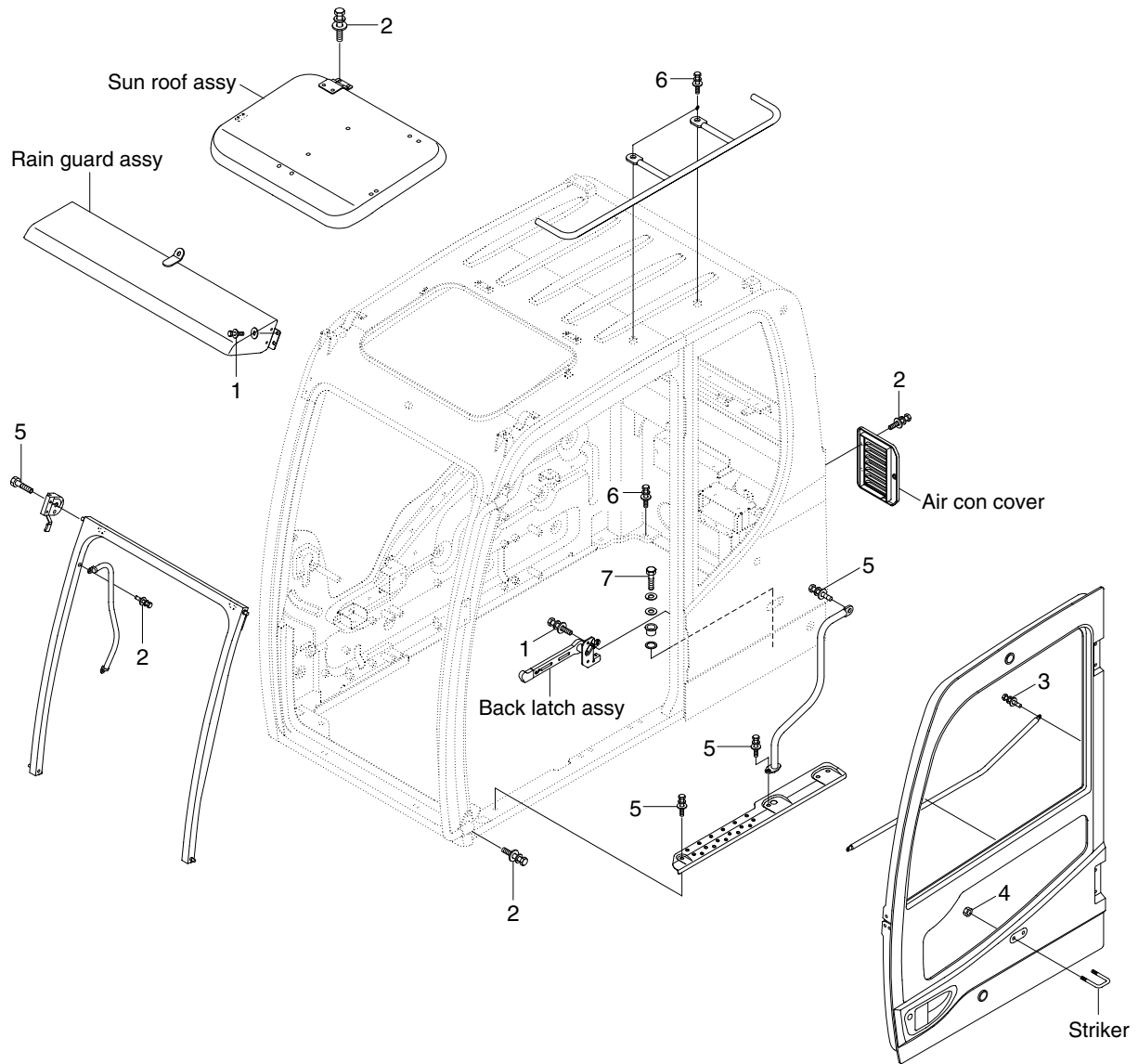
• Tightening torque

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	29.3±3.0	215±21.7
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±29

GROUP 6 STRUCTURE

1. CAB AND ACCESSORIES MOUNTING



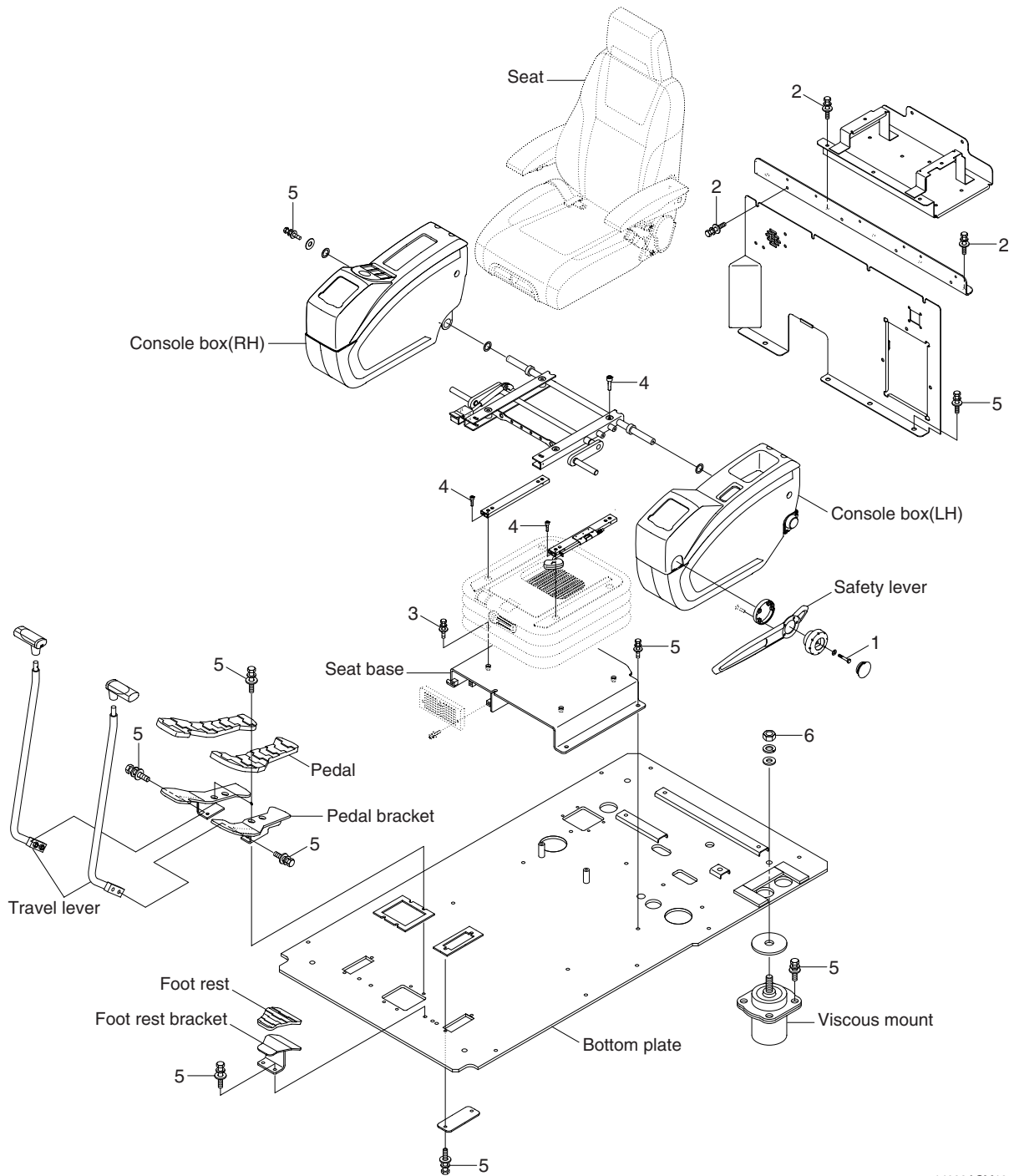
14099ACM09

· 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	4.7±0.9	34±6.5

Item	Size	kgf · m	lbf · ft
5	M10×1.5	6.9±1.4	49.9±10.1
6	M12×1.75	12.8±3.0	92.6±21.7
7	M30×3.5	199±30	1439±217
-	-	-	-

2. CAB INTERIOR MOUNTING



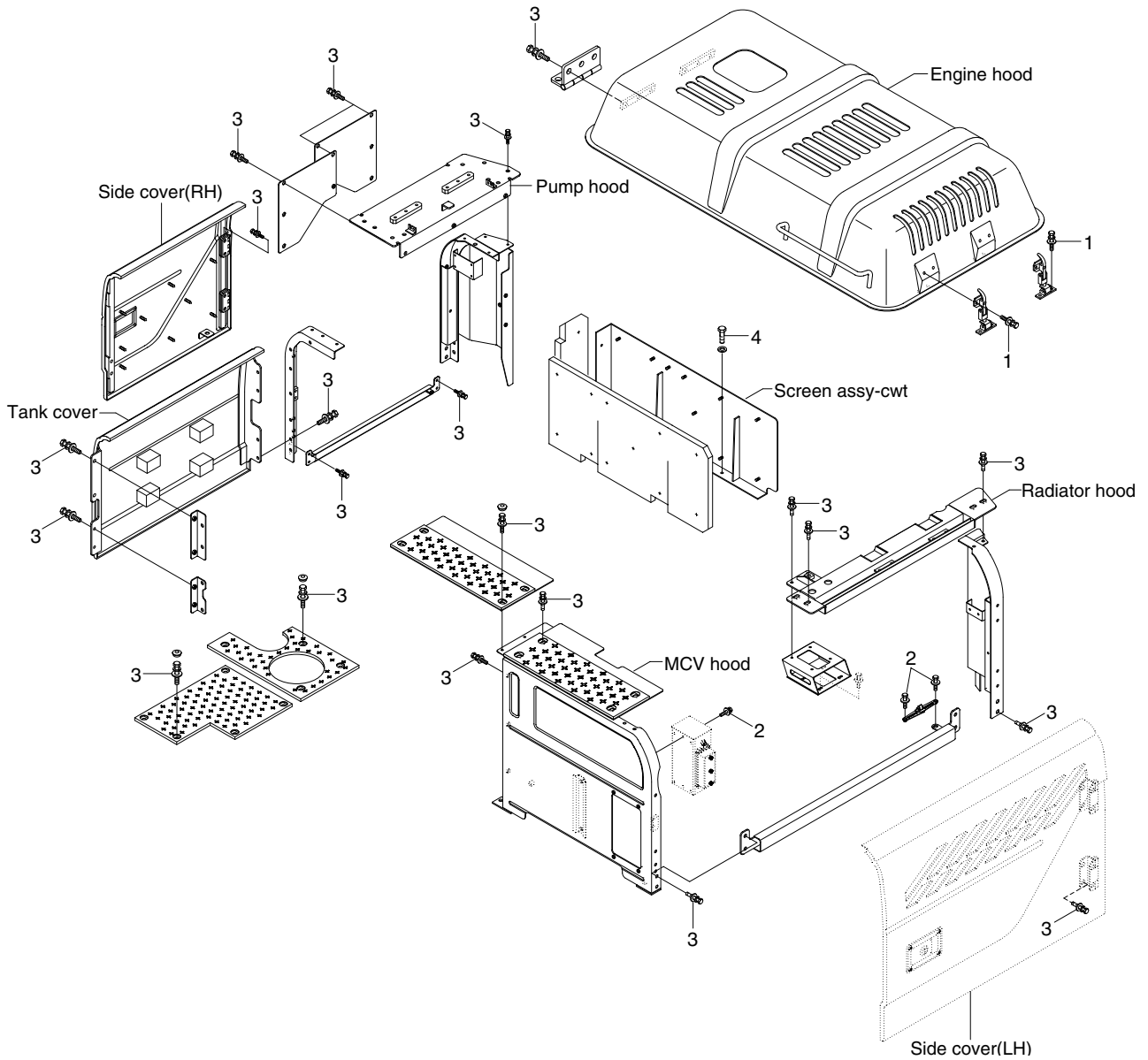
14099ACM10

· Tightening torque

Item	Size	kgf · m	lbf · ft
1	M 6×1.0	1.05±0.2	7.6±1.4
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
6	M16×2.0	29.7±4.5	215±32.5

3. COWLING MOUNTING



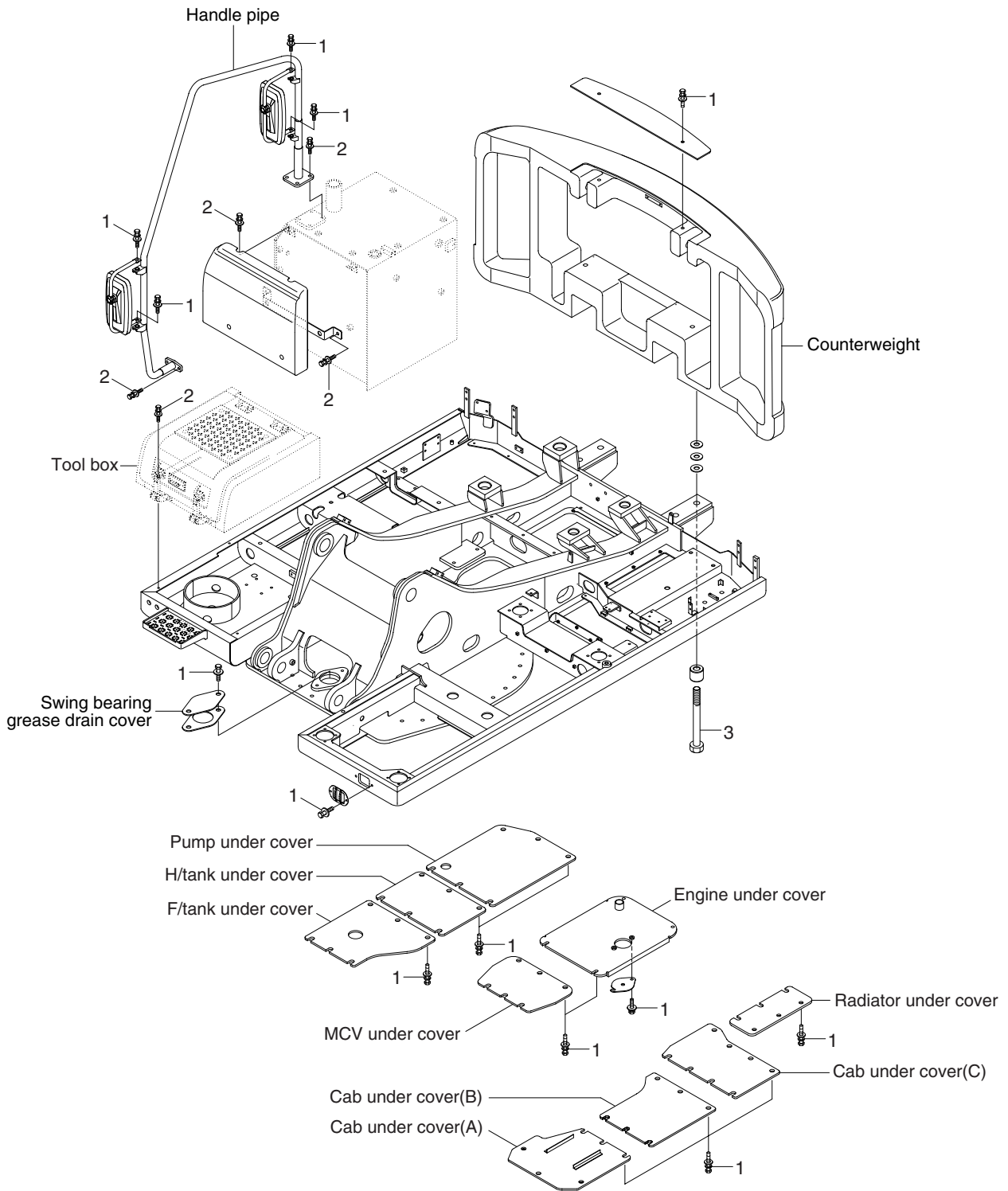
14099ACM11

· 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

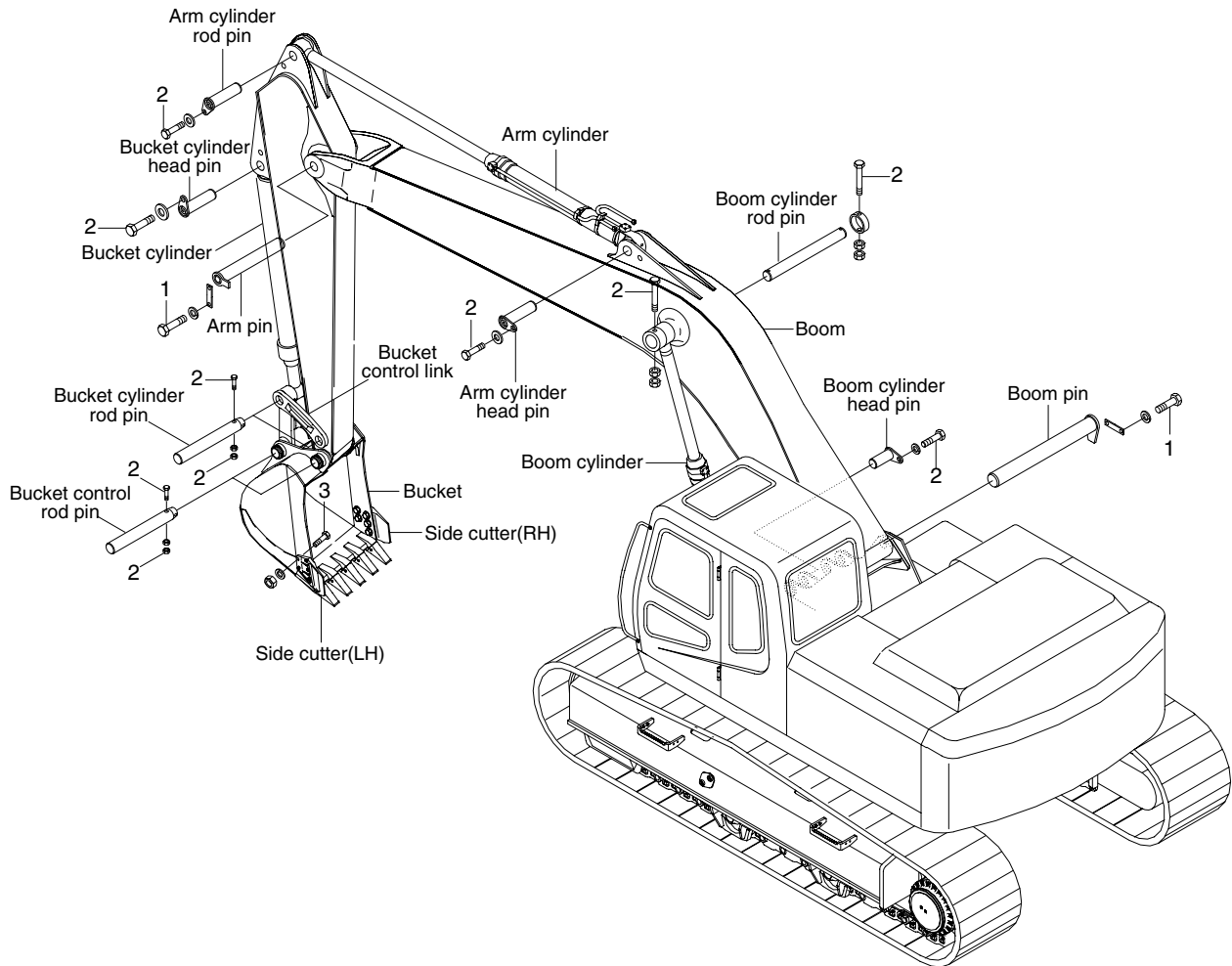


14099ACM12

· 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	M27×3.0	140±15	1013±108

GROUP 7 WORK EQUIPMENT



14099CM13

· 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