

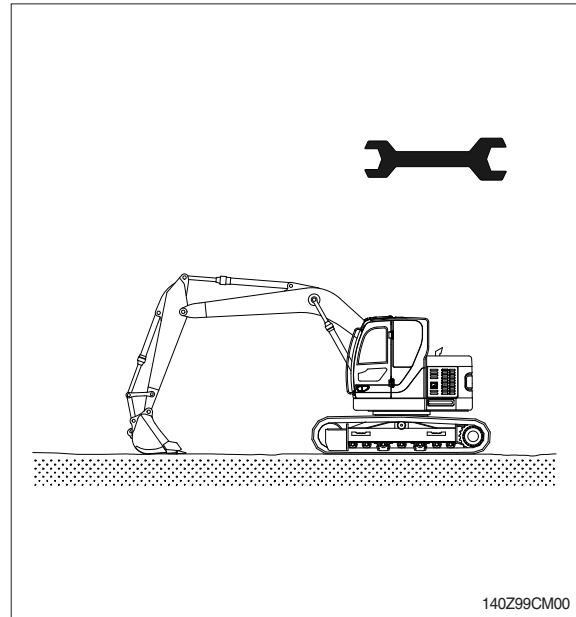
## SECTION 9 COMPONENT MOUNTING TORQUE

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# SECTION 9 COMPONENT MOUNTING TORQUE

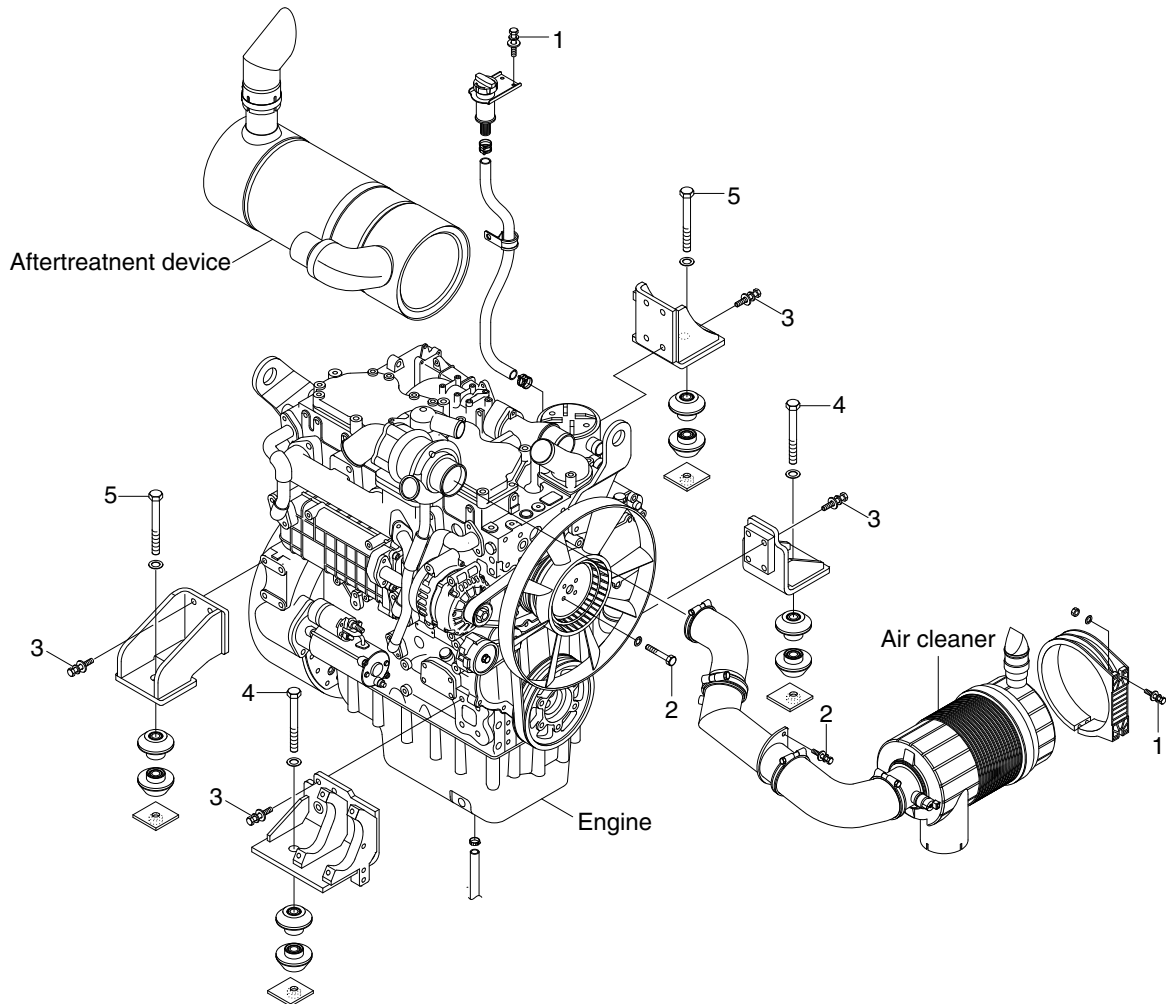
## GROUP 1 INTRODUCTION GUIDE

1. This section shows bolt specifications and standard torque values needed when mounting components to the machine.
  2. Use genuine 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



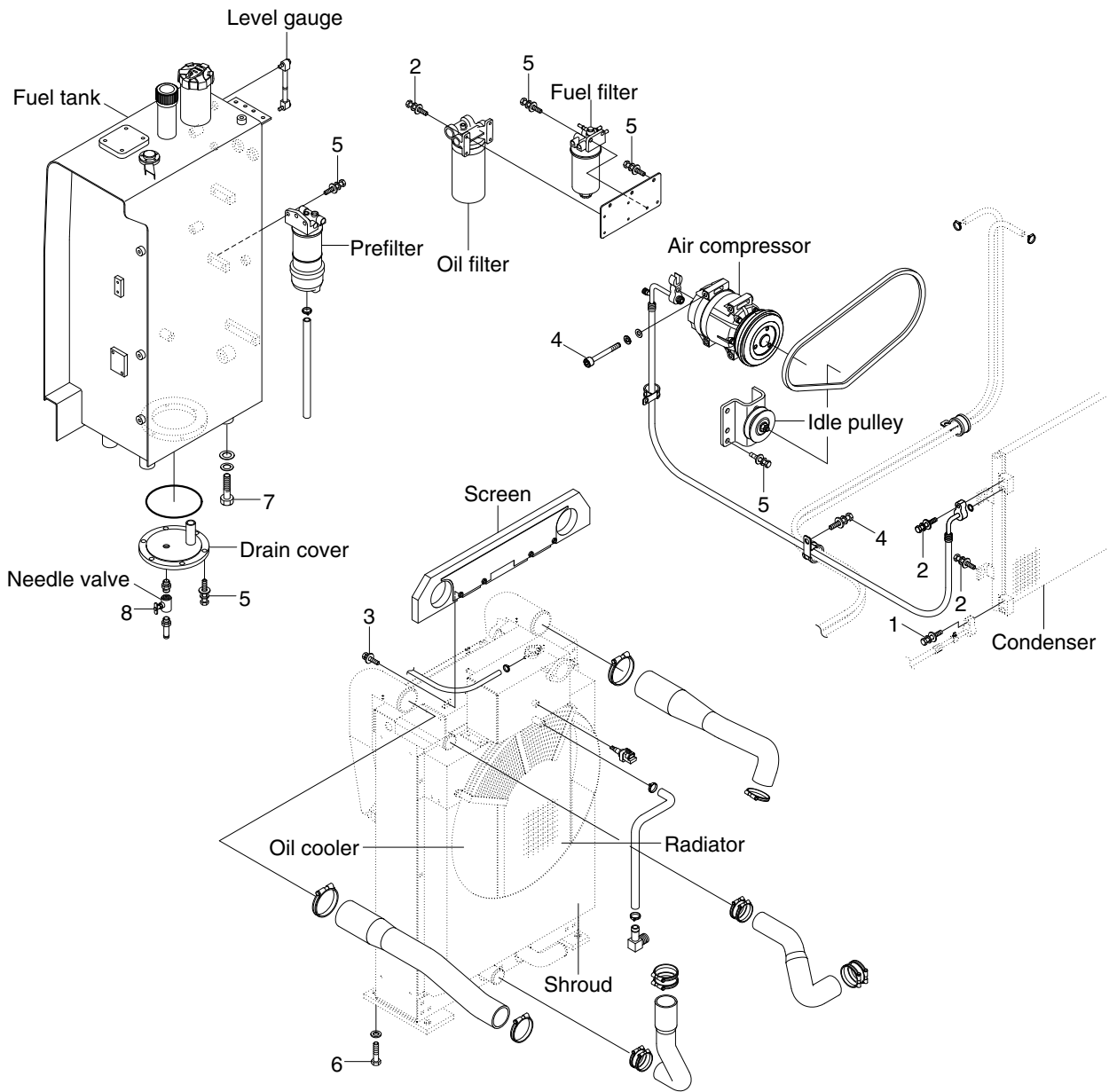
145Z9A9CM01

#### · 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	M12 × 1.75	12.3 ± 1.2	89 ± 8.7

Item	Size	kgf · m	lbf · ft
4	M20 × 2.5	55 ± 3.5	398 ± 25.3
5	M20 × 2.5	52.1 ± 5.0	377 ± 36.2
-	-	-	-

## 2. COOLING SYSTEM AND FUEL TANK MOUNTING



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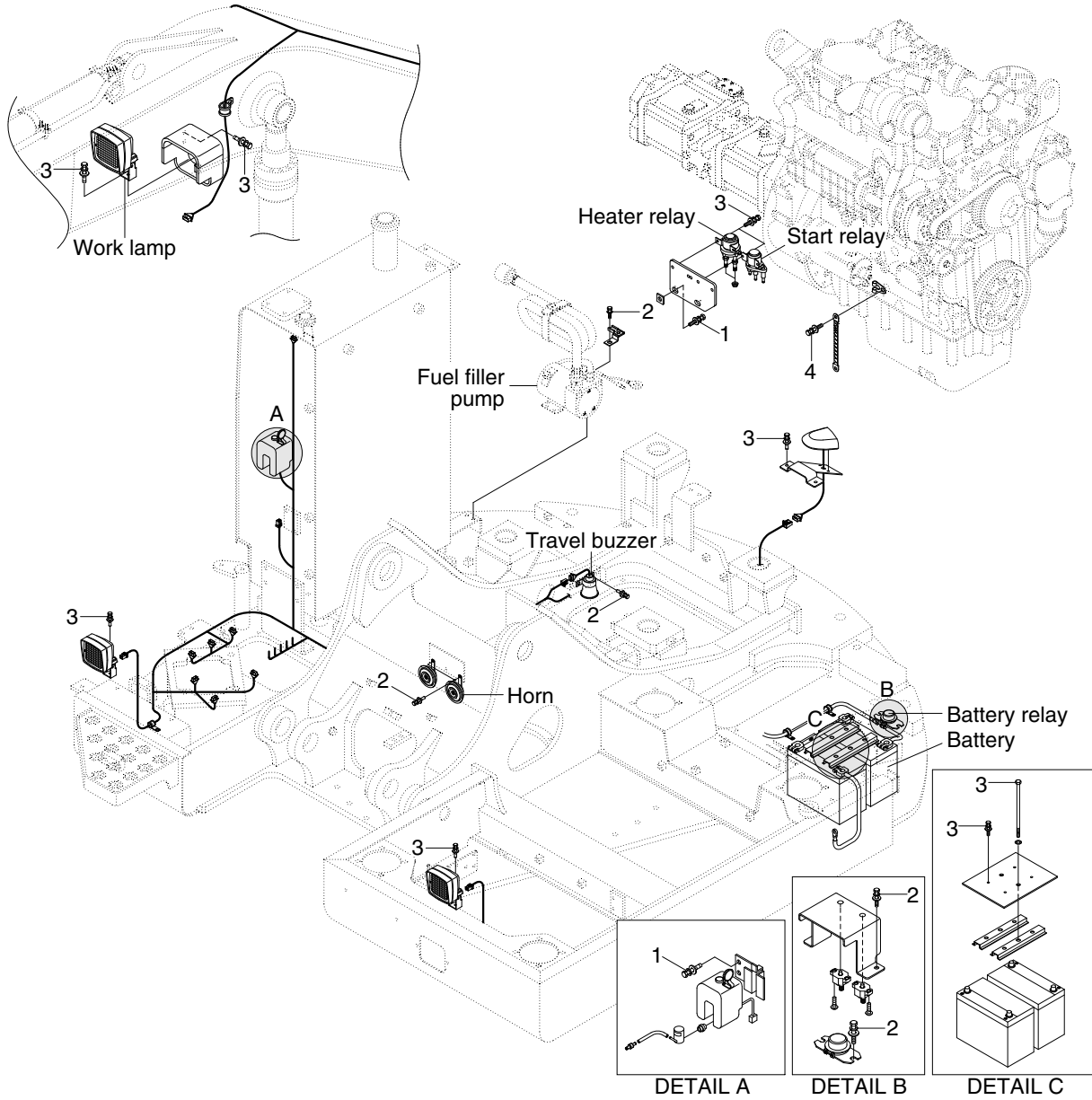
### · Tightening torque

Item	Size	kgf · m	lbf · ft
1	M 6×1.0	0.5±0.1	3.6±0.72
2	M 8×1.25	1.3±0.2	9.4±1.45
3	M 8×1.25	2.5±0.5	18.1±3.6
4	M 8×1.25	5.0±0.2	36.2±1.45

Item	Size	kgf · m	lbf · ft
5	M10×1.5	6.9±1.4	49.9±10.1
6	M16×2.0	29.7±4.5	215±32.5
7	M20×2.5	45±1.0	325±7.2
8	-	2.3±0.6	16.6±4.3

# GROUP 3 ELECTRIC SYSTEM

## 1. ELECTRIC COMPONENTS MOUNTING 1



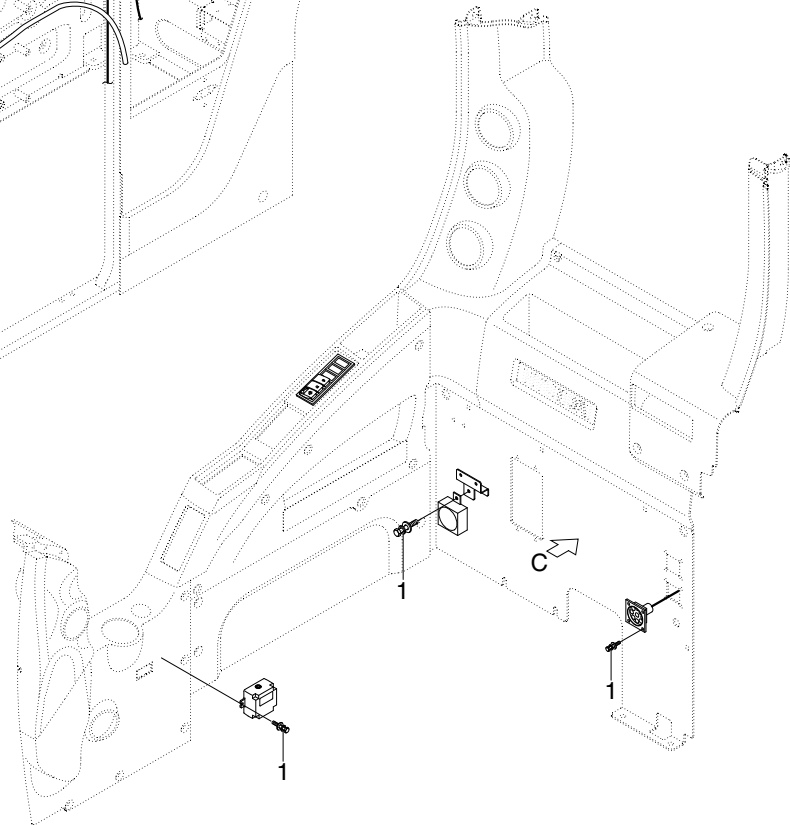
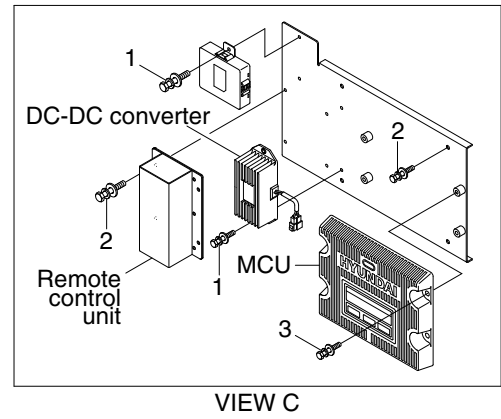
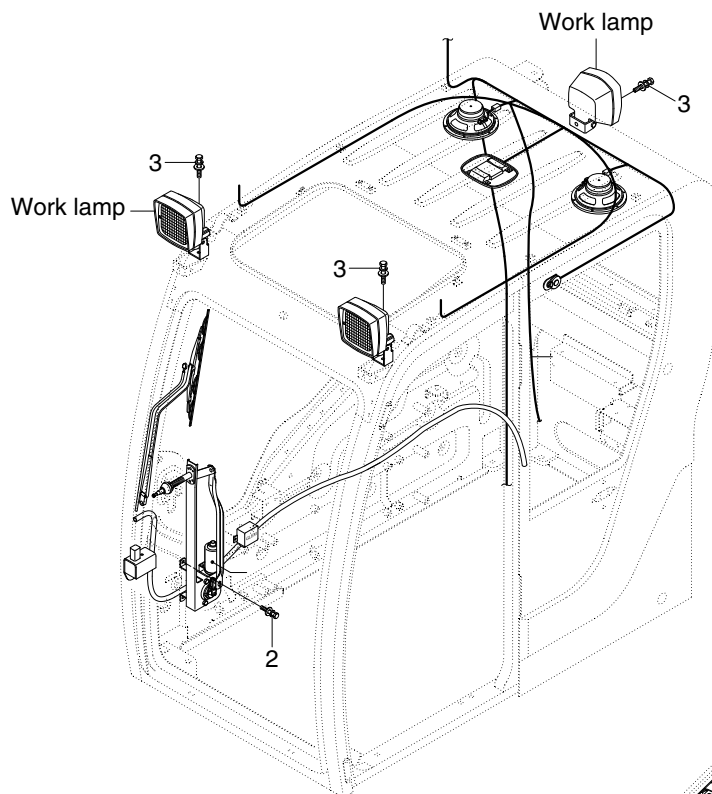
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### · Tightening torque

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	M 10×1.5	6.9±1.4	49.9±10.1
4	M 12×1.75	12.8±3.0	92.6±21.7

## 2. ELECTRIC COMPONENTS MOUNTING 2



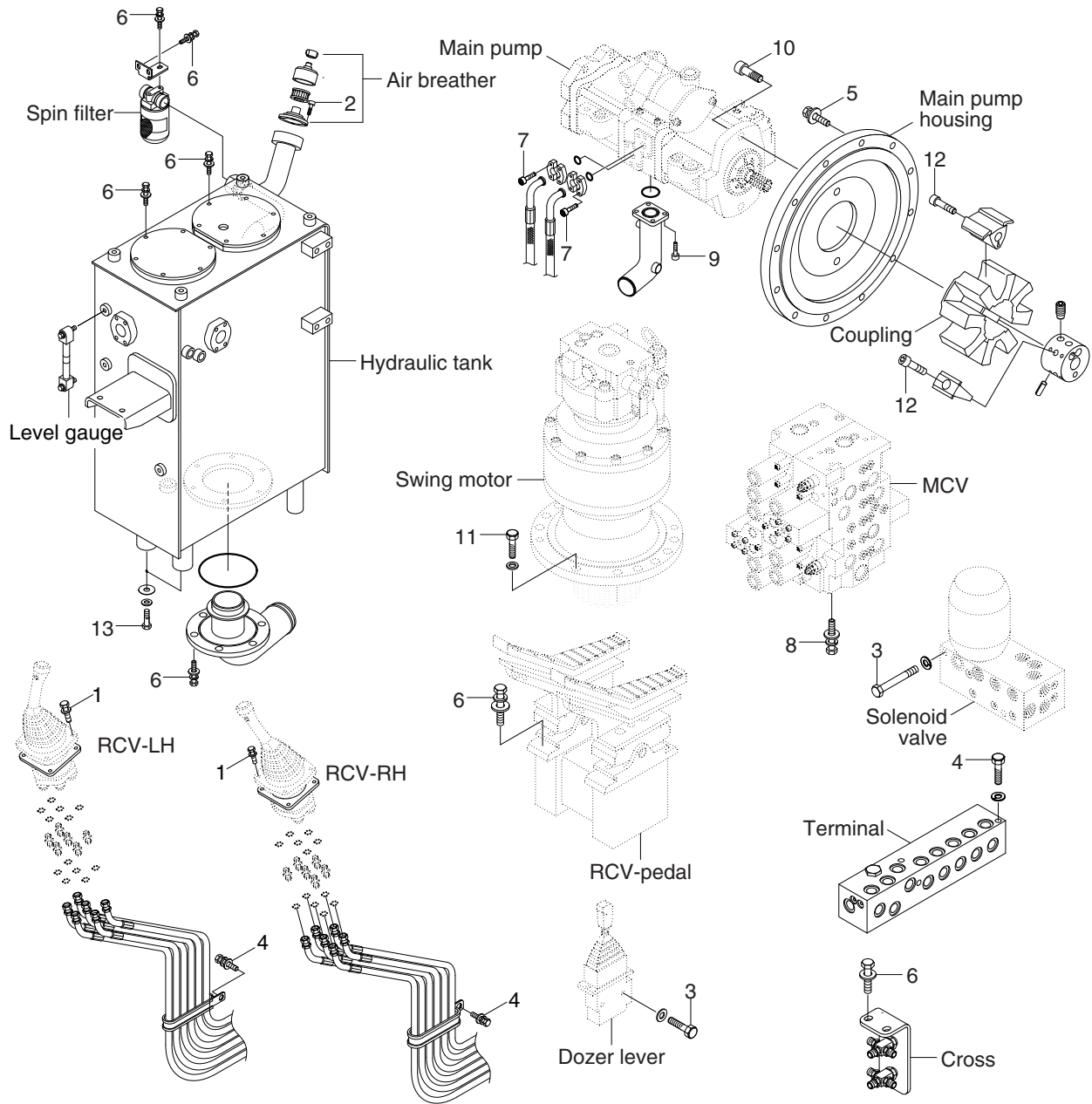
· Tightening torque

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

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# GROUP 4 HYDRAULIC SYSTEM

## 1. HYDRAULIC COMPONENTS MOUNTING 1



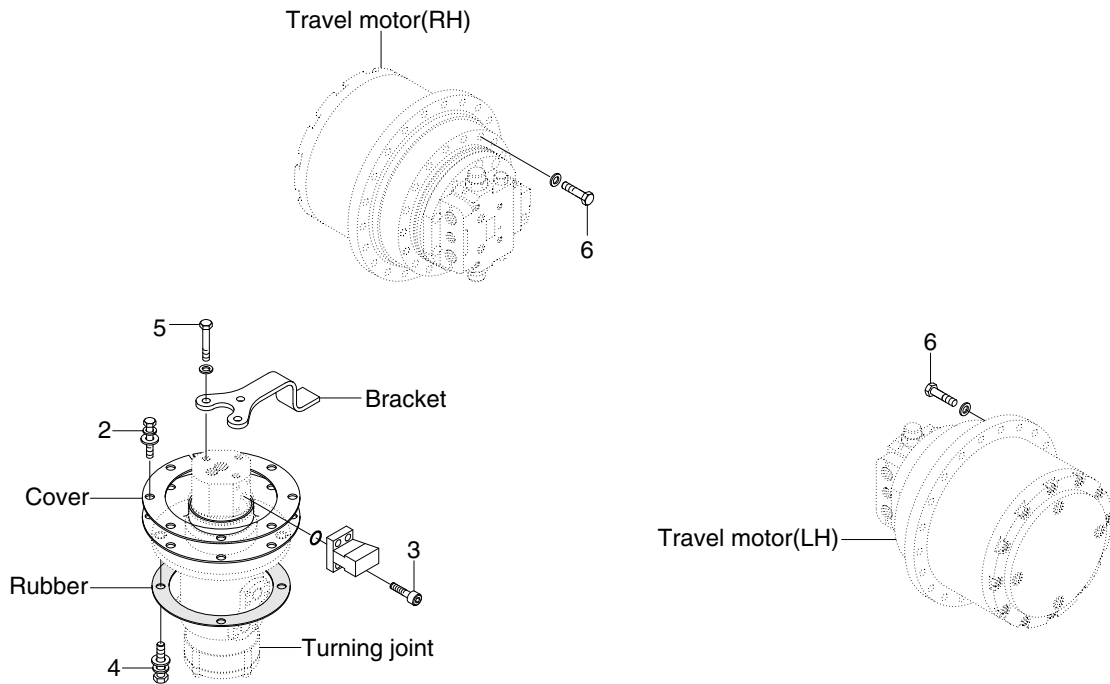
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### · Tightening torque

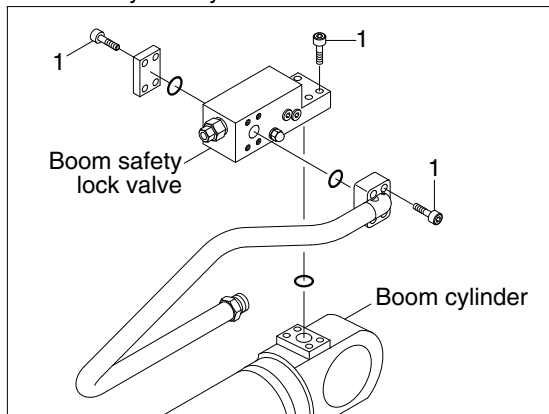
Item	Size	kgf · m	lbf · ft
1	M 6×1.0	1.05±0.2	7.6±1.45
2	M 6×1.0	1.44±0.3	10.4±2.2
3	M 8×1.25	2.5±0.5	18.1±3.6
4	M 8×1.25	4.05±0.8	29.3±5.8
5	M10×1.5	6.5±0.7	47±5.1
6	M10×1.5	6.9±1.4	49.9±10.1
7	M10×1.5	8.27±1.7	59.8±12.3

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±1.5	159±10.8
11	M16×2.0	29.6±3.2	214±23.1
12	M18×2.5	32±1.0	231±7.2
13	M20×2.5	45±1.0	325±7.2
-	-	-	-

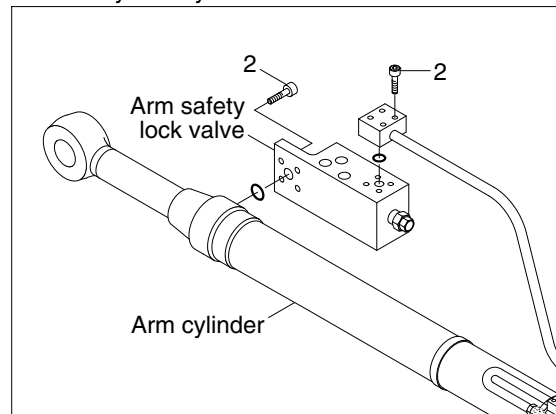
## 2. HYDRAULIC COMPONENTS MOUNTING 2



Boom safety lock system



Arm safety lock system



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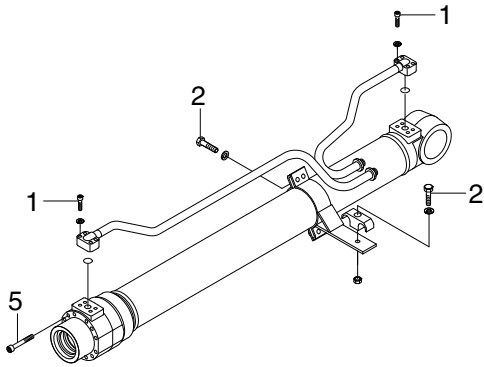
· Tightening torque

Item	Size	kgf · m	lbf · ft
1	M 8×1.25	4.05±0.8	29.3±5.8
2	M10×1.5	6.9±1.4	49.9±10.1
3	M10×1.5	8.27±1.7	59.8±12.3

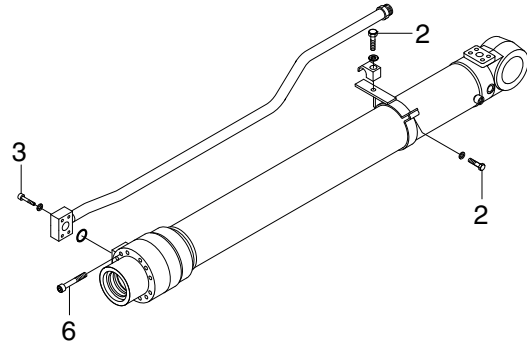
Item	Size	kgf · m	lbf · ft
4	M12×1.75	12.3±1.3	88.9±9.4
5	M14×2.0	19.6±2.9	142±21.0
6	M16×2.0	23±2.5	166±18.1



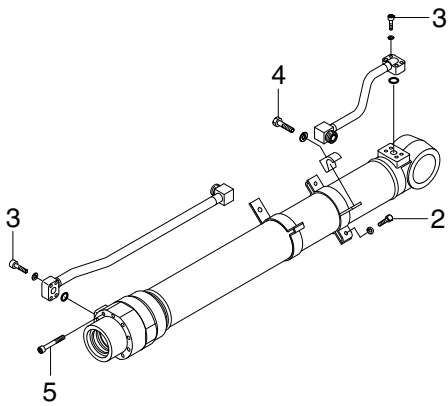
### 3. HYDRAULIC COMPONENTS MOUNTING 3



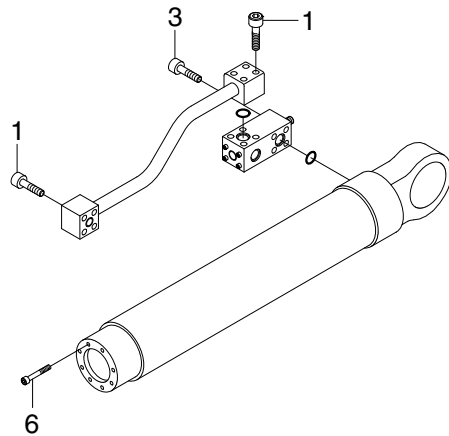
BOOM CYLINDER



ARM CYLINDER



BUCKET CYLINDER



DOZER BLADE CYLINDER

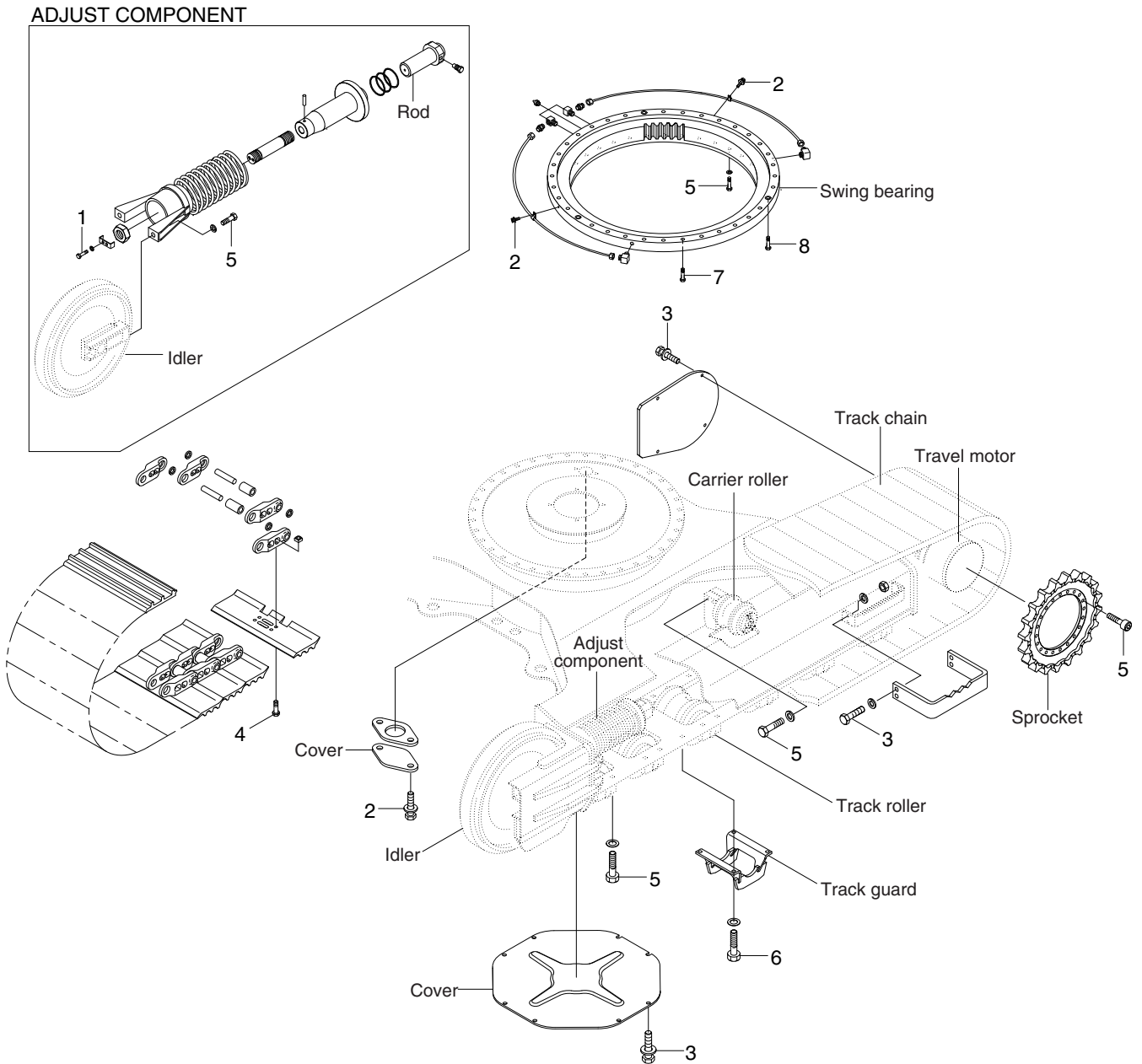
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· Tightening torque

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



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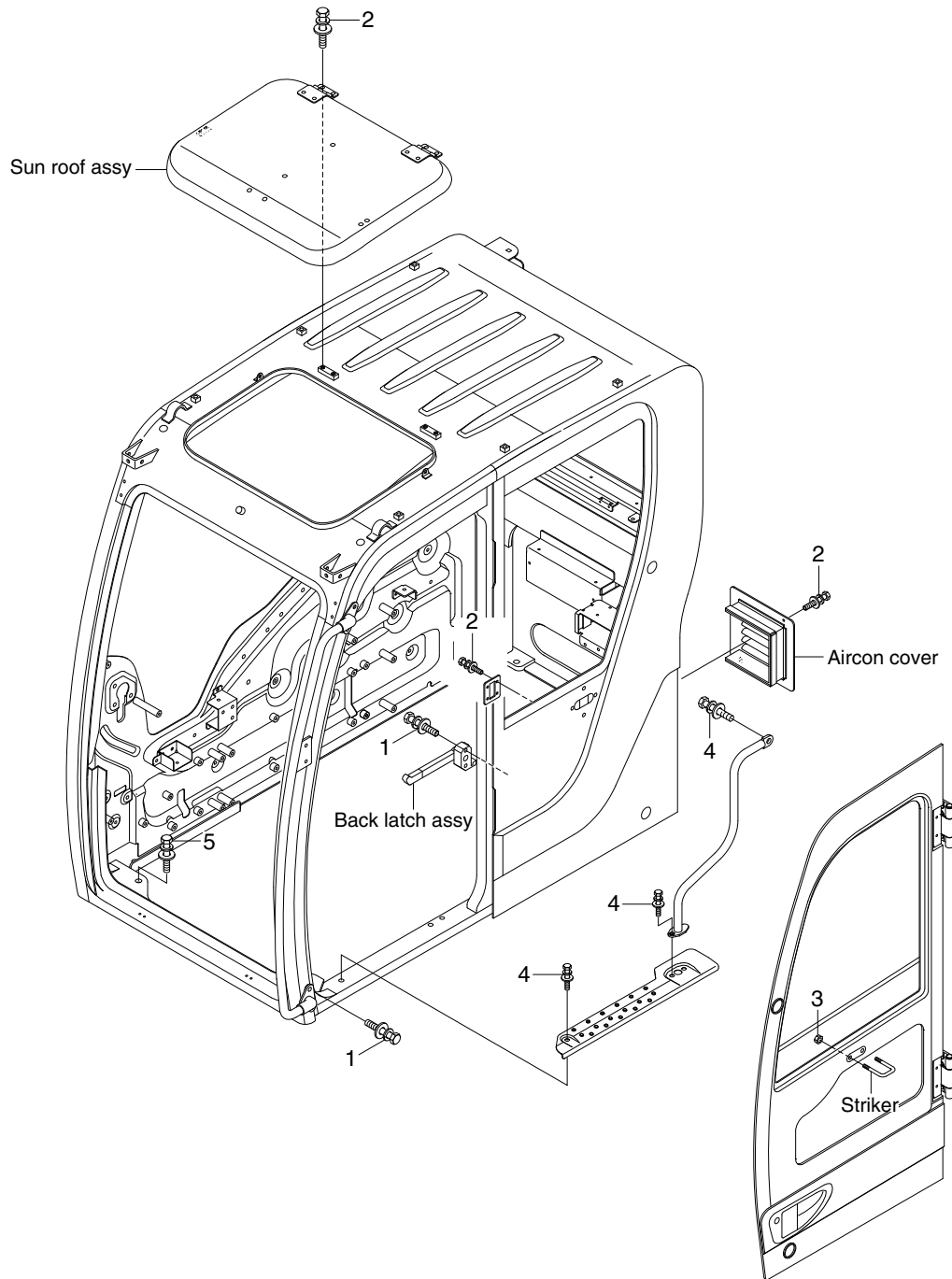
• Tightening torque

Item	Size	kgf · m	lbf · ft
1	M 8×1.0	3.74±0.7	27.1±5.1
2	M10×1.5	6.9±1.4	49.9±10.1
3	M12×1.75	12.8±3.0	92.6±21.7
4	M16×1.5	42±4.0	304±28.9

Item	Size	kgf · m	lbf · ft
5	M16×1.5	29.7±3.0	215±21.7
6	M16×2.0	29.8±3.2	214±23.1
7	M18×2.5	41.3±4.0	299±28.9
8	M18×2.5	41.3±6.2	299±44.8

# GROUP 6 STRUCTURE

## 1. CAB AND ACCESSORIES MOUNTING



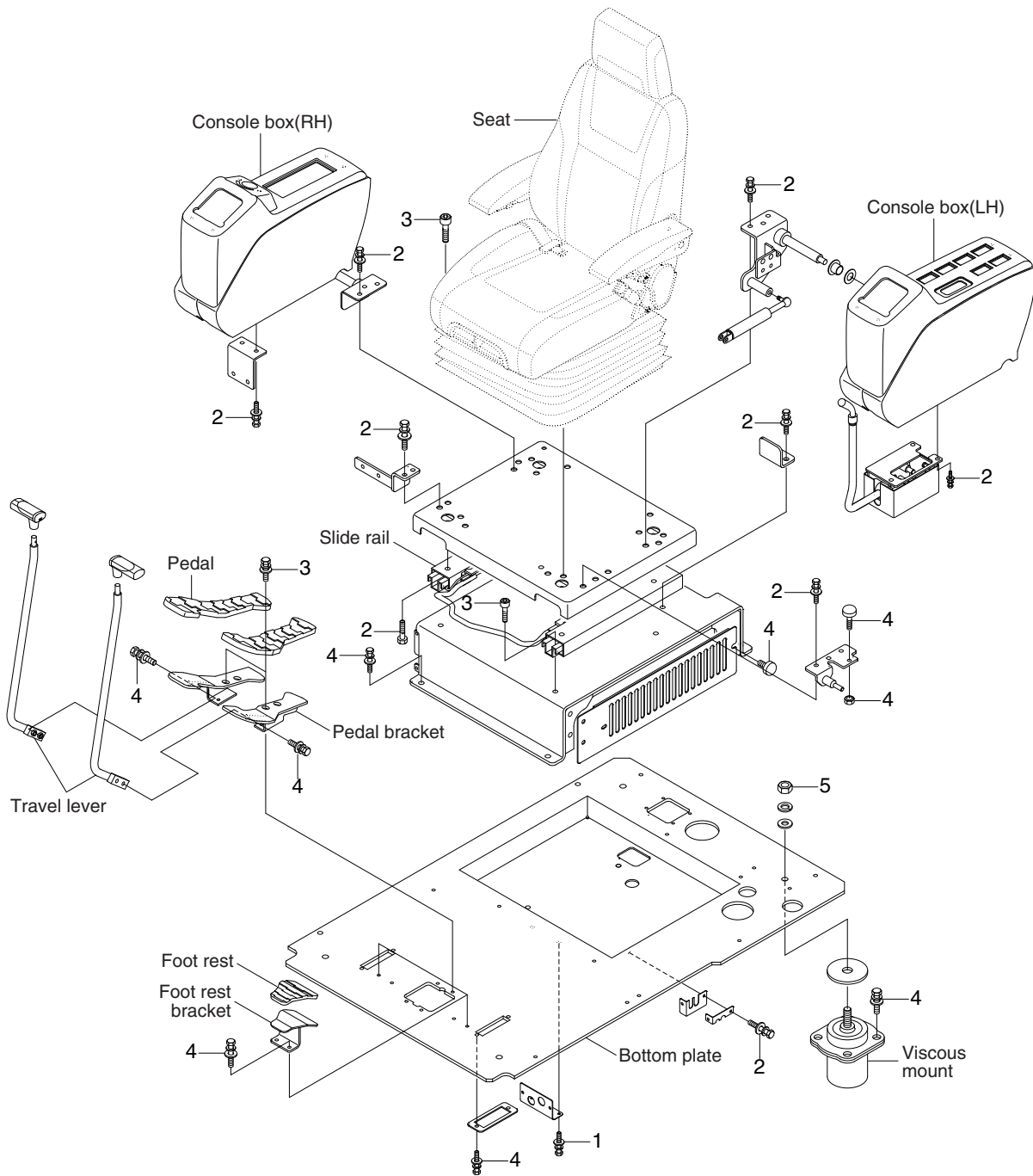
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### • Tightening torque

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	M10×1.5	4.7±0.9	34±6.5

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

## 2. CAB INTERIOR MOUNTING



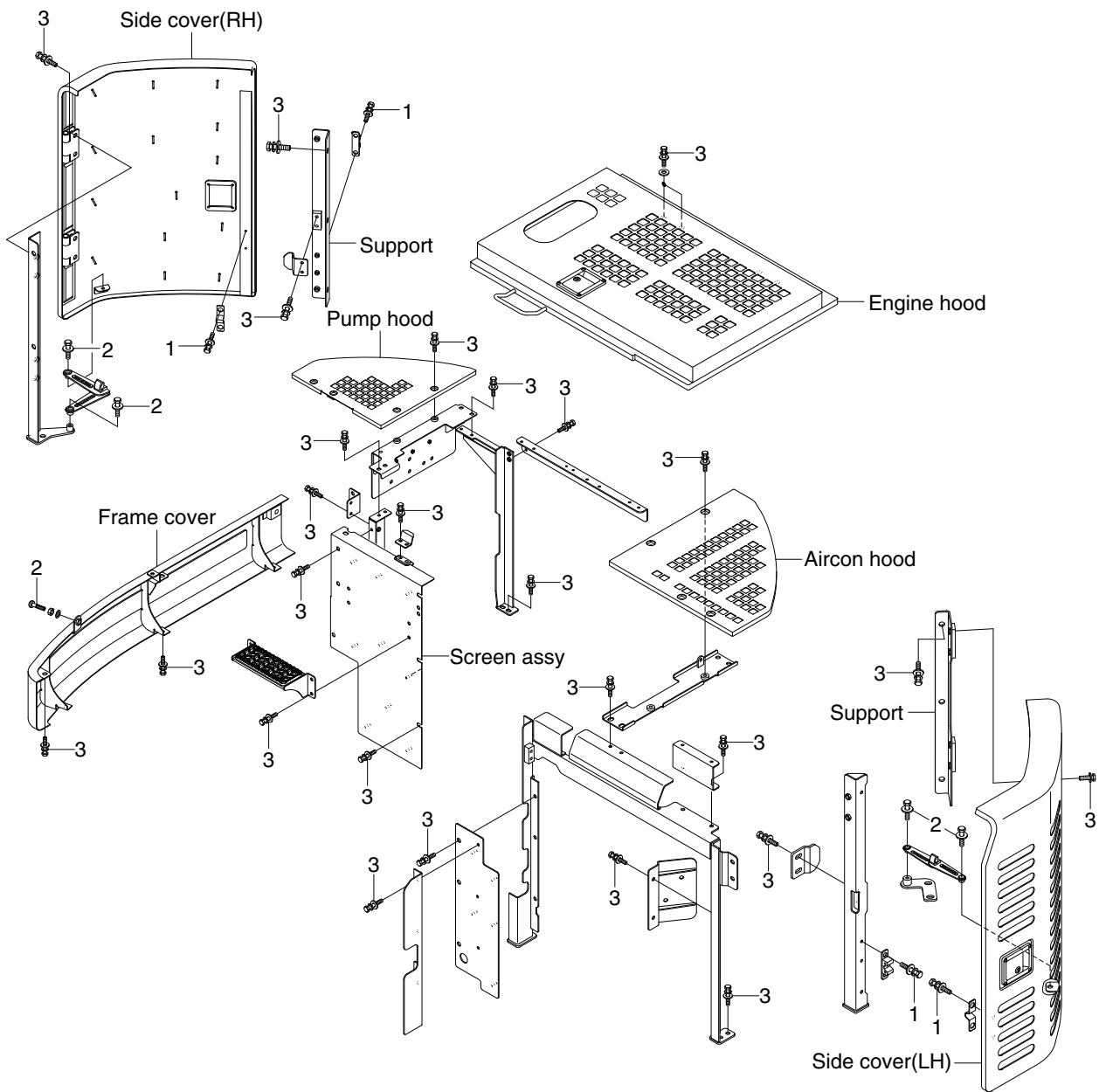
140Z99CM10

### · 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	3.43±0.7	24.8±5.1
3	M 8×1.25	4.05±0.8	29.3±5.8

Item	Size	kgf · m	lbf · ft
4	M10×1.5	6.9±1.4	49.9±10.1
5	M16×2.0	29.7±4.5	215±32.5

### 3. COWLING MOUNTING

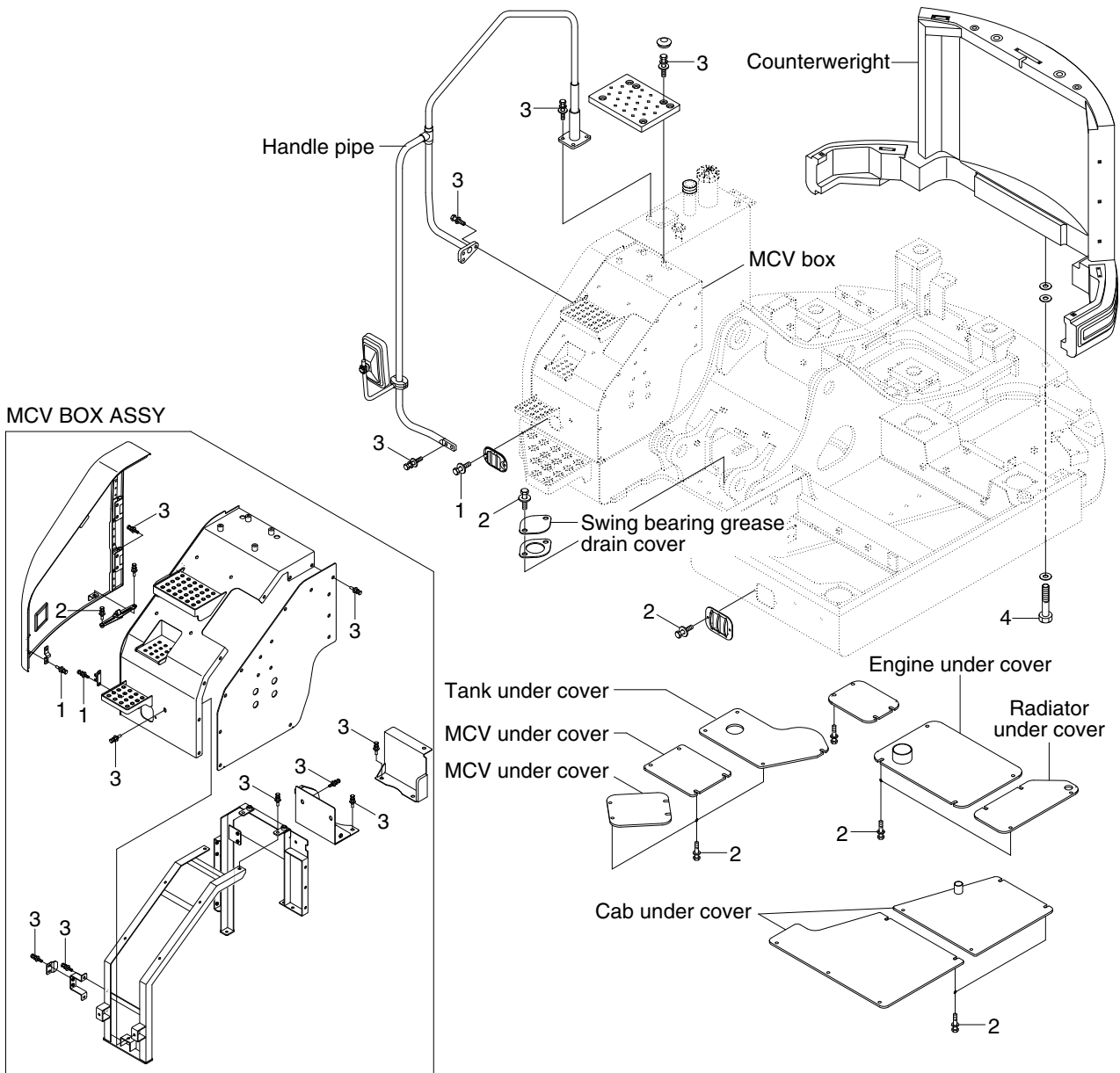


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#### · Tightening torque

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

#### 4. COUNTERWEIGHT AND COVERS MOUNTING

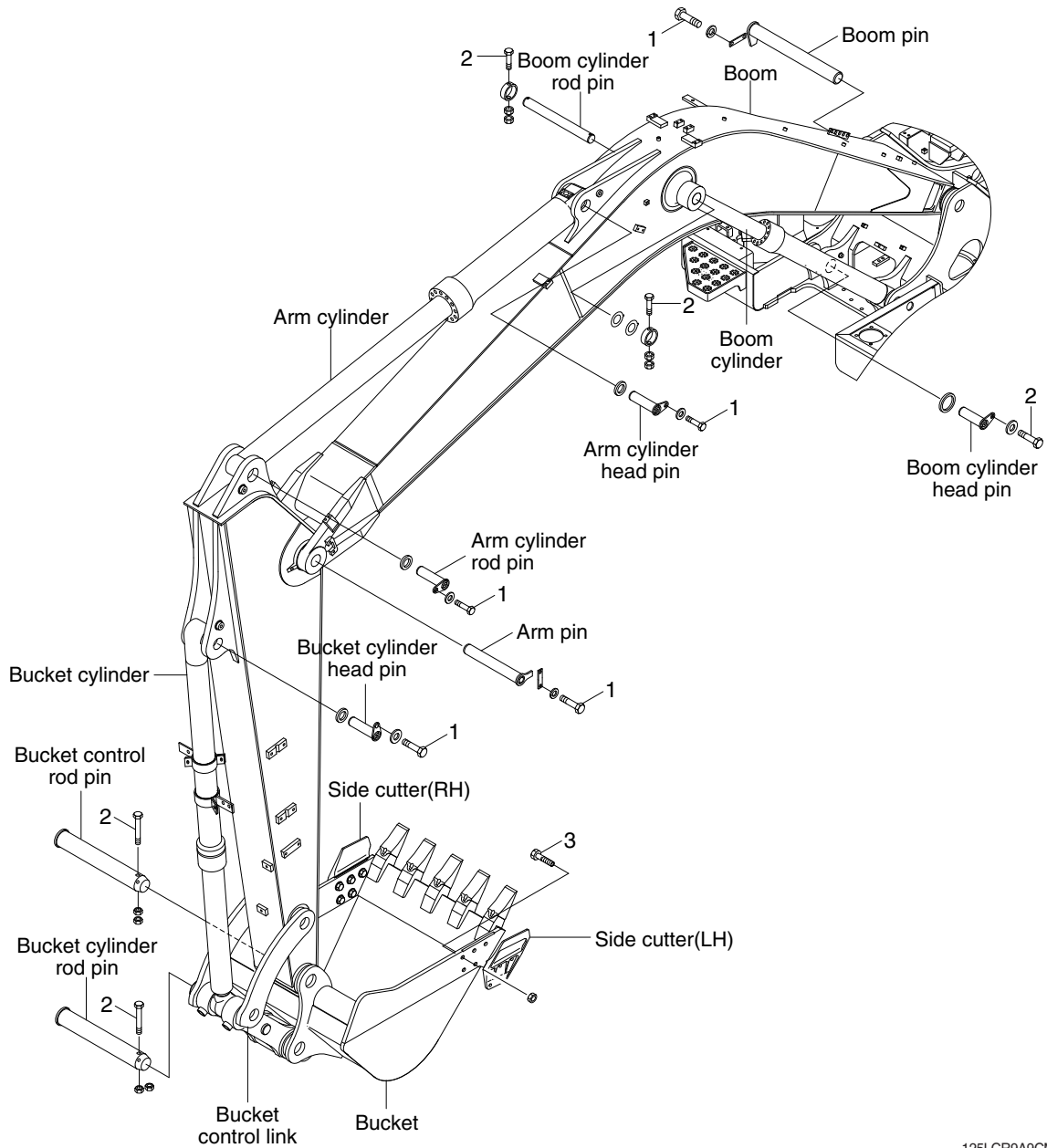


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#### · Tightening torque

Item	Size	kgf · m	lbf · ft
1	M 8 × 1.25	2.5 ± 0.5	18.1 ± 3.6
2	M10 × 1.5	6.9 ± 1.4	49.9 ± 10.1
3	M12 × 1.75	12.8 ± 3.0	92.6 ± 21.7
4	M36 × 3.0	308 ± 46	2228 ± 333

## GROUP 7 WORK EQUIPMENT



125LCR9A9CM13

### · 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