

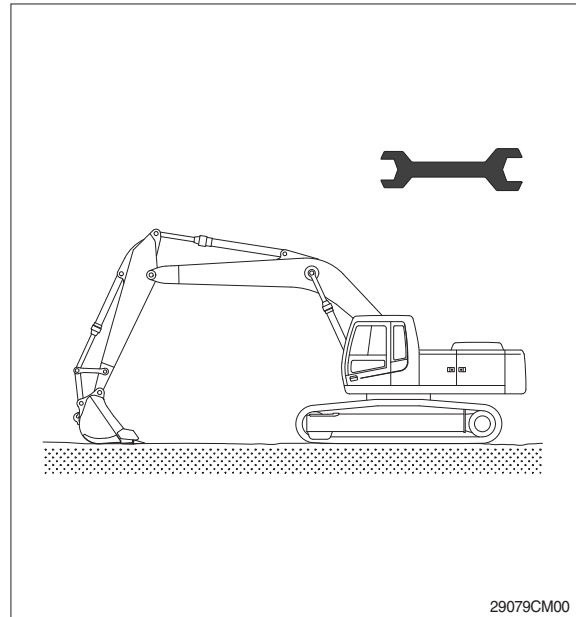
## SECTION 9 COMPONENT MOUNTING TORQUE

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

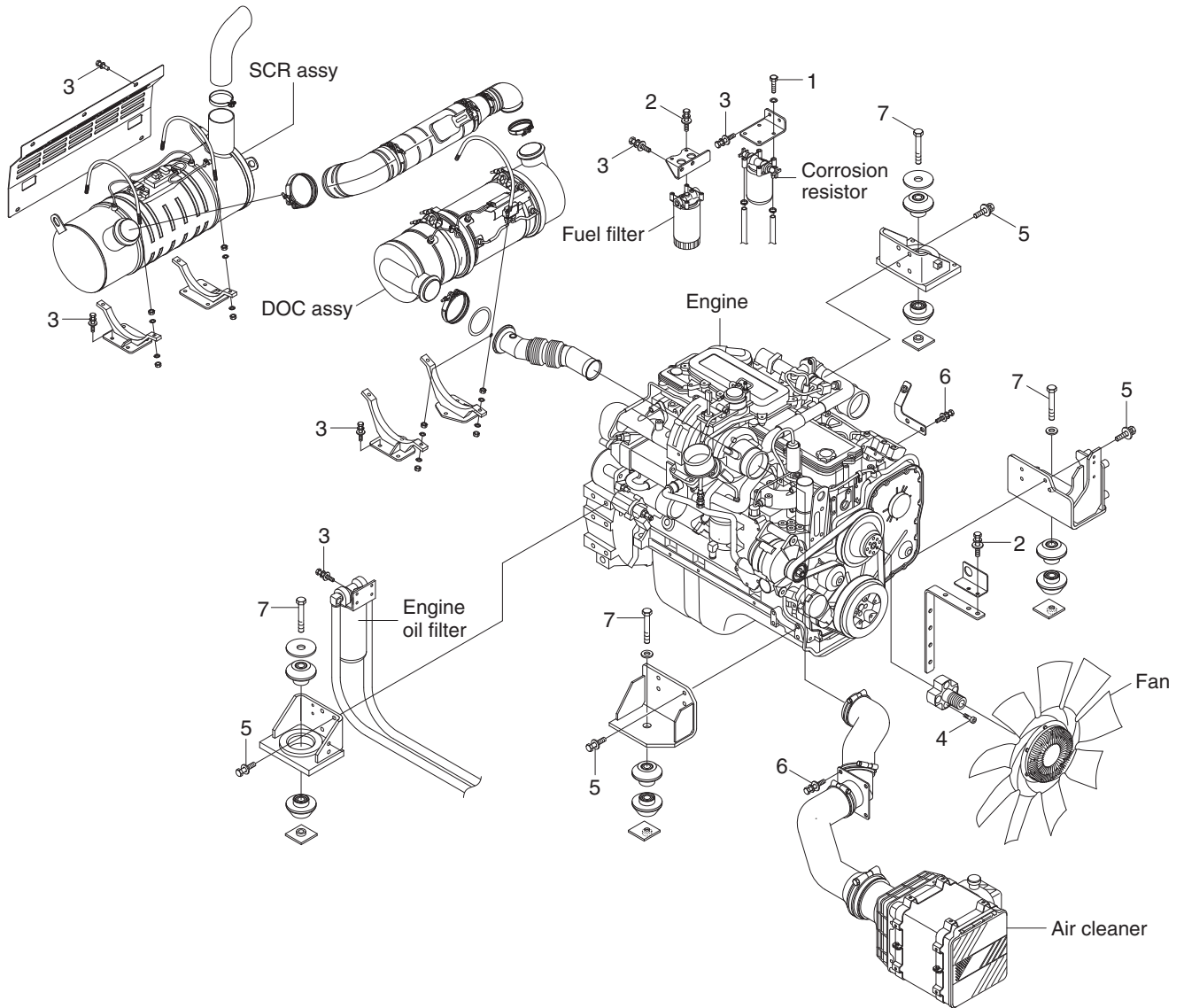
## GROUP 1 INTRODUCTION GUIDE

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

## ENGINE AND ACCESSORIES MOUNTING



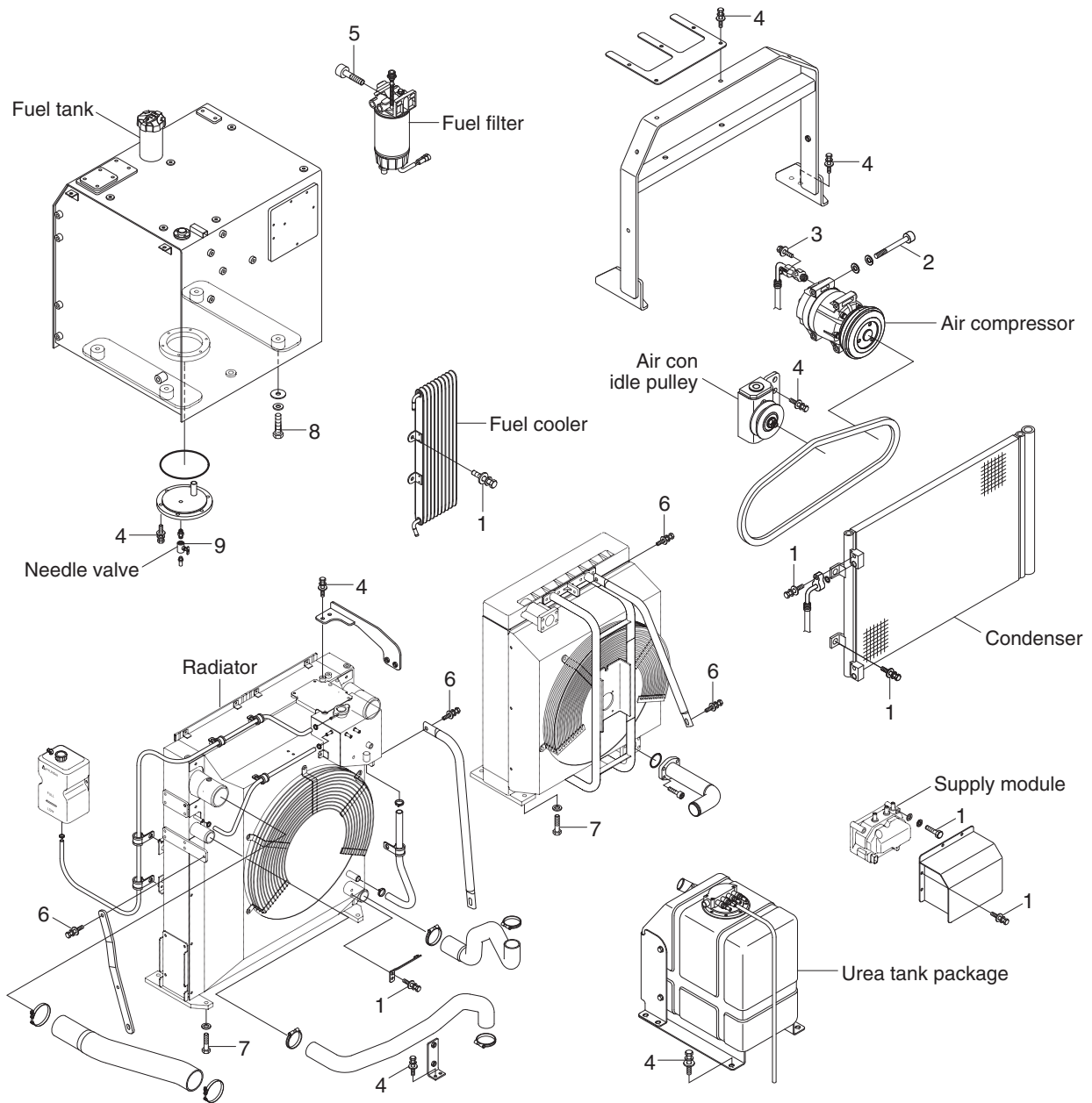
HX430L9CM01

### · 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	6.9±1.4	49.9±10.1
4	M10×1.5	8.27±1.7	59.8±12.3

Item	Size	kgf · m	lbf · ft
5	M12×1.75	11.5±1.0	83.2±7.2
6	M12×1.75	12.8±3.0	92.6±21.7
7	M24×3.0	90±9.0	651±65.1

# COOLING SYSTEM AND FUEL TANK MOUNTING



HX380L9CM02

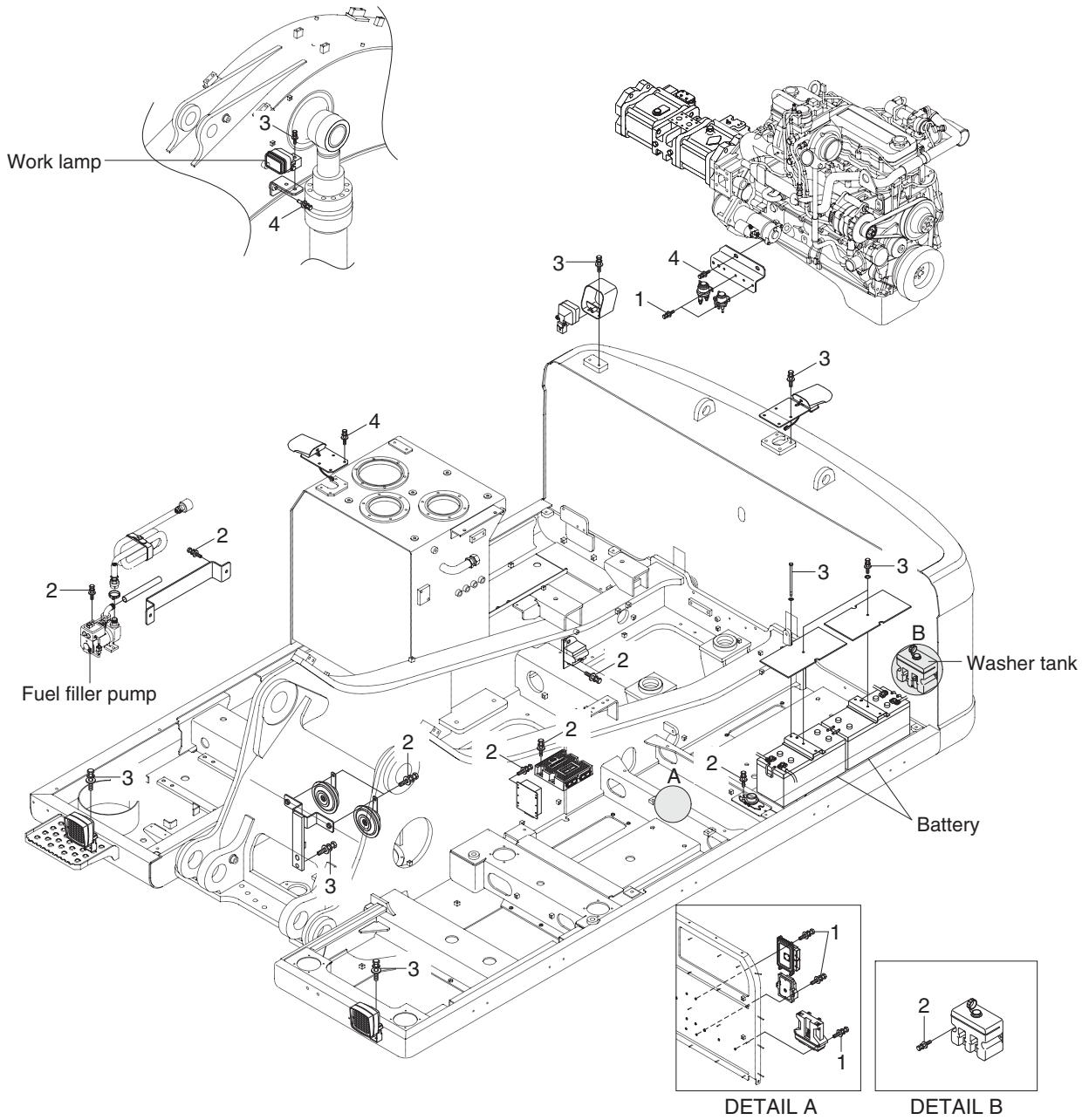
## · Tightening torque

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	M10×1.25	7.4±1.5	53.5±10.8
4	M10×1.5	6.9±1.4	49.9±10.1
5	M10×1.5	8.27±1.7	59.8±12.3

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	-	2.3±0.6	16.6±4.3
-	-	-	-

# GROUP 3 ELECTRIC SYSTEM

## ELECTRIC COMPONENTS MOUNTING 1



HX380L9CM03

· Tightening torque

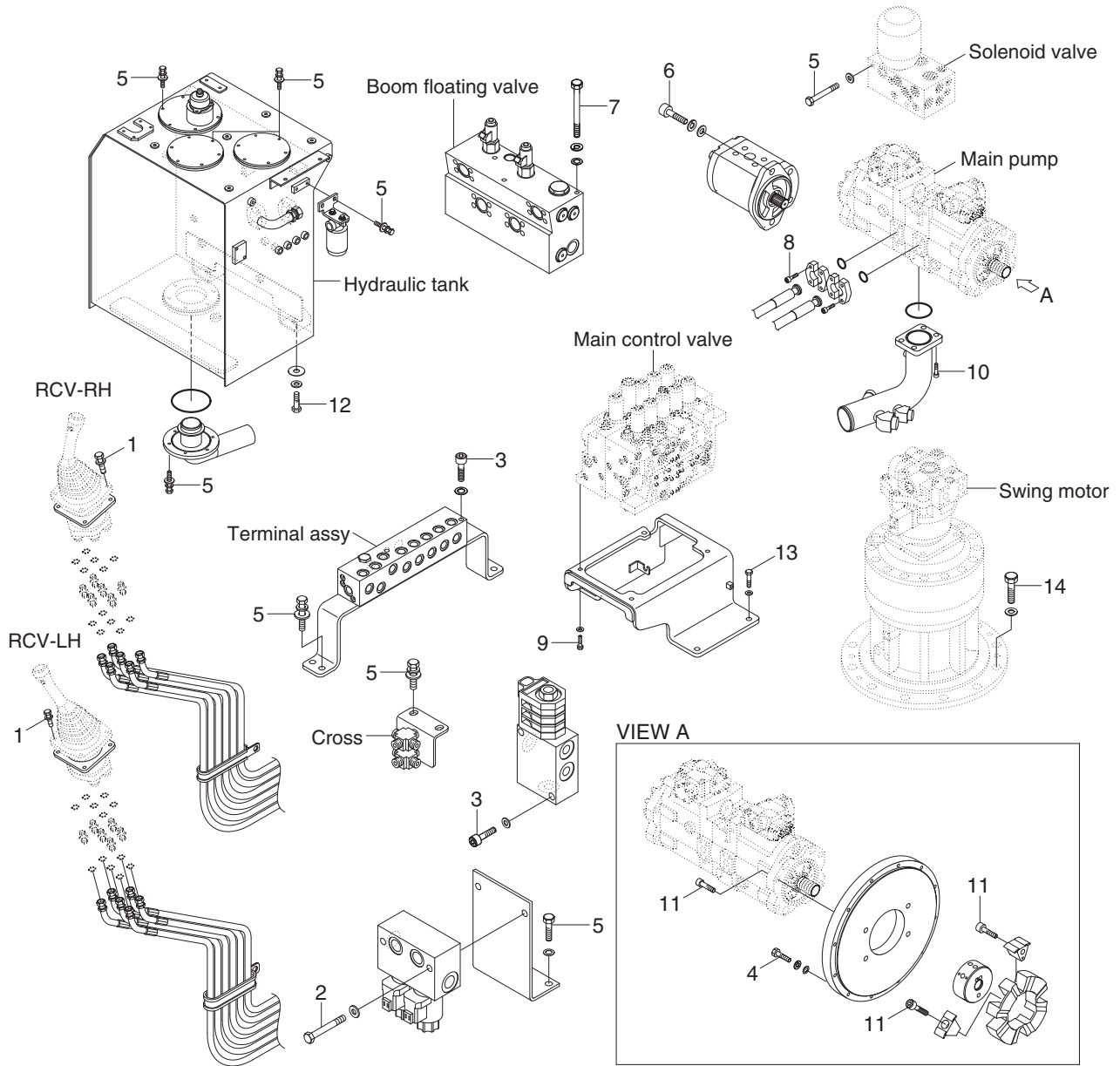
Item	Size	kgf · m	lbf · ft
1	M 6×1.0	1.05±0.2	7.6±1.45
2	M 8×1.25	2.5±0.5	18.1±3.6

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



# GROUP 4 HYDRAULIC SYSTEM

## HYDRAULIC COMPONENTS MOUNTING 1



HX380L9CM05

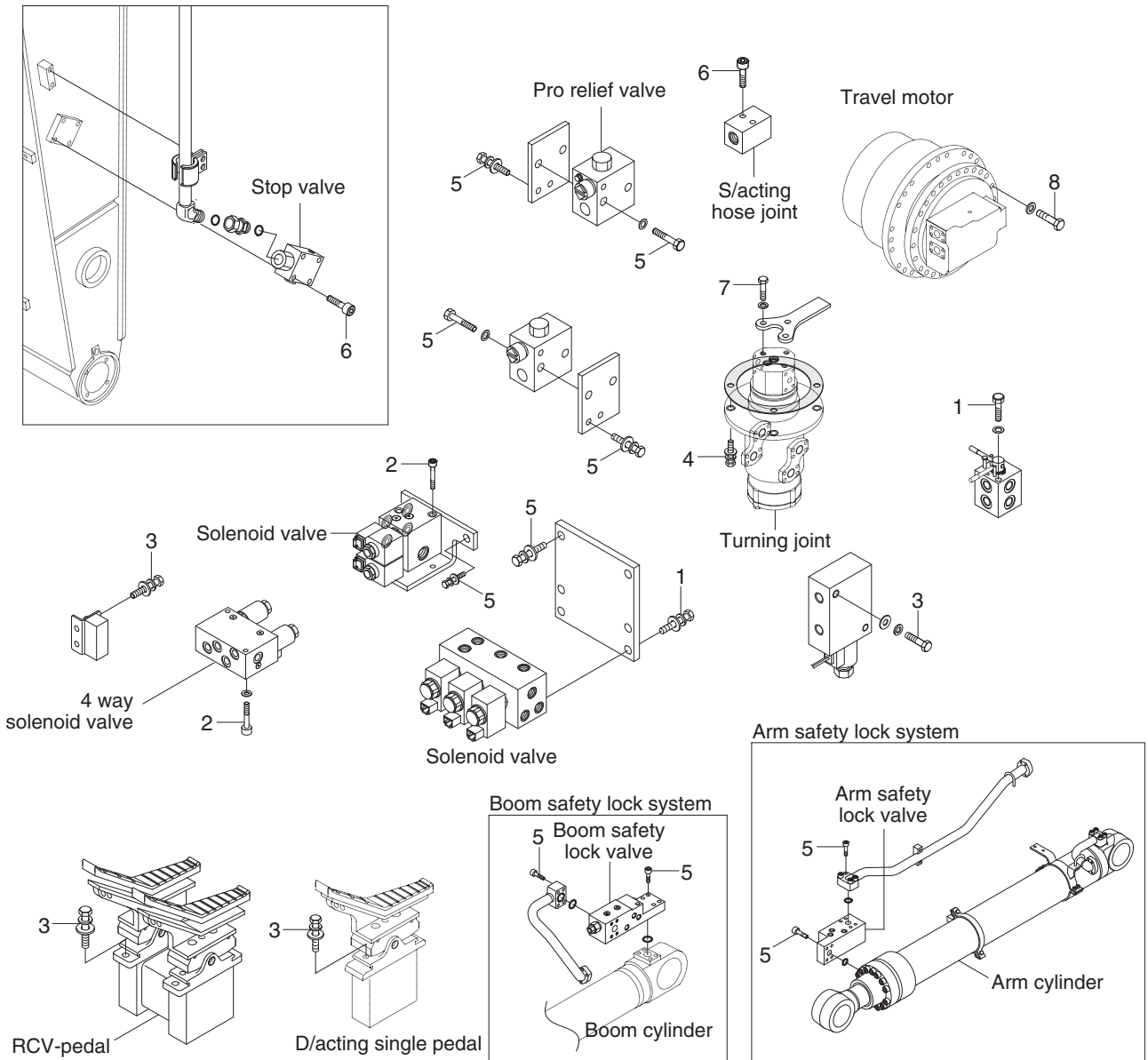
### · Tightening torque

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	4.05±0.8	29.3±5.8
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
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	29.7±4.5	215±32.5
10	M16×2.0	35.6±7.1	257±51
11	M20×2.5	46.5±2.5	336±18.1
12	M20×2.5	57.9±5.8	419±42
13	M20×2.5	57.9±8.7	419±62.9
14	M24×3.0	97.8±15	707±108

# HYDRAULIC COMPONENTS MOUNTING 2

## ATTACH PIPING



HX380L9CM06

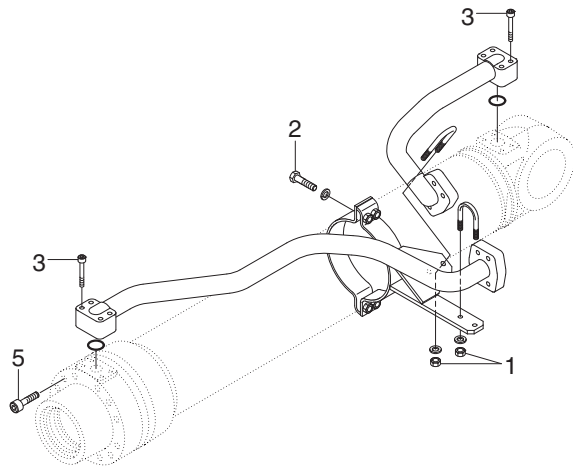
### · Tightening torque

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	12.3±1.2	89.0±8.7

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	M14×2.0	19.6±2.9	142±21.0
8	M20×2.5	57.9±8.7	419±62.9

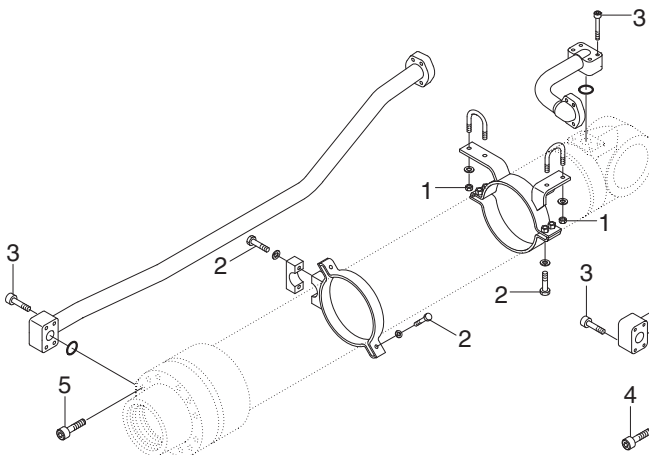
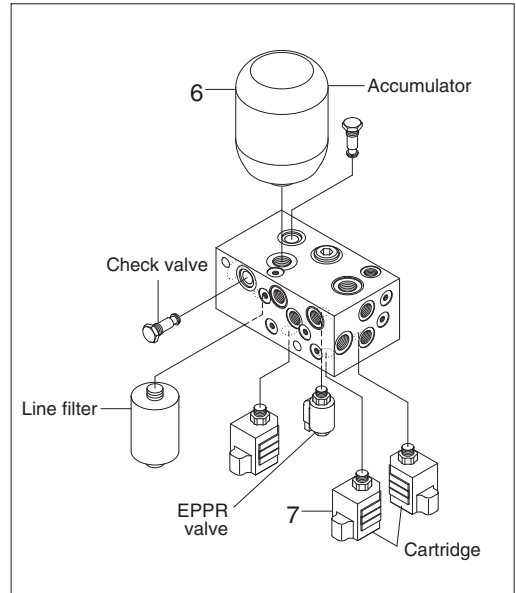


# HYDRAULIC COMPONENTS MOUNTING 3

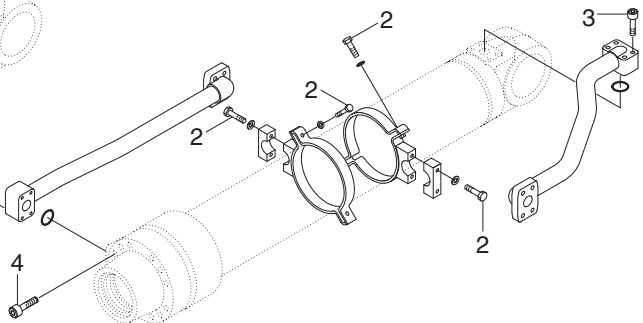


BOOM CYLINDER

## Solenoid valve



ARM CYLINDER



BUCKET CYLINDER

HX380L9CM07

### · Tightening torque

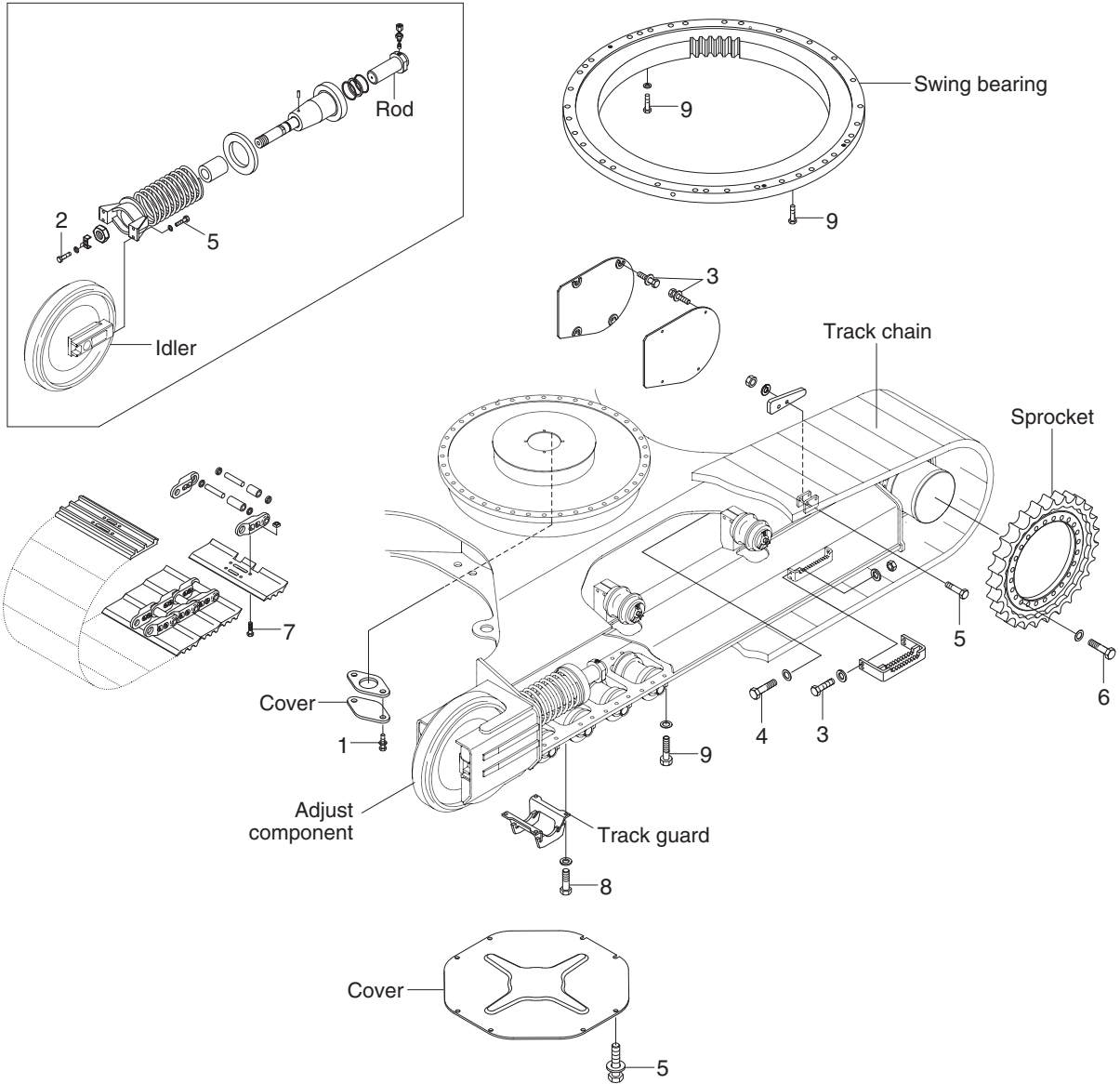
Item	Size	kgf · m	lbf · ft
1	M10×1.5	3.2±0.3	23.1±2.2
2	M12×1.75	5.5±0.6	39.8±4.3
3	M12×1.75	9.4±1.0	68.0±7.2
4	M20×2.5	46±5.0	333±36.2

Item	Size	kgf · m	lbf · ft
5	M22×2.5	63 ±6.0	456 ±43.4
6	-	5.6±0.5	40.5±3.6
7	-	2.5±0.5	18.1±3.6
-	-	-	-

# GROUP 5 UNDERCARRIAGE

## UNDERCARRIAGE MOUNTING

### ADJUST COMPONENT



HX380L9CM08

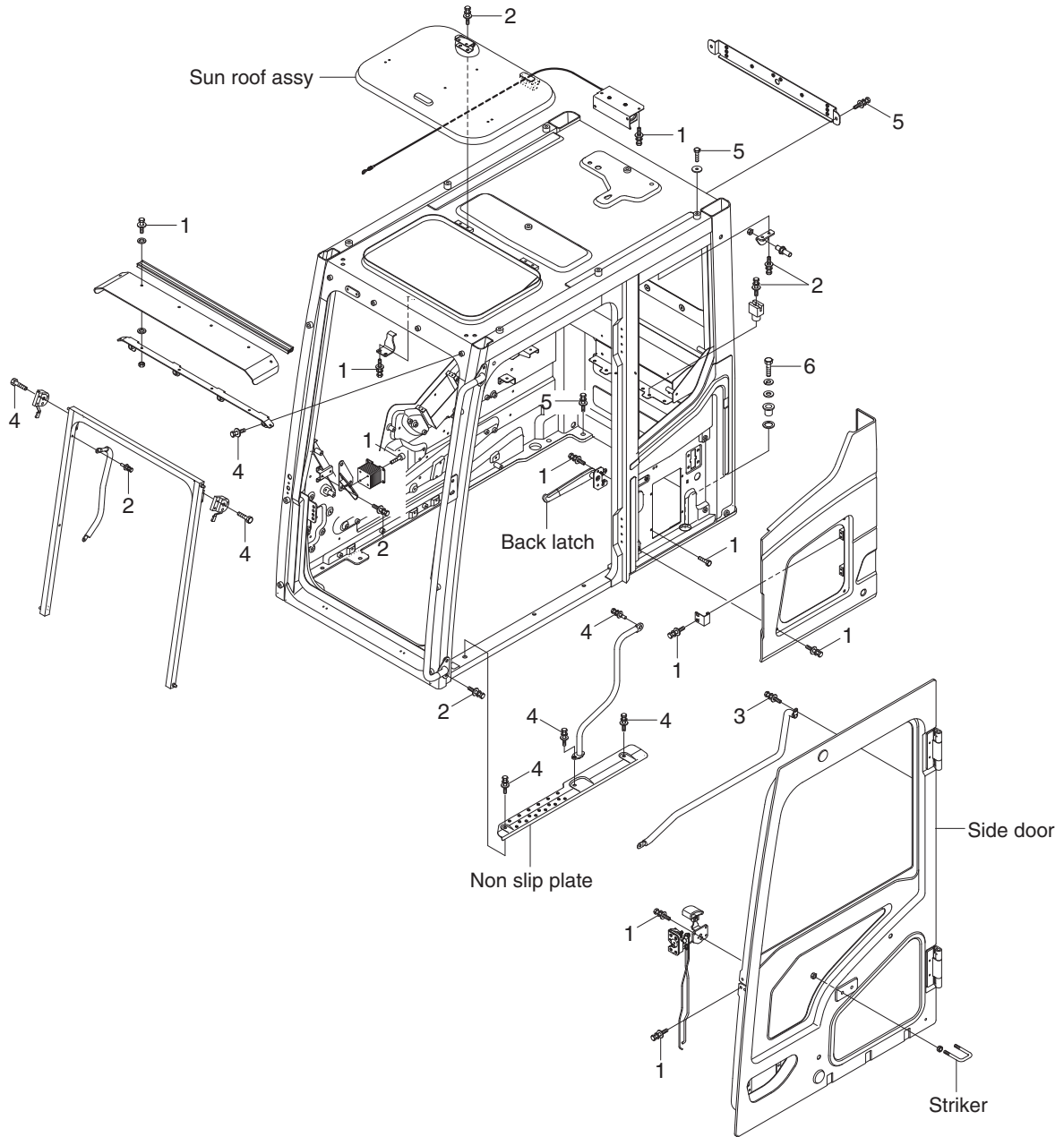
### · Tightening torque

Item	Size	kgf · m	lbf · ft
1	M10×1.5	6.9±1.4	49.9±10.1
2	M12×1.25	13.3±2.7	96.2±19.5
3	M12×1.75	12.8±3.0	92.6±21.7
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	M24×1.5	140±5.0	1010±36.2
8	M24×3.0	77.4±11	560±80
9	M24×3.0	100±10	723±72.3
-	-	-	-

# GROUP 6 STRUCTURE

## CAB AND ACCESSORIES MOUNTING



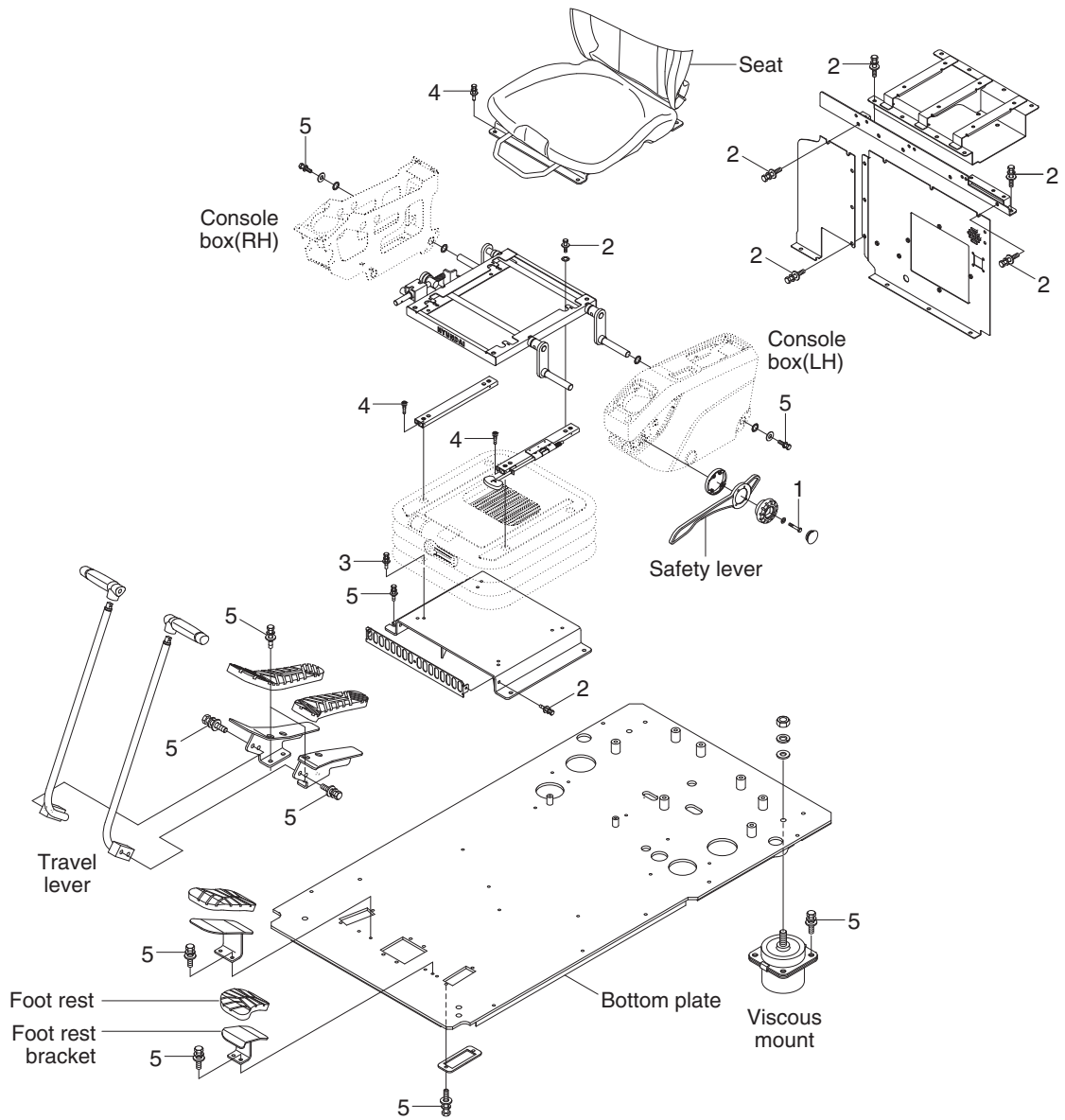
HX380L9CM09

· 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



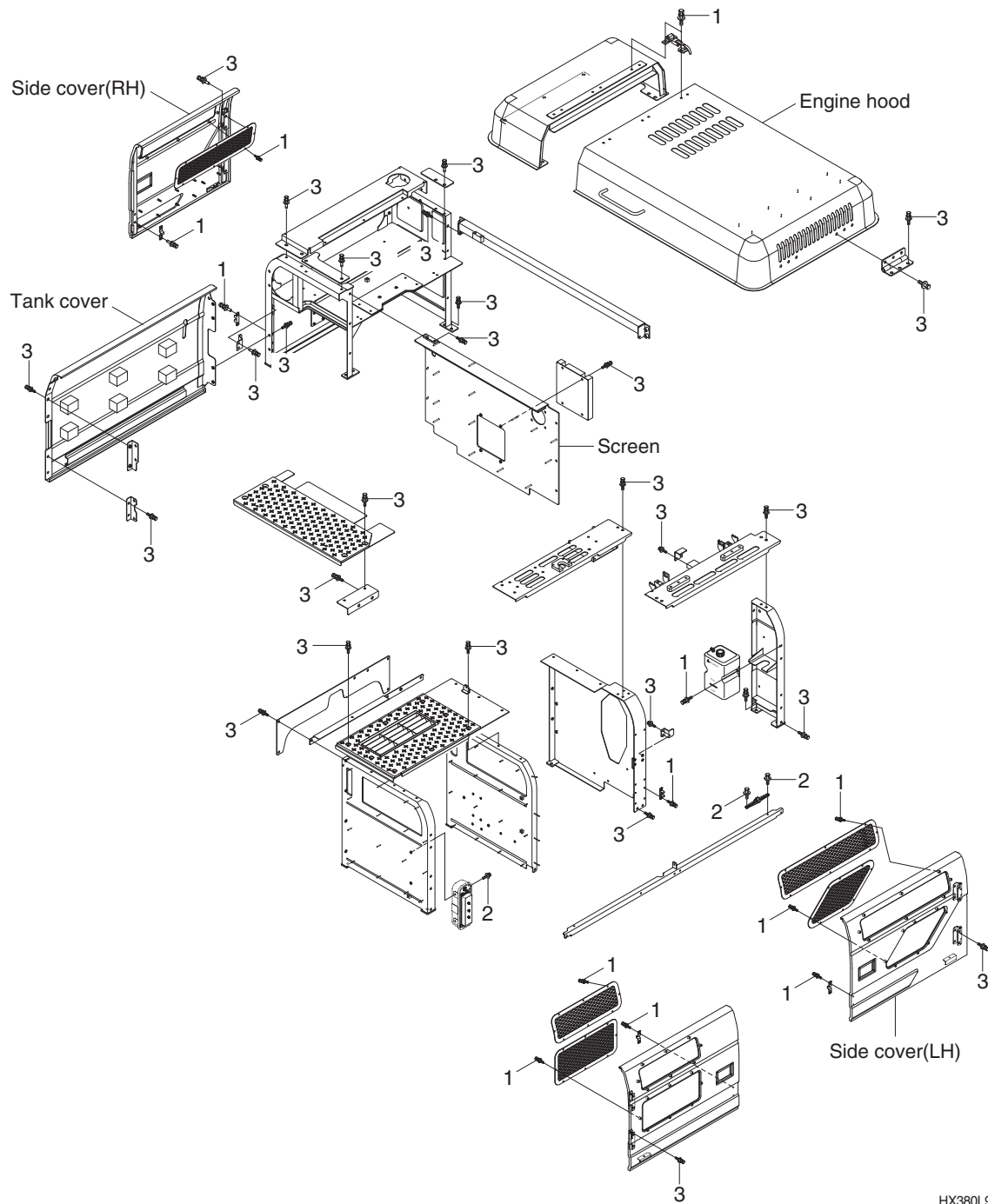
HX380L9CM10

## · 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



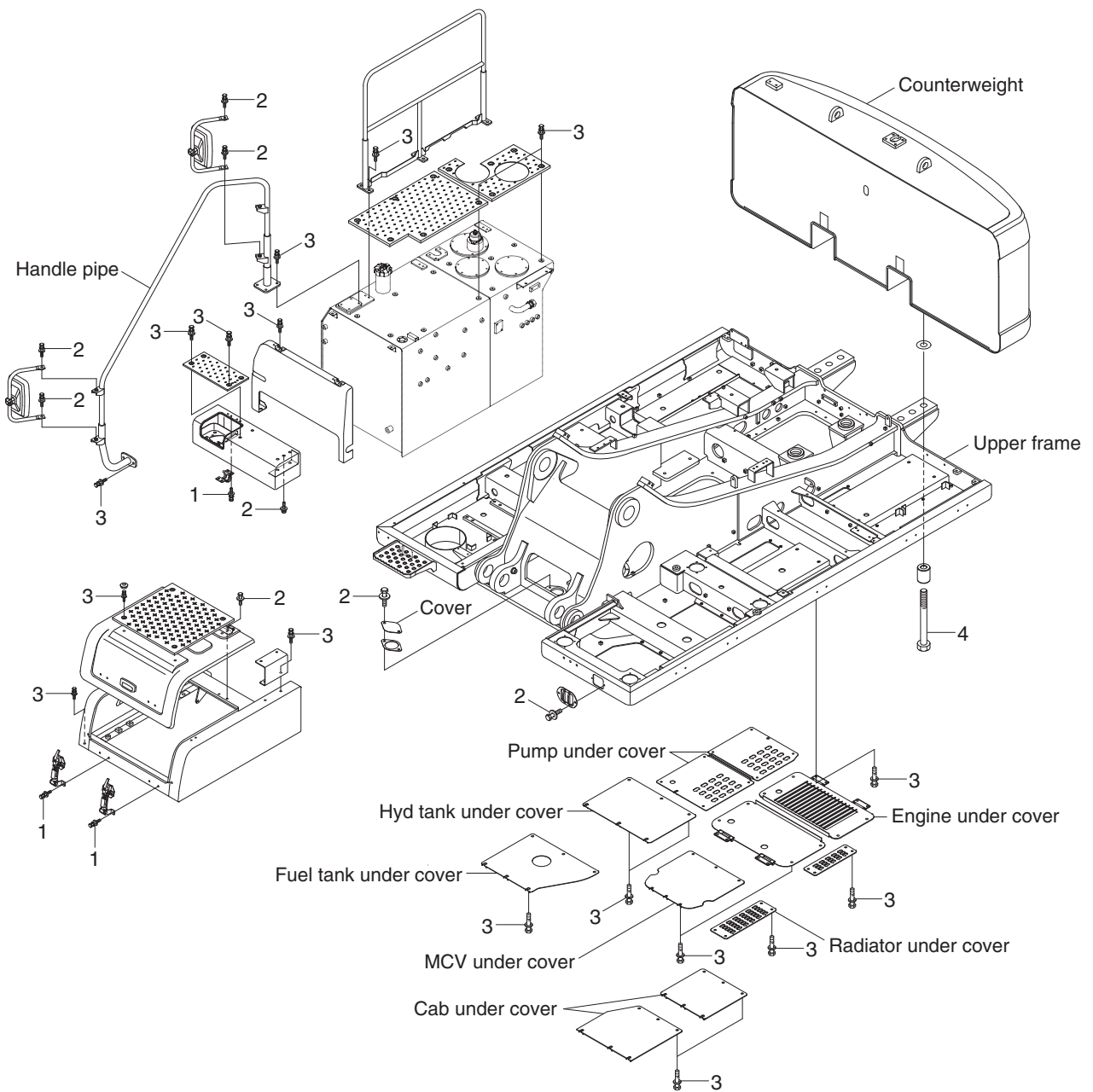
HX380L9CM11

## · 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



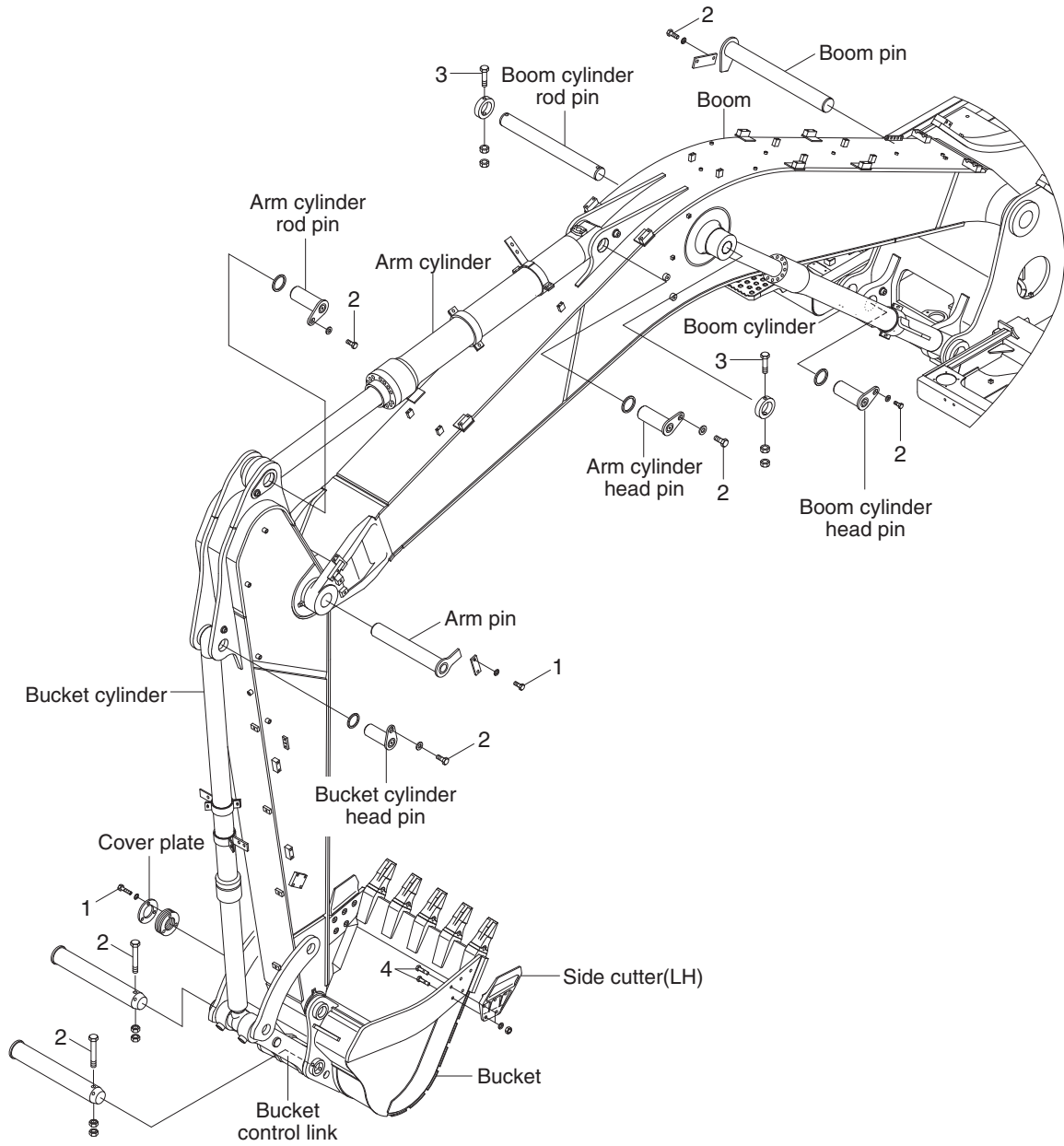
HX380L9CM12

## · 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	M36×3.0	337±33	2440±239

# GROUP 7 WORK EQUIPMENT



HX380L9CM13

· 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

Item	Size	kgf · m	lbf · ft
3	M24×3.0	100±15	723±109
4	M30×3.5	199±30	1439±217