

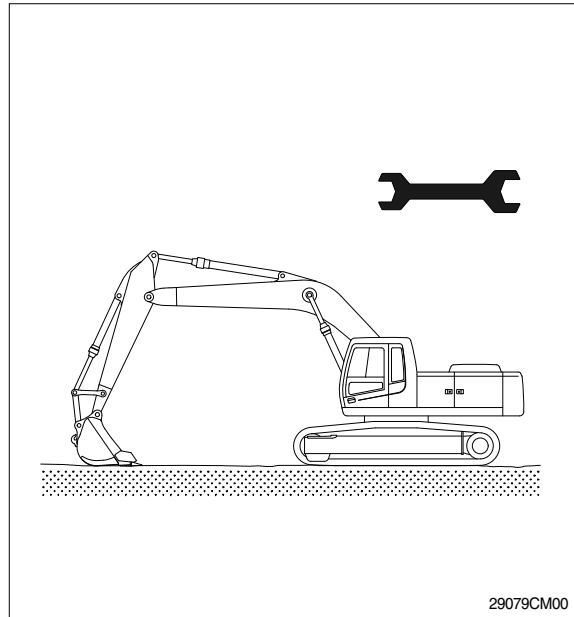
## SECTION 9 COMPONENT MOUNTING TORQUE

|         |                          |      |
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# SECTION 9 COMPONENT MOUNTING TORQUE

## GROUP 1 INTRODUCTION GUIDE

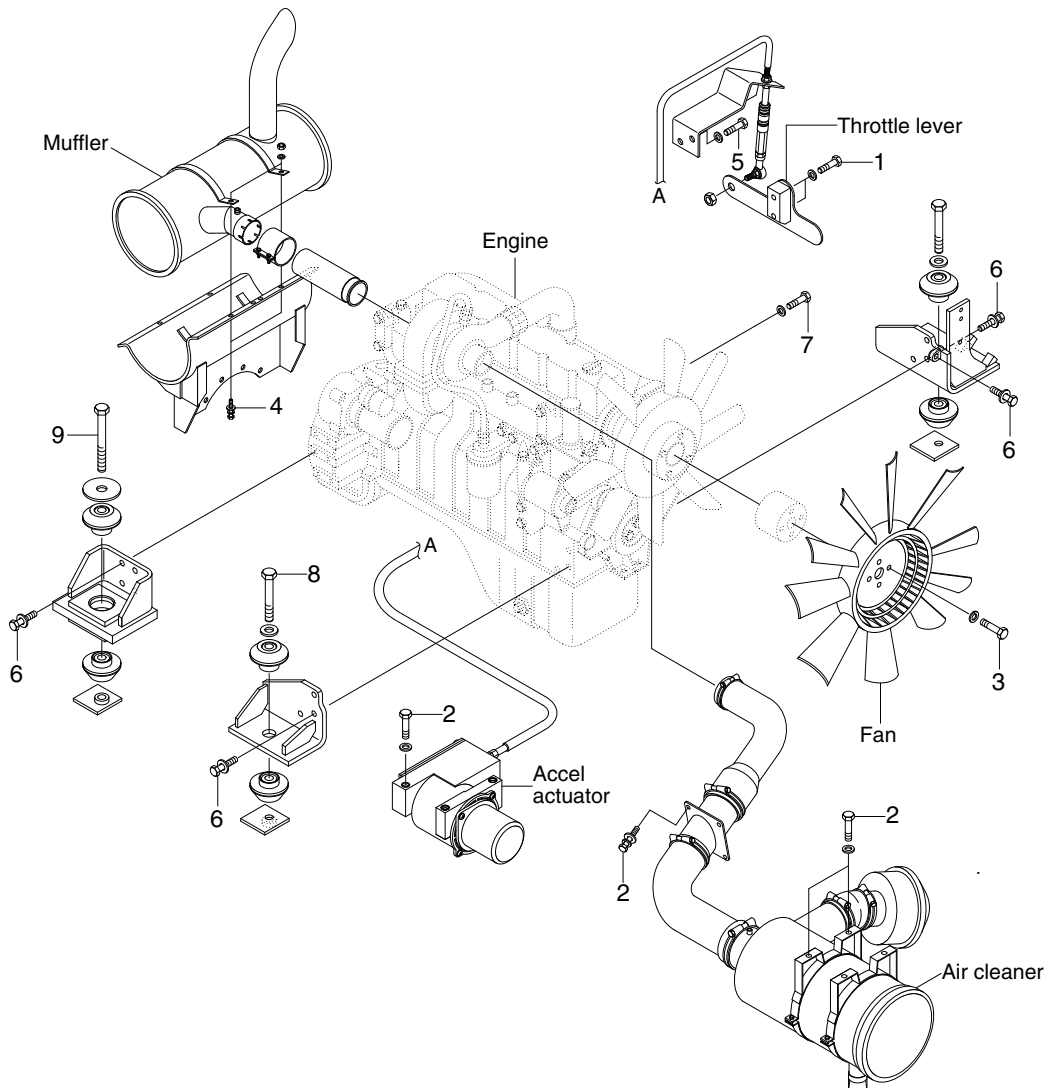
1. This section shows bolt specifications and standard torque values needed when mounting components to the machine.
  2. Use genuine Hyundai spare parts.  
We expressly point out that Hyundai will not accept any responsibility for defects resulted from non-genuine parts.  
In such cases Hyundai cannot 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.**



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## GROUP 2 ENGINE SYSTEM

### ENGINE AND ACCESSORIES MOUNTING



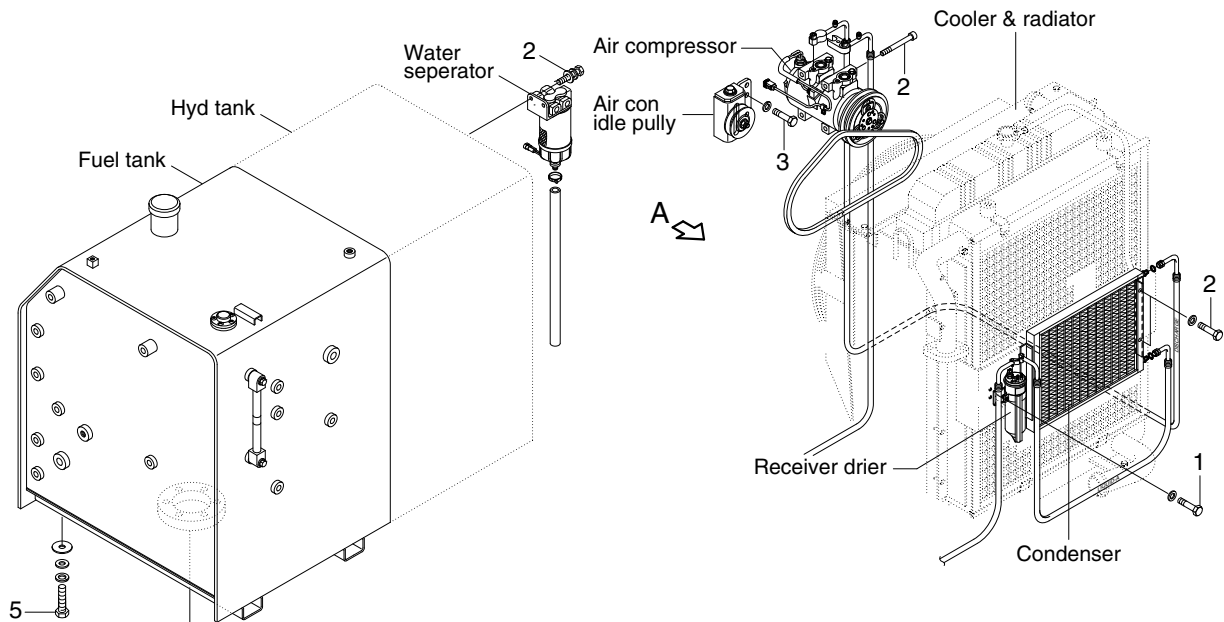
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#### · Tightening torque

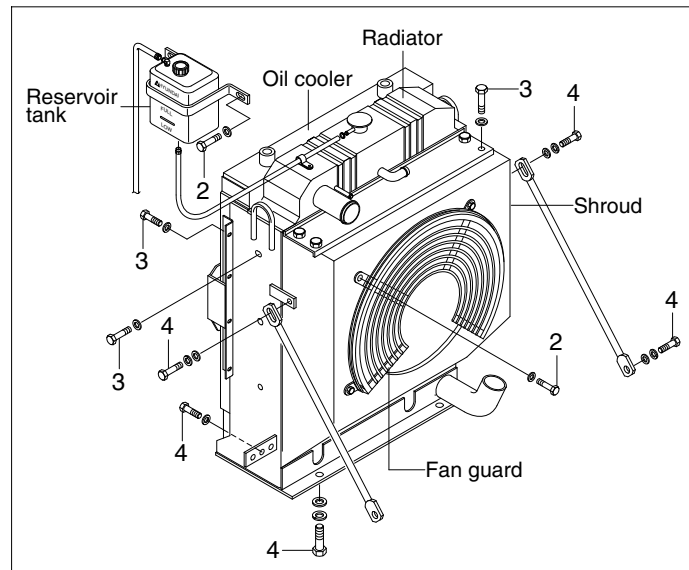
| Item | Size     | kgf · m  | lbf · ft  |
|------|----------|----------|-----------|
| 1    | M 6×1.0  | 0.92±0.2 | 6.7±1.4   |
| 2    | M 8×1.25 | 2.5±0.5  | 18.1±3.6  |
| 3    | M10×1.5  | 4.4±0.9  | 31.8±6.5  |
| 4    | M10×1.5  | 6.9±1.4  | 49.9±10.1 |
| 5    | M12×1.5  | 12.5±3.0 | 92.6±21.7 |

| Item | Size     | kgf · m  | lbf · ft  |
|------|----------|----------|-----------|
| 6    | M12×1.75 | 10.0±2.0 | 72.3±14.5 |
| 7    | M12×1.75 | 12.8±3.0 | 92.6±21.7 |
| 8    | M20×2.5  | 55±3.5   | 398±25.3  |
| 9    | M24×3.0  | 90±7.0   | 651±51    |
| -    | -        | -        | -         |

# COOLING SYSTEM AND FUEL TANK MOUNTING



VIEW A



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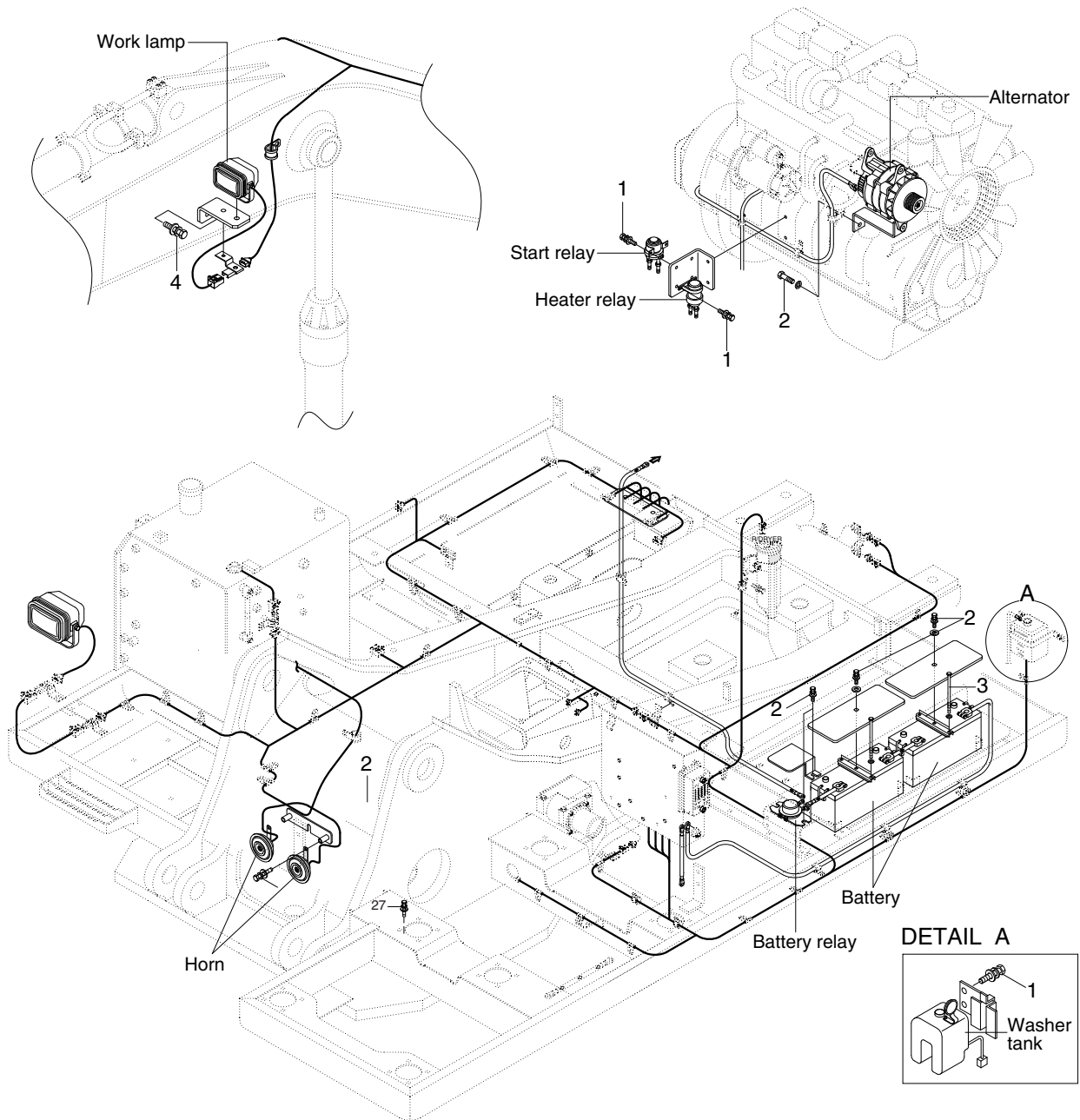
## · Tightening torque

| 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  |
| 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    | M20×2.5  | 45±5.1   | 325±36.9  |
| 6    | -        | 2.3±0.6  | 16.6±4.3  |

# GROUP 3 ELECTRIC SYSTEM

## ELECTRIC COMPONENTS MOUNTING 1



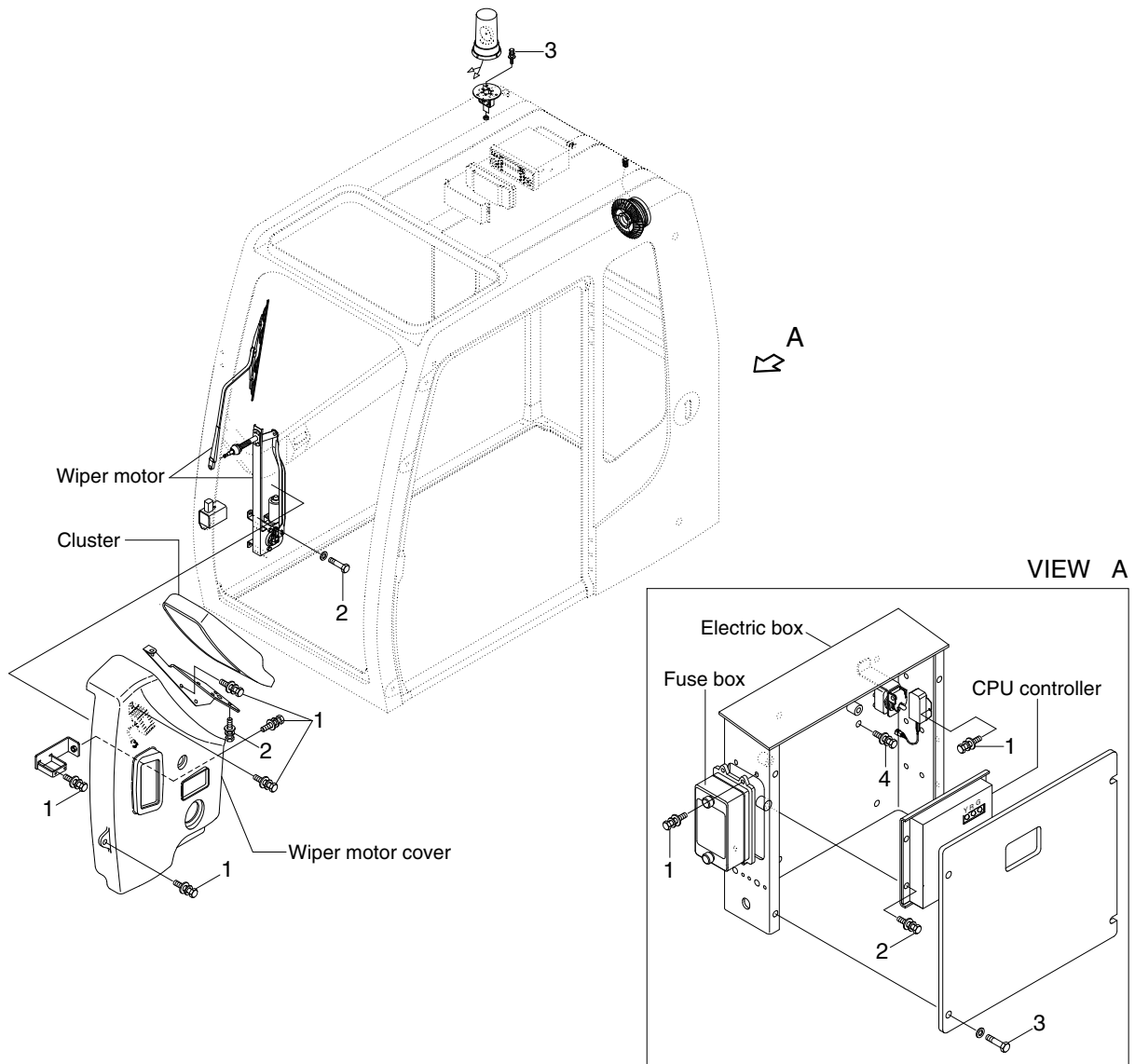
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· Tightening torque

| 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    | 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



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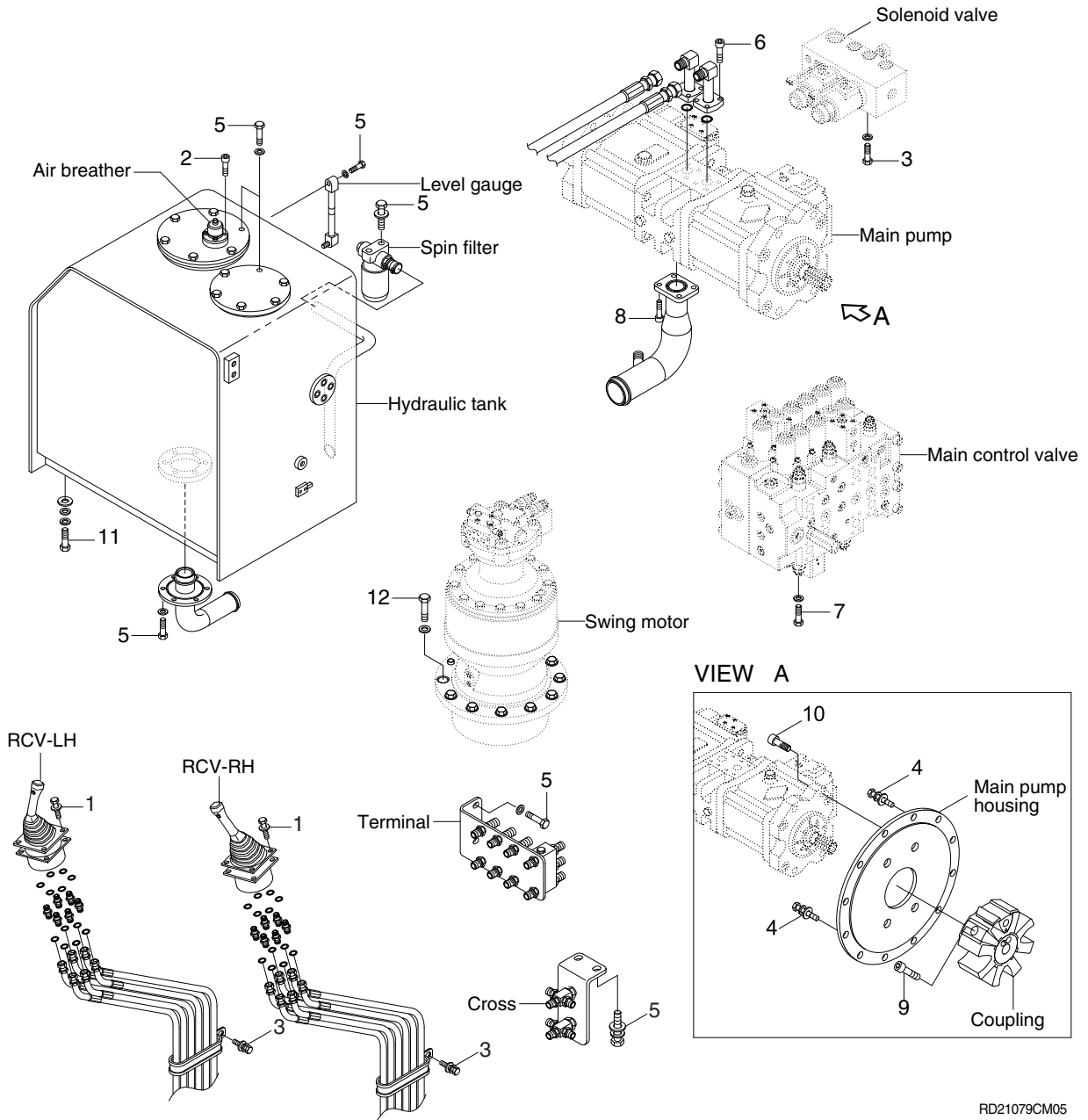
### · Tightening torque

| 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



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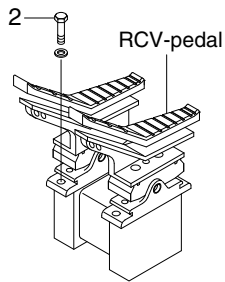
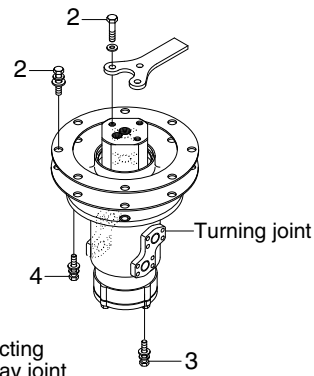
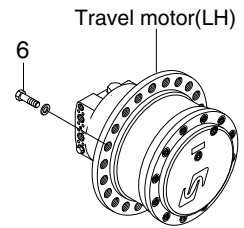
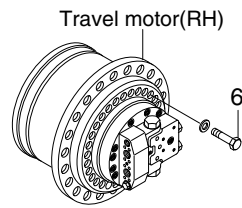
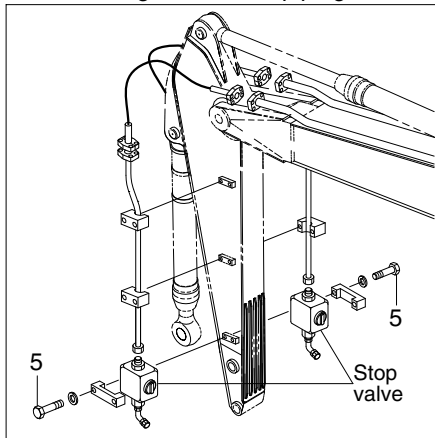
### · Tightening torque

| 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    | M10×1.5  | 4.8±0.3  | 34.7±2.2  |
| 5    | M10×1.5  | 6.9±1.4  | 49.9±10.1 |
| 6    | M10×1.5  | 8.27±1.7 | 59.8±12.3 |

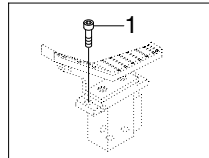
| Item | Size     | kgf · m  | lbf · ft |
|------|----------|----------|----------|
| 7    | M12×1.75 | 12.2±1.3 | 88.2±9.4 |
| 8    | M12×1.75 | 14.7±2.2 | 106±15.9 |
| 9    | M16×2.0  | 22±1.0   | 159±7.2  |
| 10   | M20×2.5  | 42±4.5   | 304±32.5 |
| 11   | M20×2.5  | 45±5.1   | 325±36.9 |
| 12   | M20×2.5  | 57.9±8.7 | 419±62.9 |

## HYDRAULIC COMPONENTS MOUNTING 2

Double acting attachment piping



D/acting single pedal



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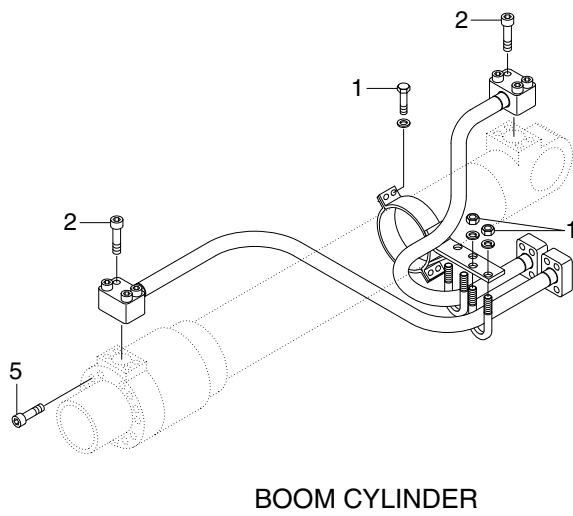
### · Tightening torque

| 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    | M12×1.75 | 11.25±1.25 | 81.4±9.0  |
| 4    | M12×1.75 | 12.3±1.3   | 88.9±9.4  |

| Item | Size     | kgf · m  | lbf · ft  |
|------|----------|----------|-----------|
| 5    | M12×1.75 | 12.8±3.0 | 92.6±21.7 |
| 6    | M12×1.75 | 14.7±2.2 | 106±15.9  |
| 7    | M16×2.0  | 23.0±2.5 | 166±18.1  |
| -    | -        | -        | -         |

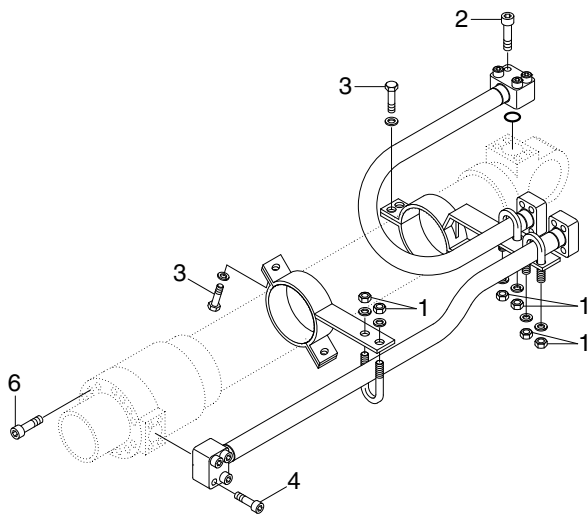
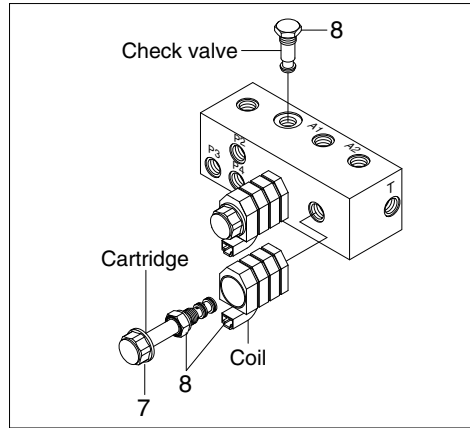


# HYDRAULIC COMPONENTS MOUNTING 3

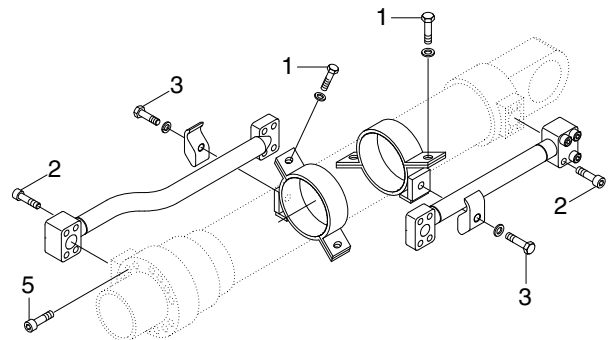


**BOOM CYLINDER**

**Solenoid valve**



**ARM CYLINDER**



**BUCKET CYLINDER**

RD21079CM07

· Tightening torque

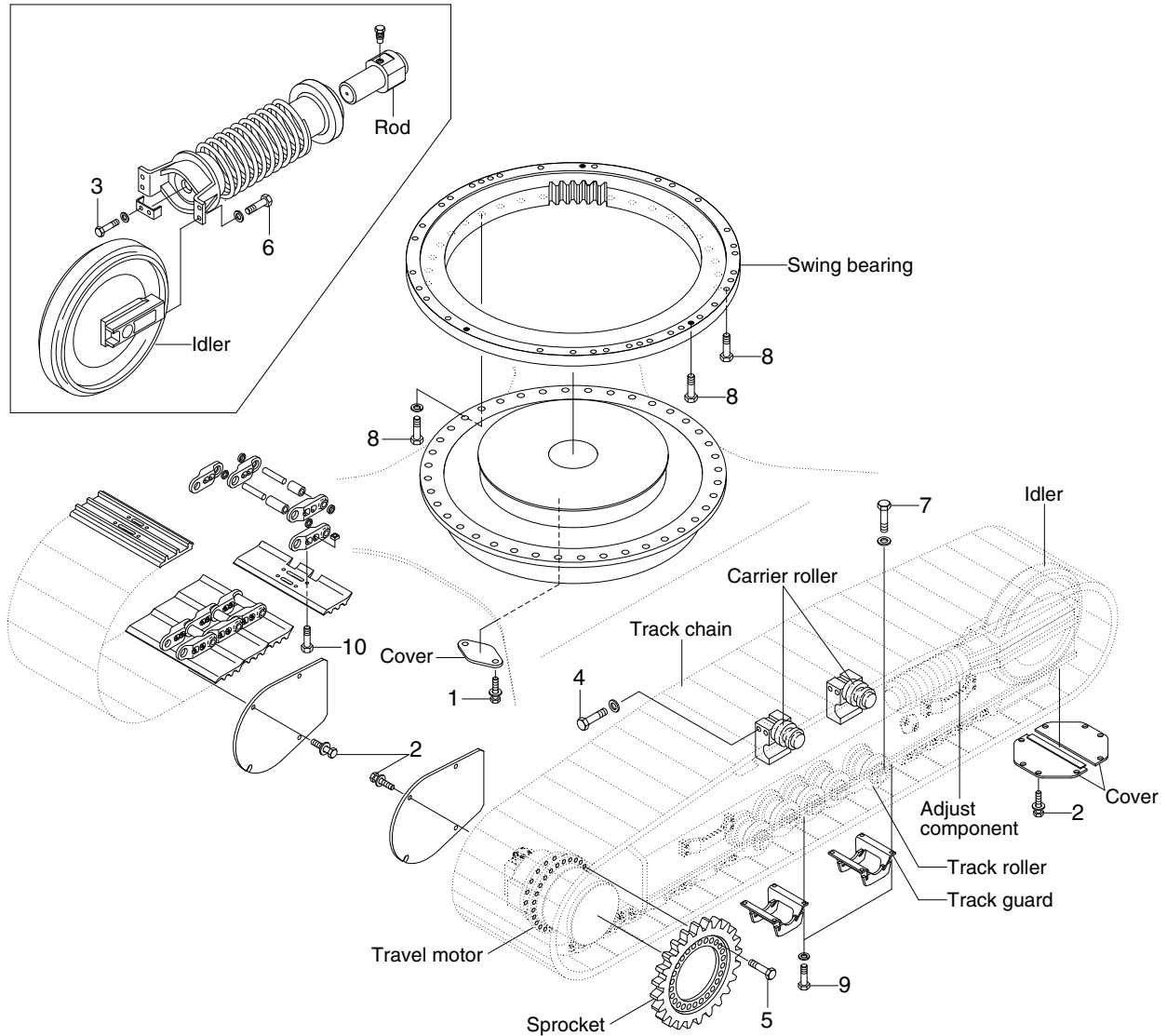
| Item | Size     | kgf · m | lbf · ft |
|------|----------|---------|----------|
| 1    | M10×1.5  | 3.2±0.3 | 23.1±2.2 |
| 2    | M10×1.5  | 5.4±0.5 | 39.1±3.6 |
| 3    | M12×1.75 | 5.5±0.6 | 39.8±4.3 |
| 4    | M12×1.75 | 9.4±1.0 | 68.0±7.2 |

| Item | Size    | kgf · m | lbf · ft |
|------|---------|---------|----------|
| 5    | M16×2.0 | 23±2.0  | 166±14.5 |
| 6    | M18×2.5 | 32±3.0  | 232±21.7 |
| 7    | -       | 0.5±0.1 | 3.6±0.7  |
| 8    | -       | 2.8±0.2 | 20.3±1.4 |

# GROUP 5 UNDERCARRIAGE

## UNDERCARRIAGE MOUNTING

### ADJUST COMPONENT



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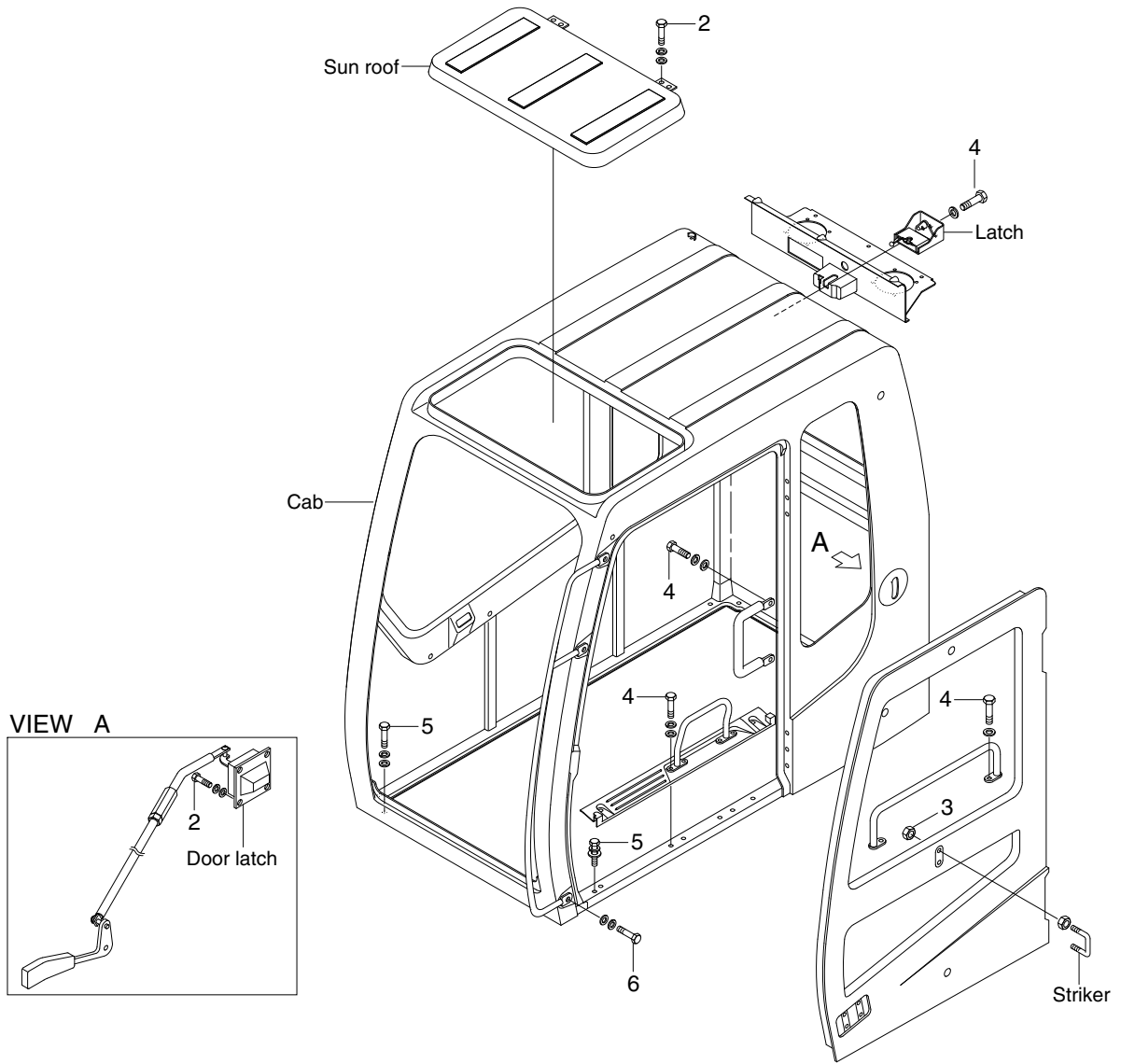
### · Tightening torque

| 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    | M12×1.75 | 15±0.5   | 108±3.6   |
| 4    | M16×2.0  | 23±2.5   | 166±18.1  |
| 5    | M16×2.0  | 26±4.0   | 188±28.9  |

| Item | Size    | kgf · m  | lbf · ft |
|------|---------|----------|----------|
| 6    | M16×2.0 | 29.7±4.5 | 215±32.5 |
| 7    | M20×2.5 | 54.7±5.0 | 396±36.2 |
| 8    | M20×2.5 | 57.8±6.4 | 418±46.3 |
| 9    | M20×2.5 | 57.9±8.7 | 419±62.9 |
| 10   | M20×2.5 | 78±8.0   | 564±57.9 |

# GROUP 6 STRUCTURE

## CAB AND ACCESSORIES MOUNTING



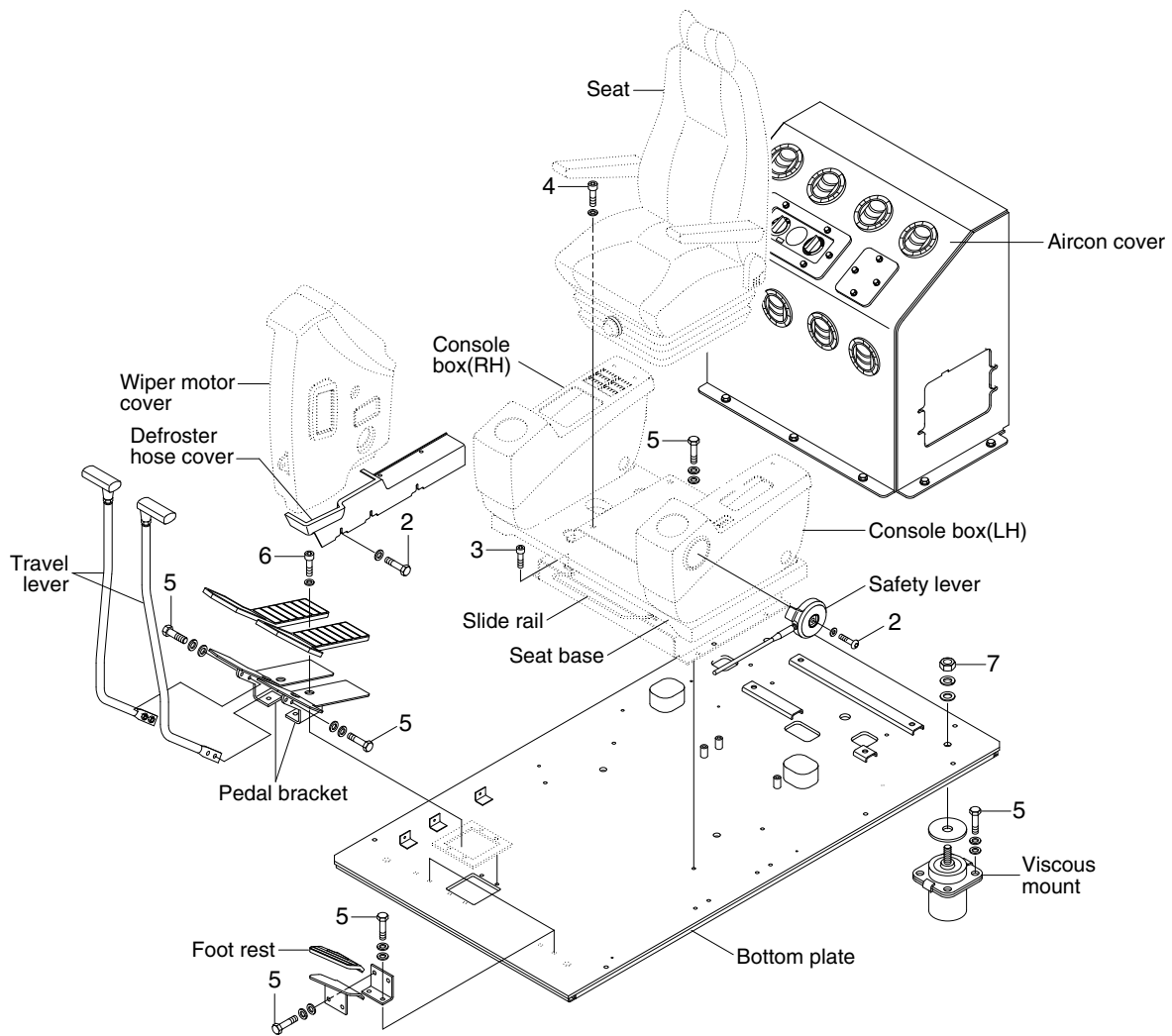
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### · Tightening torque

| Item | Size     | kgf · m  | lbf · ft |
|------|----------|----------|----------|
| 1    | M 6×1.0  | 0.49±0.1 | 3.5±0.7  |
| 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 |
| 6    | M16×2.0  | 29.7±4.5 | 215±32.5  |

# CAB INTERIOR MOUNTING



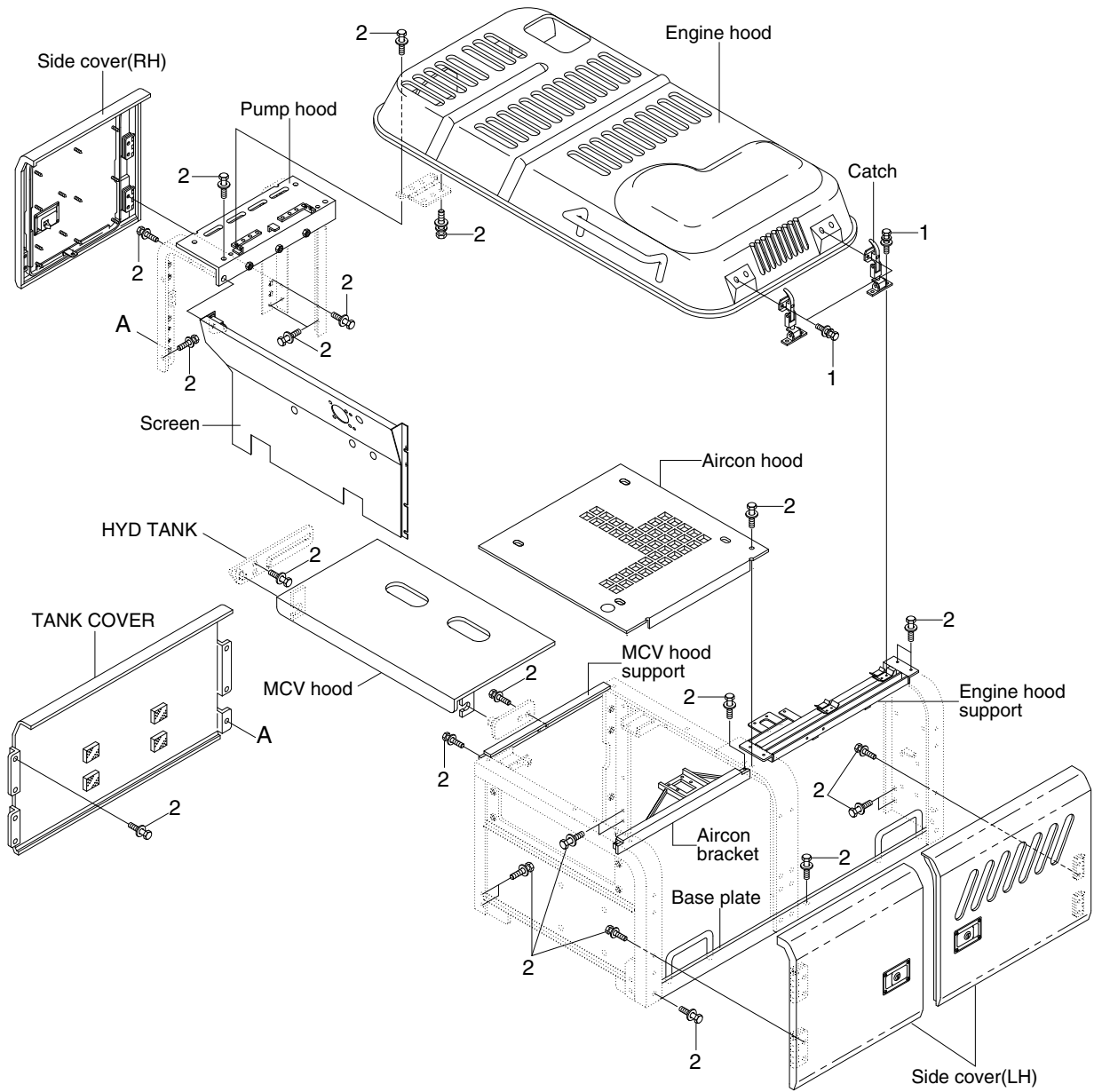
RD21079CM10

## · Tightening torque

| Item | Size     | kgf · m  | lbf · ft |
|------|----------|----------|----------|
| 1    | M 6×1.0  | 0.49±0.1 | 3.5±0.7  |
| 2    | M 6×1.0  | 1.05±0.2 | 7.6±1.4  |
| 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 |

| Item | Size    | kgf · m  | lbf · ft  |
|------|---------|----------|-----------|
| 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    | M16×2.0 | 29.7±4.5 | 215±32.5  |
| -    | -       | -        | -         |

# COWLING MOUNTING



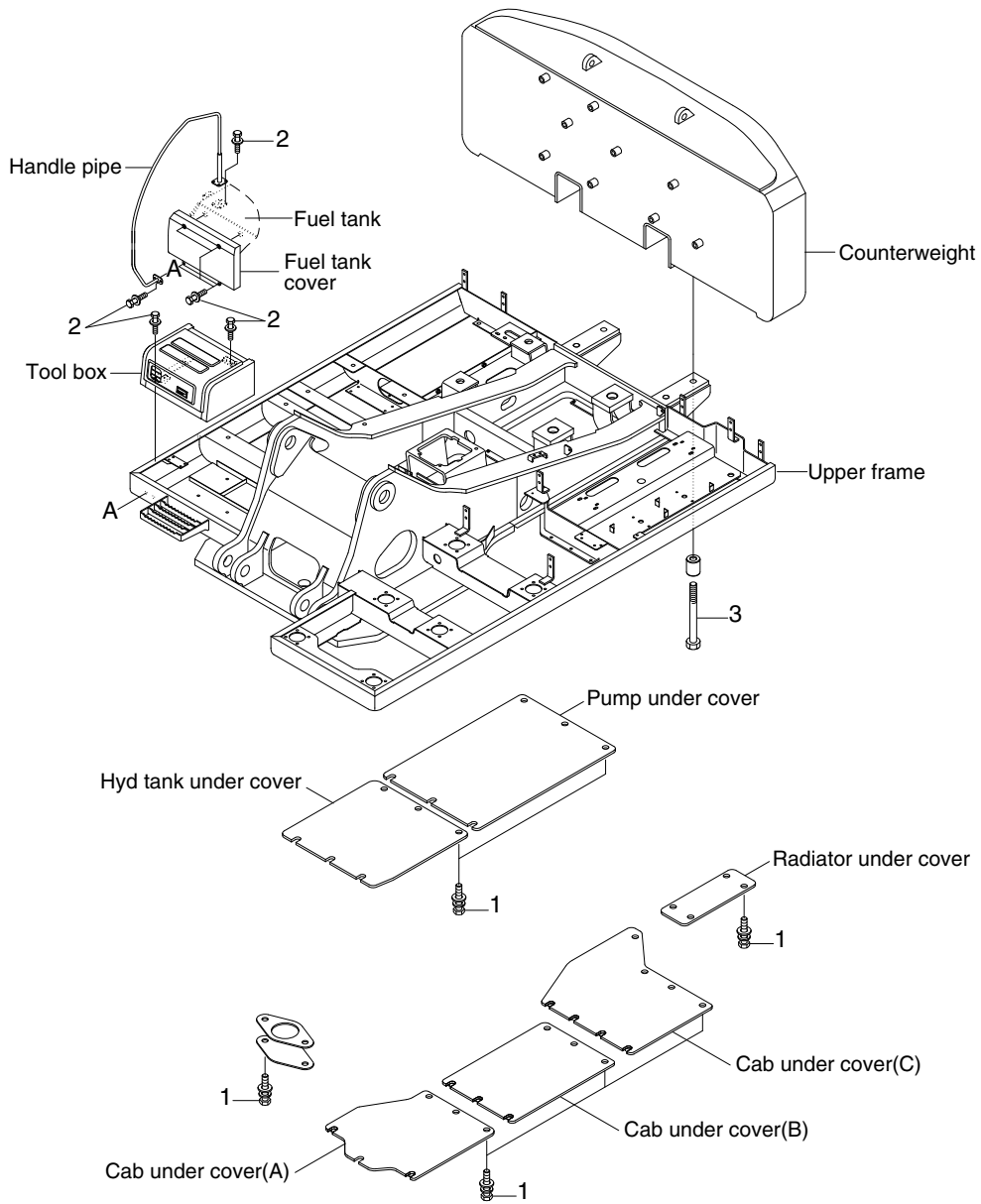
RD21079CM11

## · Tightening torque

| Item | Size     | kgf · m  | lbf · ft  |
|------|----------|----------|-----------|
| 1    | M 8×1.25 | 2.5±0.5  | 18.1±3.6  |
| 2    | M12×1.75 | 12.8±3.0 | 92.6±21.7 |

| Item | Size    | kgf · m  | lbf · ft |
|------|---------|----------|----------|
| 3    | M16×2.0 | 29.7±4.5 | 215±32.5 |
| -    | -       | -        | -        |

# COUNTERWEIGHT AND COVERS MOUNTING



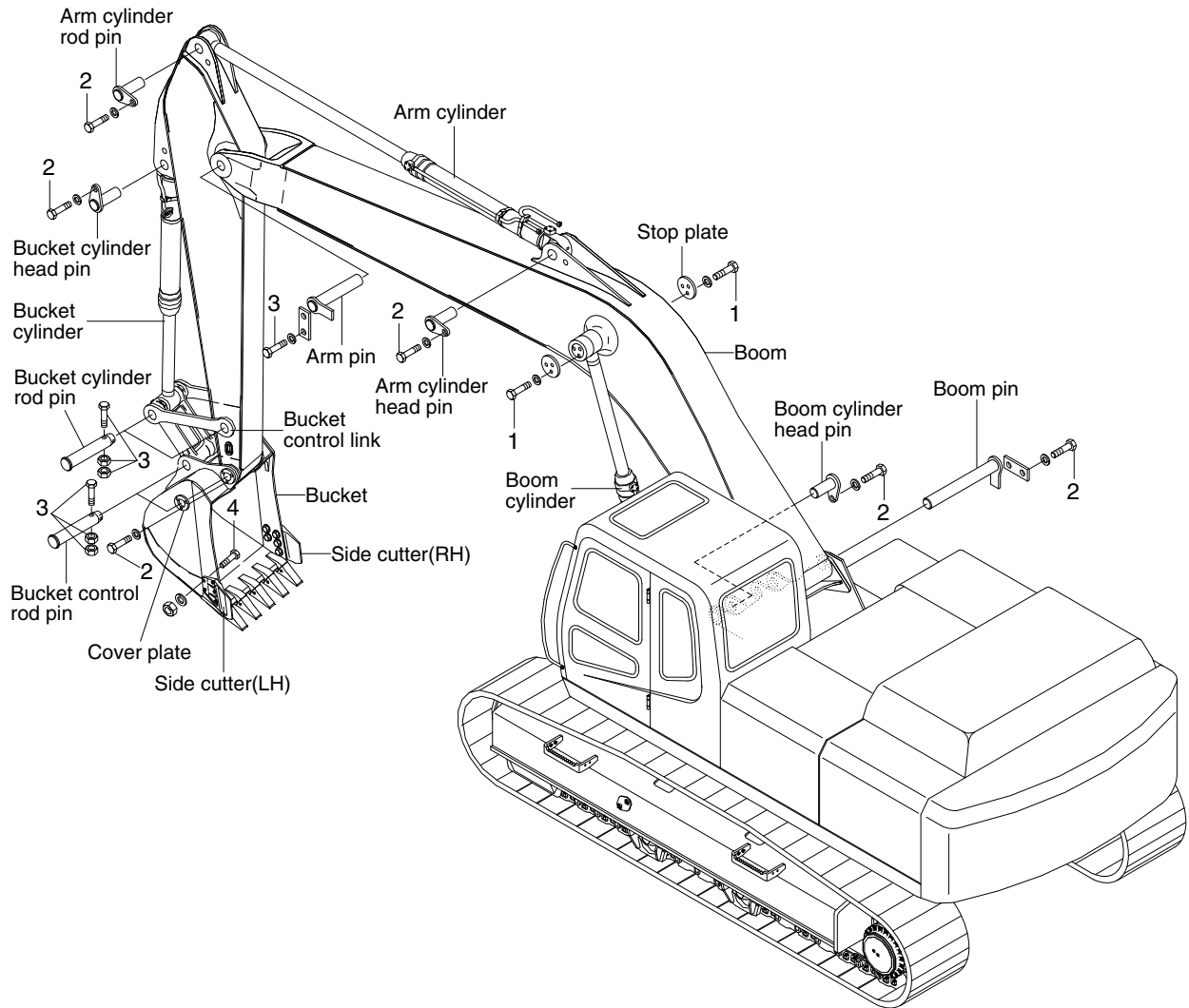
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## · Tightening torque

| 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 |

| Item | Size    | kgf · m | lbf · ft |
|------|---------|---------|----------|
| 3    | M36×3.0 | 308±46  | 2228±333 |
| -    | -       | -       | -        |

# GROUP 7 WORK EQUIPMENT



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· 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  |

| Item | Size    | kgf · m  | lbf · ft |
|------|---------|----------|----------|
| 3    | M20×2.5 | 57.9±8.7 | 419±62.9 |
| -    | M22×2.5 | 55.8±7.5 | 404±54.2 |