

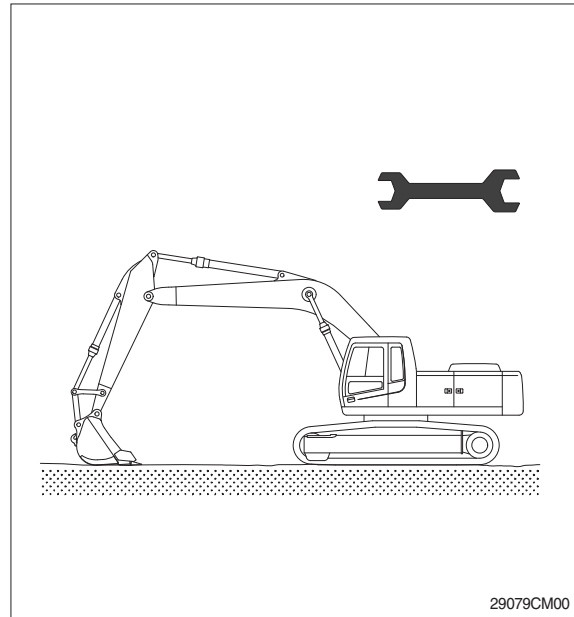
## SECTION 9 COMPONENT MOUNTING TORQUE

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# SECTION 9 COMPONENT MOUNTING TORQUE

## GROUP 1 INTRODUCTION GUIDE

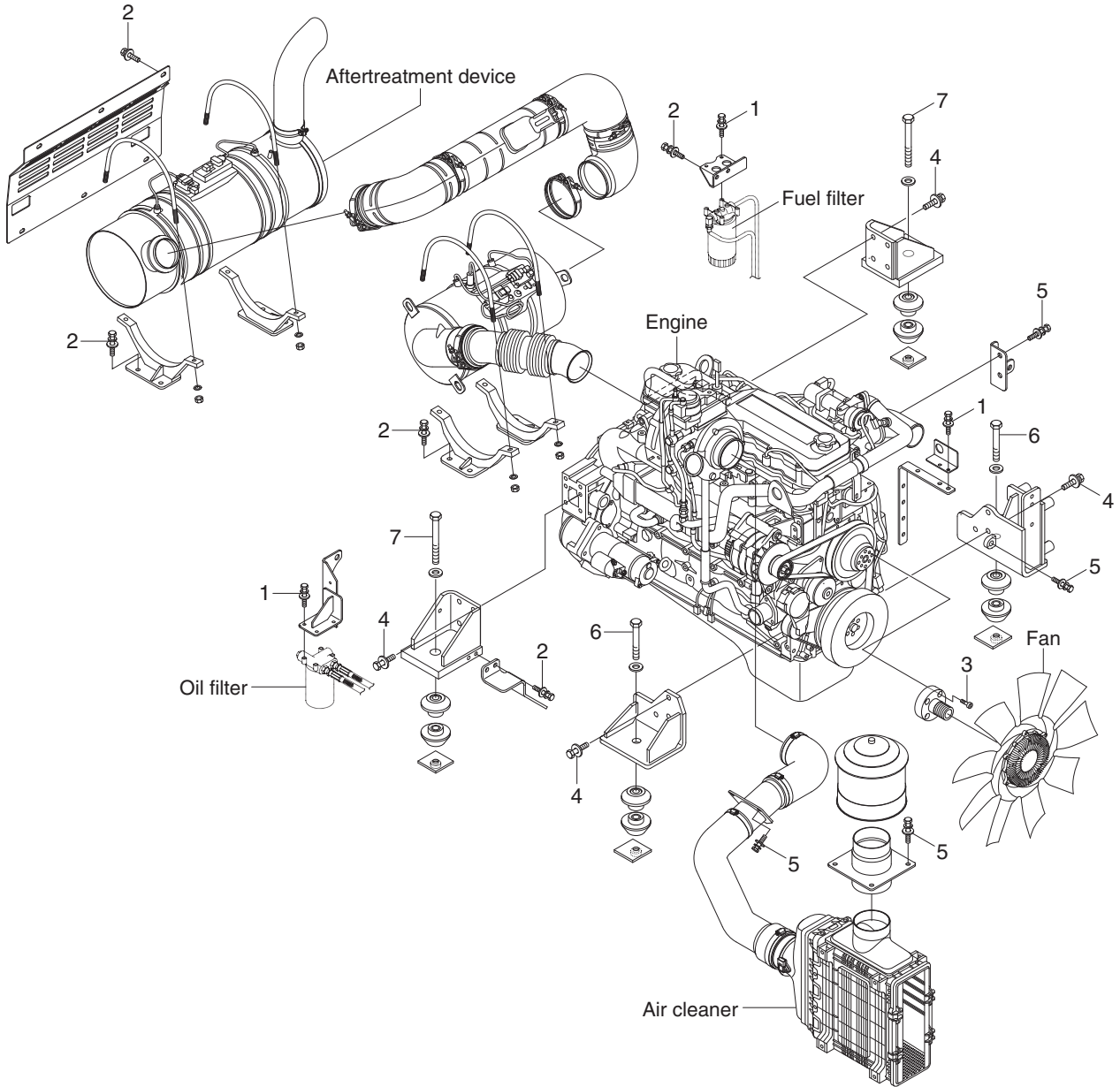
1. This section shows bolt specifications and standard torque values needed when mounting components to the machine.
  2. Use genuine Hyundai spare parts.  
We expressly point out that Hyundai will not accept any responsibility for defects resulted from non-genuine parts.  
In such cases Hyundai cannot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



29079CM00

# GROUP 2 ENGINE SYSTEM

## ENGINE AND ACCESSORIES MOUNTING



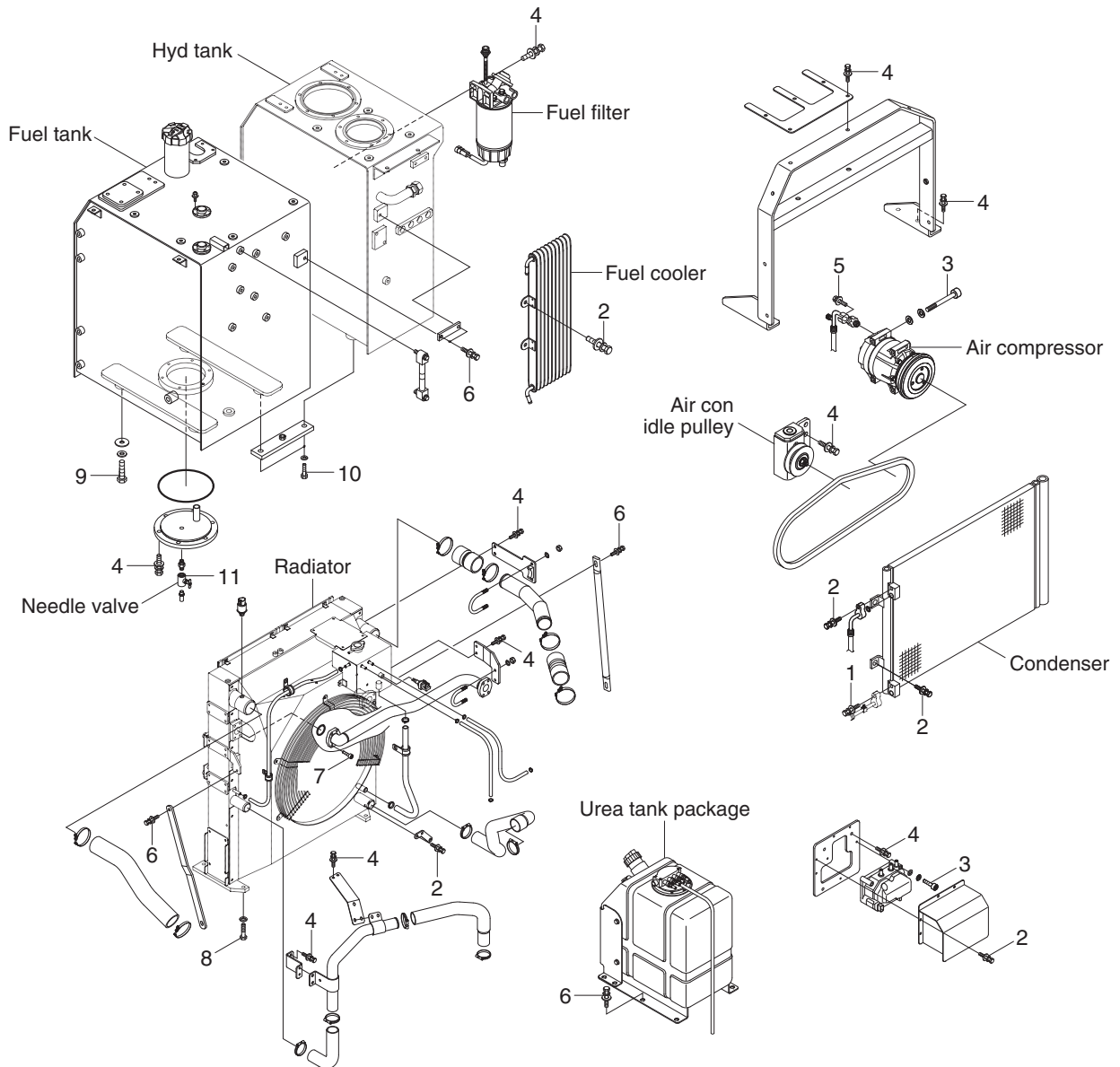
HX220L9CM01

### · 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	M10×1.5	8.27±1.7	59.8±12.3
4	M12×1.75	11.45±1.0	82.8±7.2

Item	Size	kgf · m	lbf · ft
5	M12×1.75	12.8±3.0	92.6±21.7
6	M20×2.5	52.1±5.0	377±36.2
7	M24×3.0	90±9.0	651±65.1
-	-	-	-

# COOLING SYSTEM AND FUEL TANK MOUNTING



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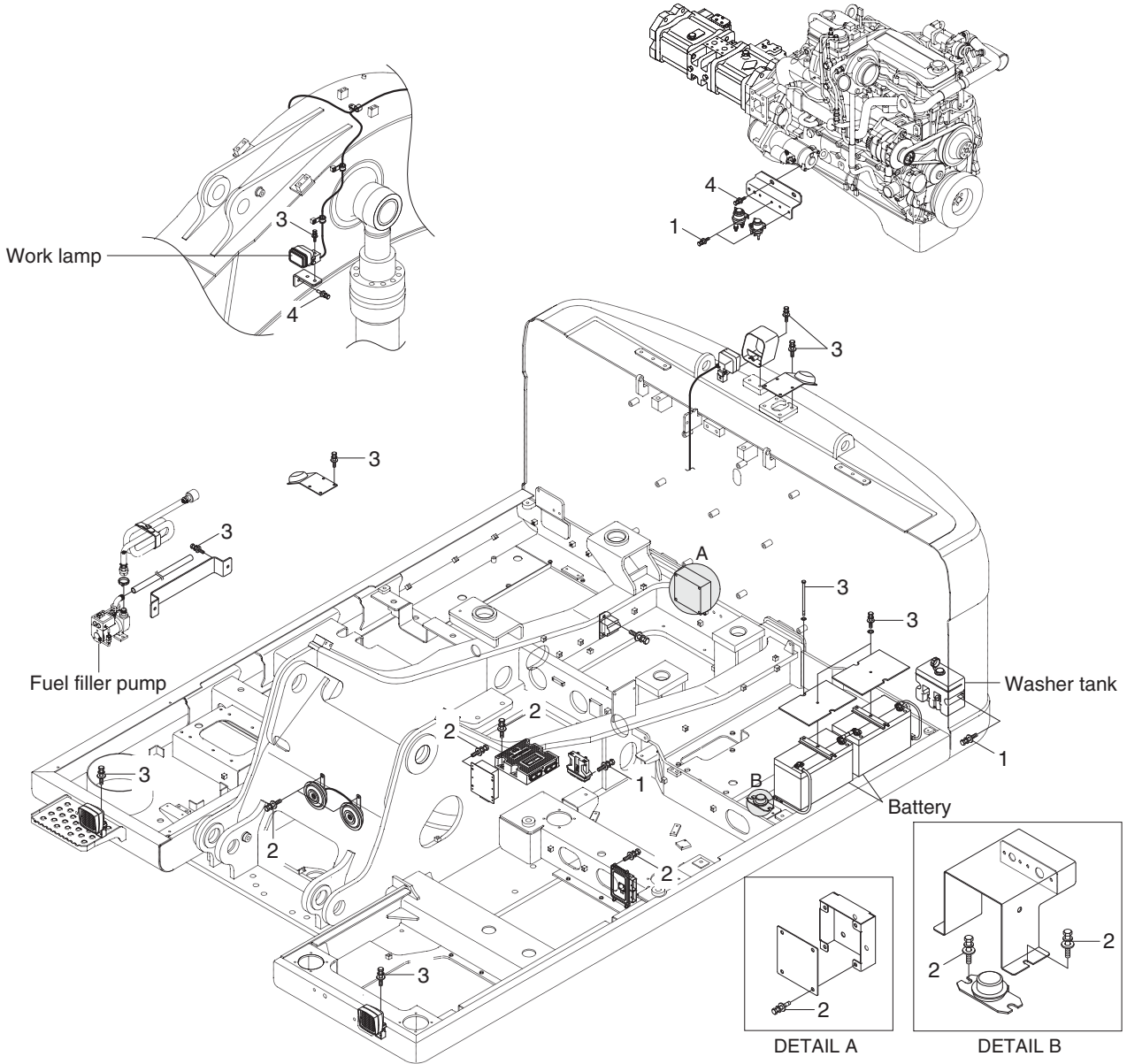
## · Tightening torque

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	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
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	M16×2.0	29.7±4.5	215±32.5
9	M20×2.5	46±5.1	333±36.9
10	M20×2.5	57.9±8.7	419±62.9
11	-	2.3±0.6	16.6±4.3
-	-	-	-

# GROUP 3 ELECTRIC SYSTEM

## ELECTRIC COMPONENTS MOUNTING 1



HX220L9CM03

### · Tightening torque

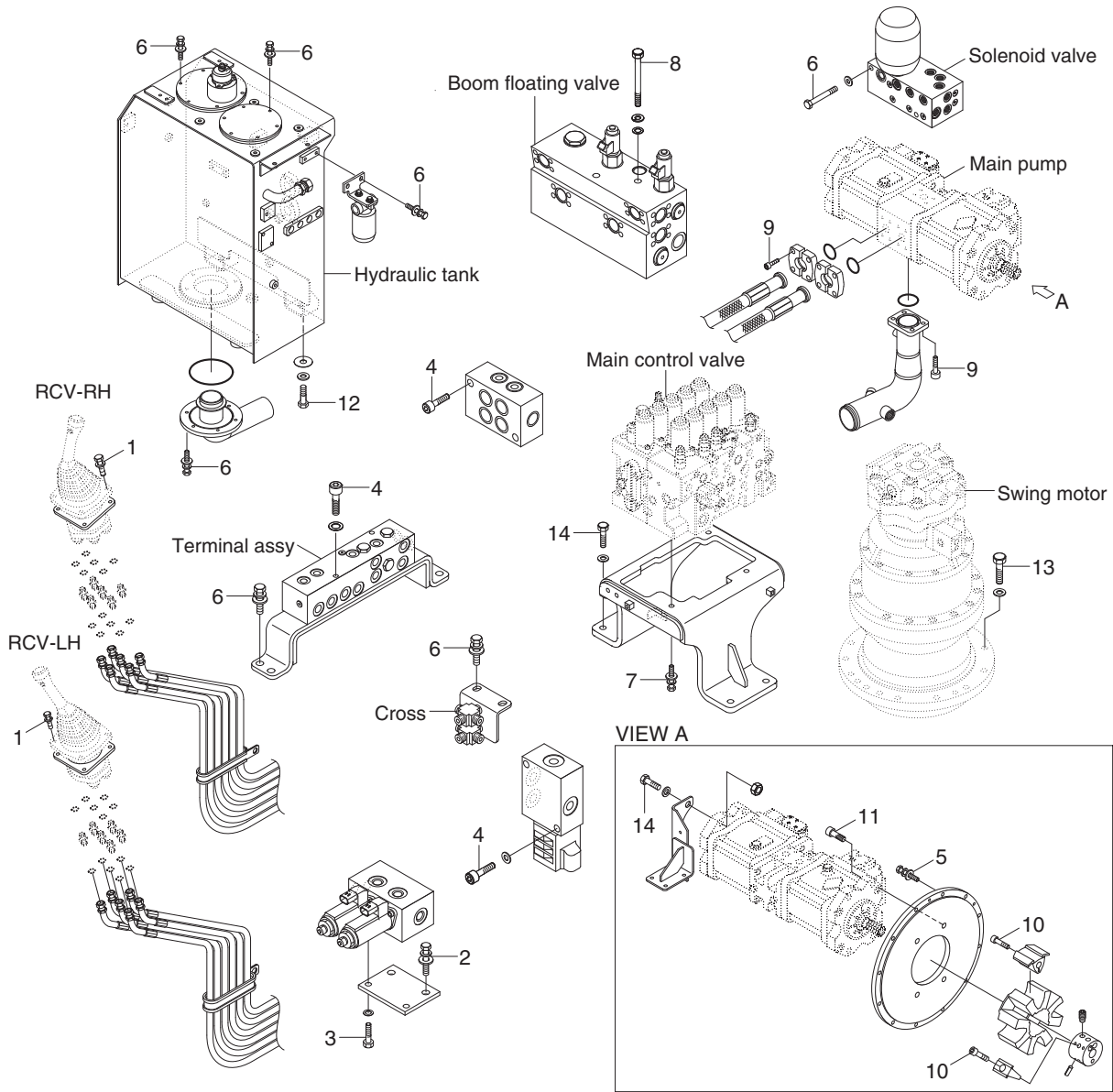
Item	Size	kgf · m	lbf · ft
1	M 6×1.0	1.05±0.2	7.6±1.45
2	M 8×1.25	2.5±0.5	18.1±3.6

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



HX220L9CM05

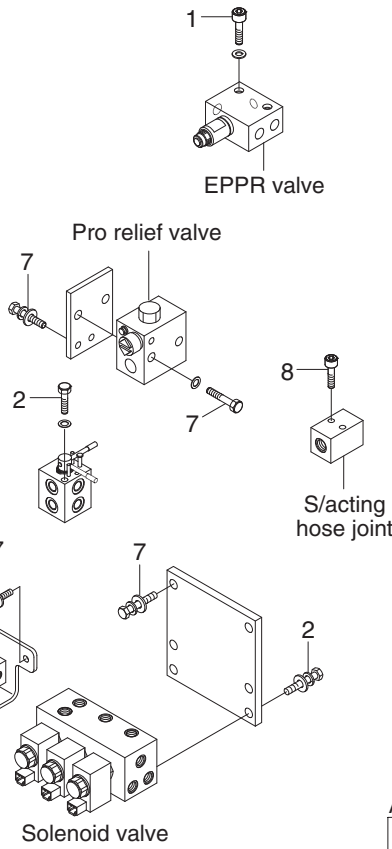
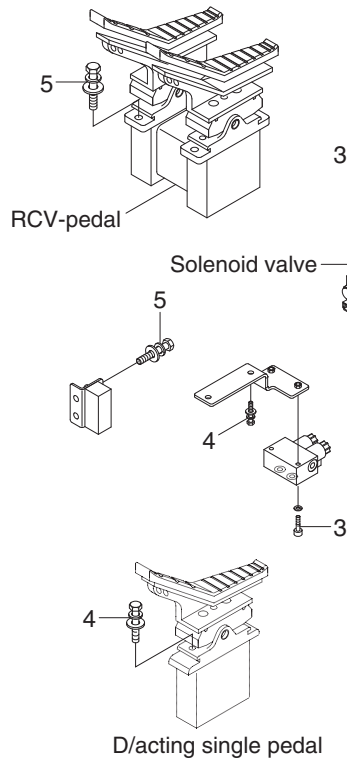
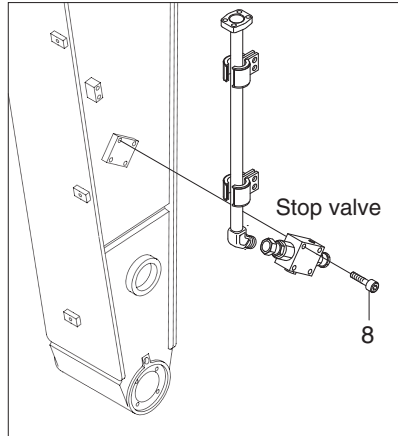
• Tightening torque

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	6.5±0.7	47±5.1
6	M10×1.5	6.9±1.4	49.9±10.1
7	M12×1.75	12.3±1.3	89±9.4

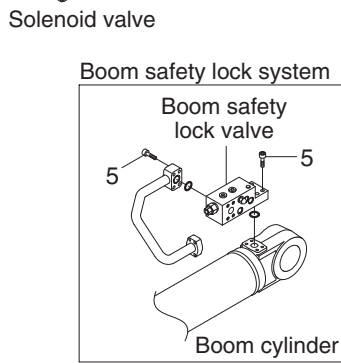
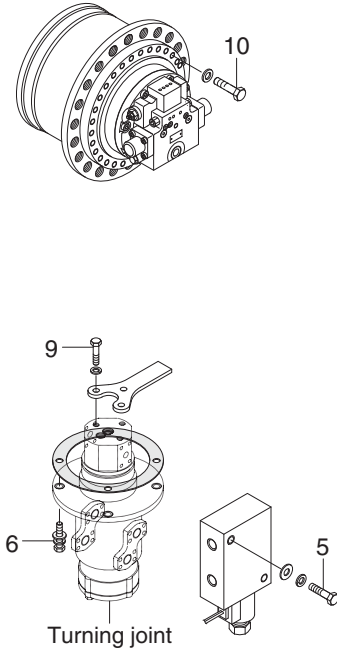
Item	Size	kgf · m	lbf · ft
8	M12×1.75	12.8±3.0	92.6±21.7
9	M12×1.75	14.7±2.2	106±15.9
10	M18×2.5	32±1.0	231±7.2
11	M20×2.5	42±4.5	304±32.5
12	M20×2.5	46±5.1	333±36.9
13	M20×2.5	57.9±5.8	419±42
14	M20×2.5	57.9±8.7	419±62.9

# HYDRAULIC COMPONENTS MOUNTING 2

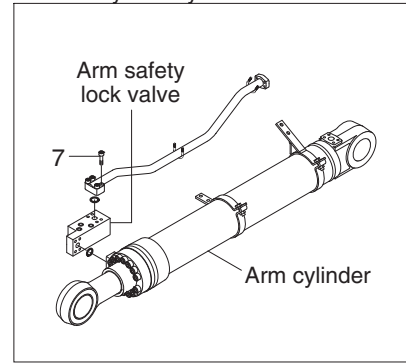
## Double acting attachment piping



## Travel motor



## Arm safety lock system



HX220L9CM06

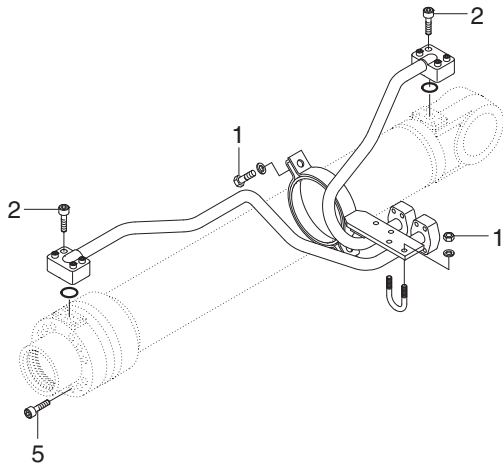
### • Tightening torque

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	5.0±1.0	36.2±7.2
5	M10×1.5	6.9±1.4	49.9±10.1

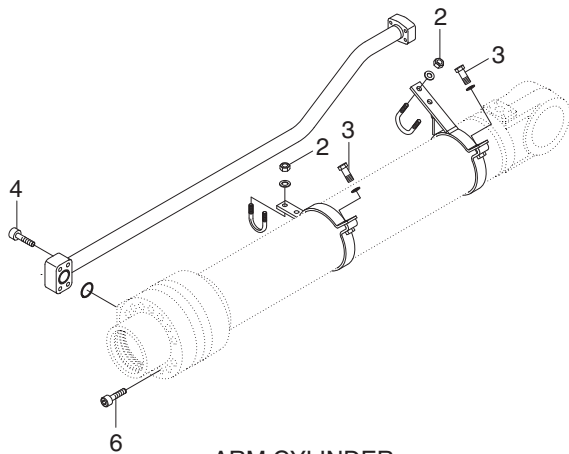
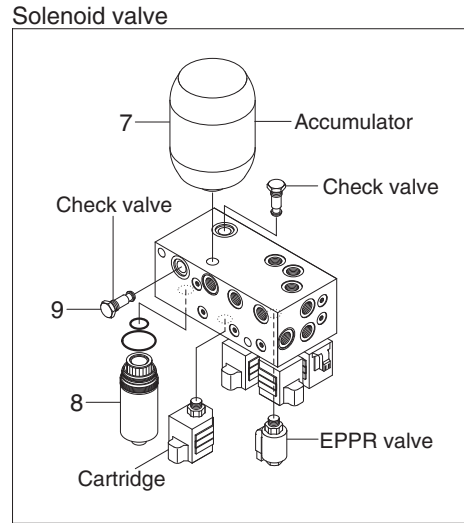
Item	Size	kgf · m	lbf · ft
6	M12×1.75	12.3±1.3	89.0±9.4
7	M12×1.75	12.8±3.0	92.6±21.7
8	M12×1.75	14.7±2.2	106±15.9
9	M14×2.0	19.6±2.9	142±21.0
10	M16×2.0	23.0±2.5	166±18.1



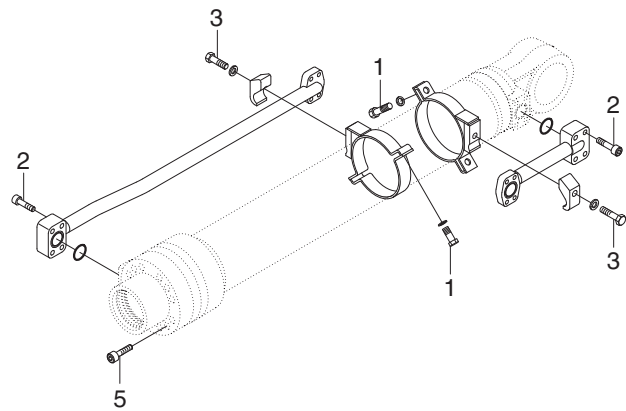
# HYDRAULIC COMPONENTS MOUNTING 3



BOOM CYLINDER



ARM CYLINDER



BUCKET CYLINDER

HX220L9CM07

· Tightening torque

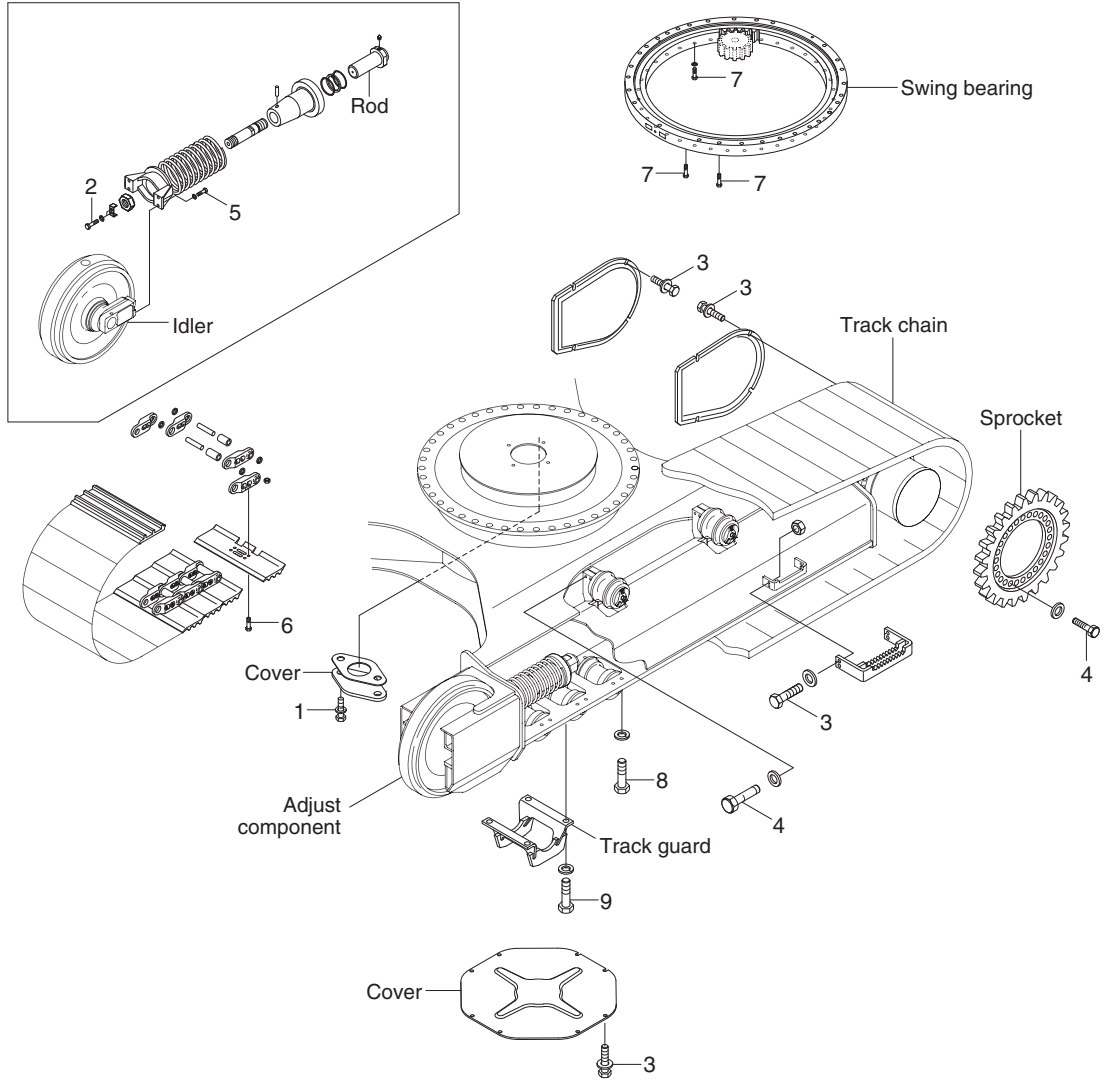
Item	Size	kgf · m	lbf · ft
1	M10×1.5	3.2±0.3	23.1±2.2
2	M10×1.5	5.4±0.5	39.1±3.6
3	M12×1.75	5.5±0.6	39.8±4.3
4	M12×1.75	9.4±1.0	68.0±7.2
5	M16×2.0	23±2.0	166±14.5

Item	Size	kgf · m	lbf · ft
6	M18×2.5	32±3.0	232±21.7
7	Accumulator	5.6±0.5	40.5±3.6
8	Line filter	2.5	18.0
9	Check valve	2.5±0.5	18±3.6
-	-	-	-

# GROUP 5 UNDERCARRIAGE

## UNDERCARRIAGE MOUNTING

ADJUST COMPONENT



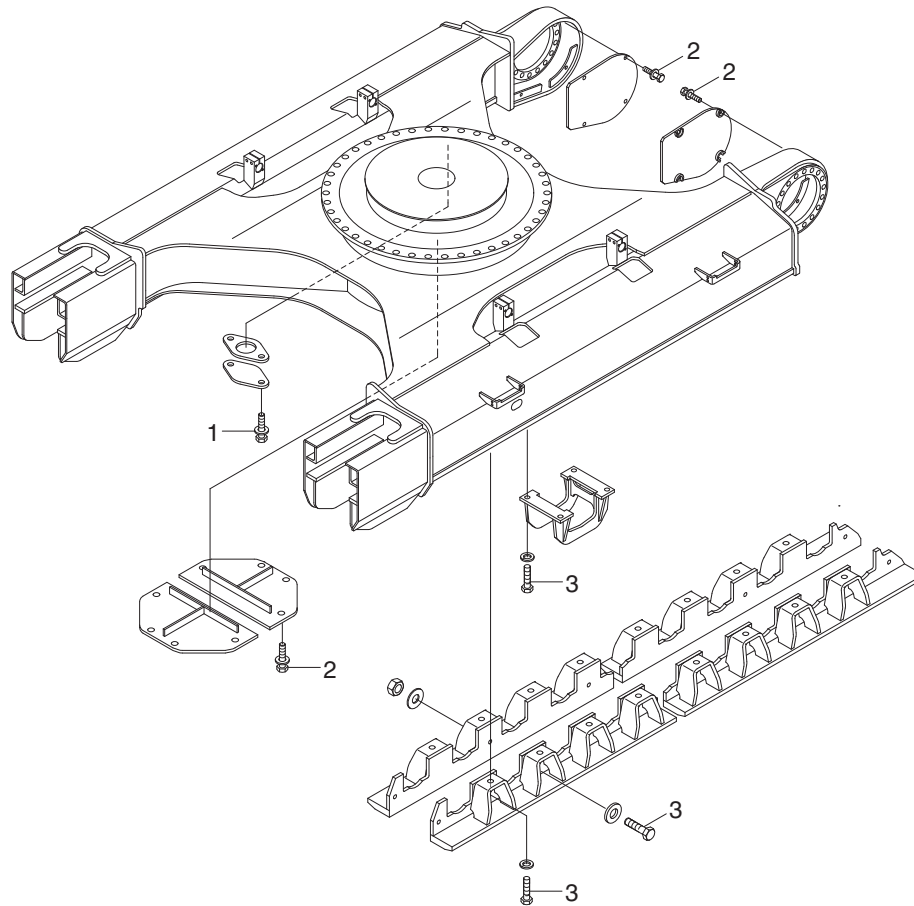
HX220L9CM08

· 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	M20×1.5	18±8.0	564±57.9
7	M20×2.5	57.9±5.8	419±42
8	M20×2.5	57.9±6.0	419±43.4
9	M20×2.5	57.9±8.7	419±62.9
-	-	-	-

## UNDERCARRIAGE MOUNTING (HIGH WALKER)



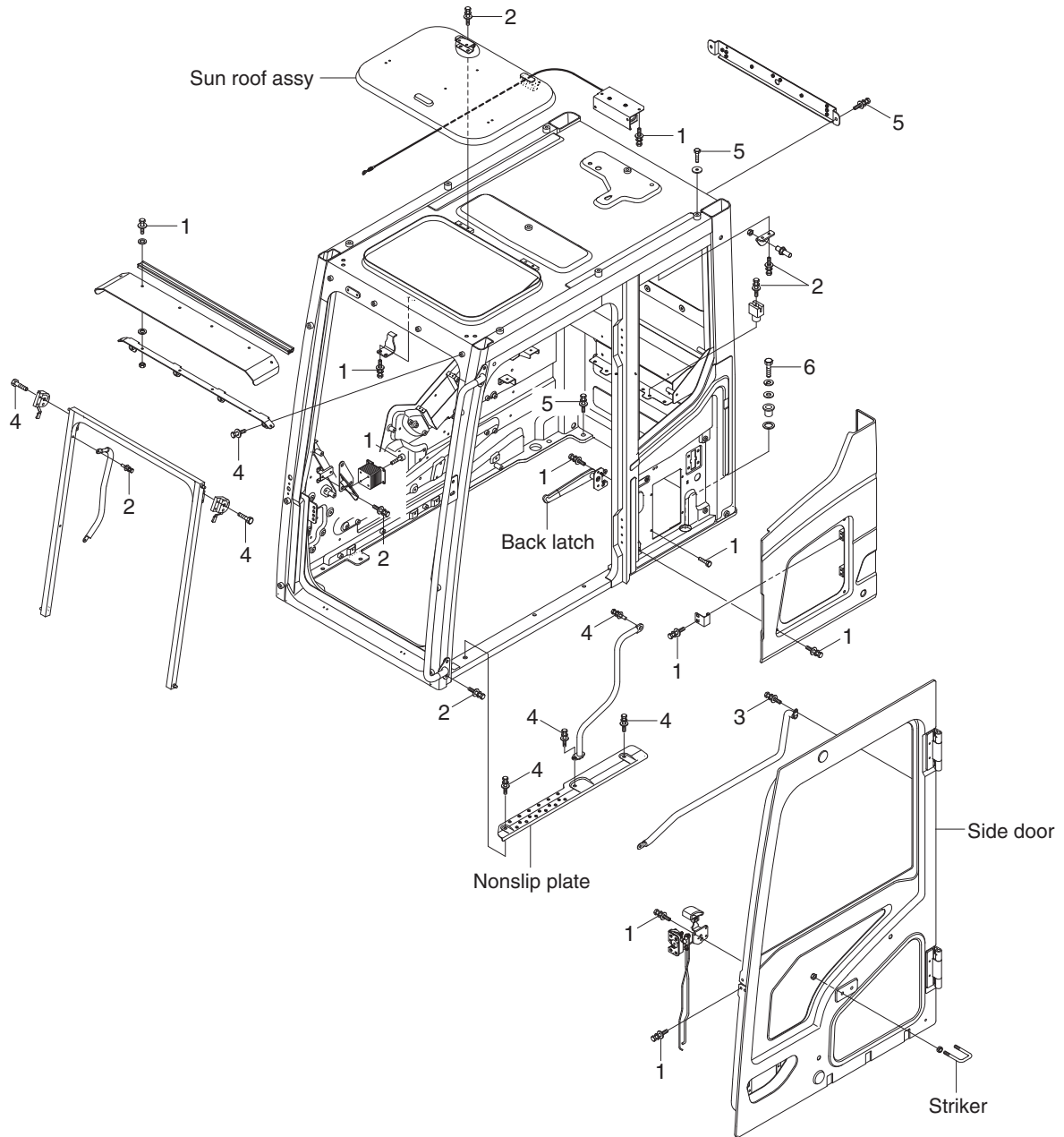
HX220L9CM09

### · 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	M24×3.0	100±15	723±109

# GROUP 6 STRUCTURE

## CAB AND ACCESSORIES MOUNTING



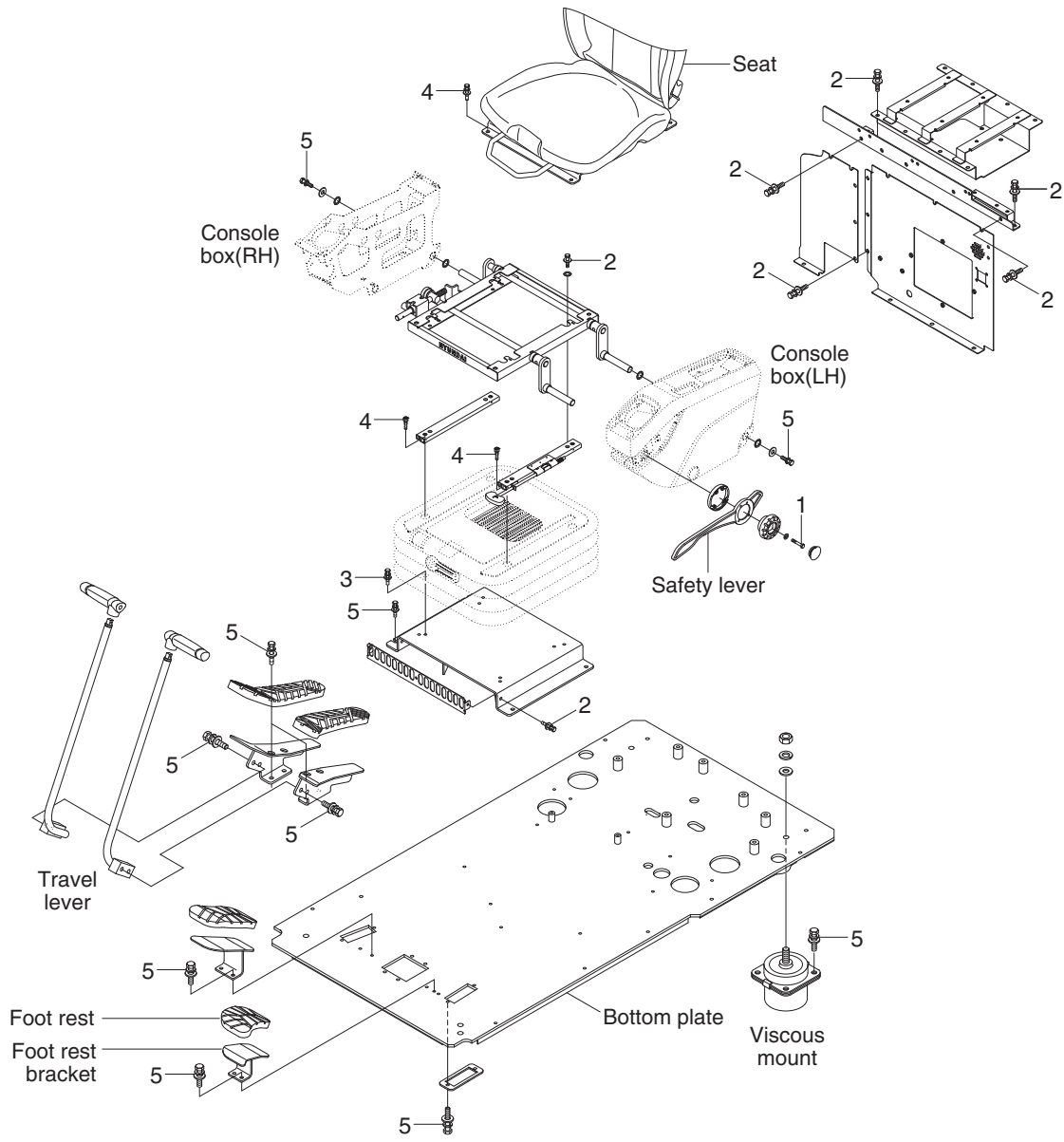
HX220L9CM10

### · 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	M8×1.25	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



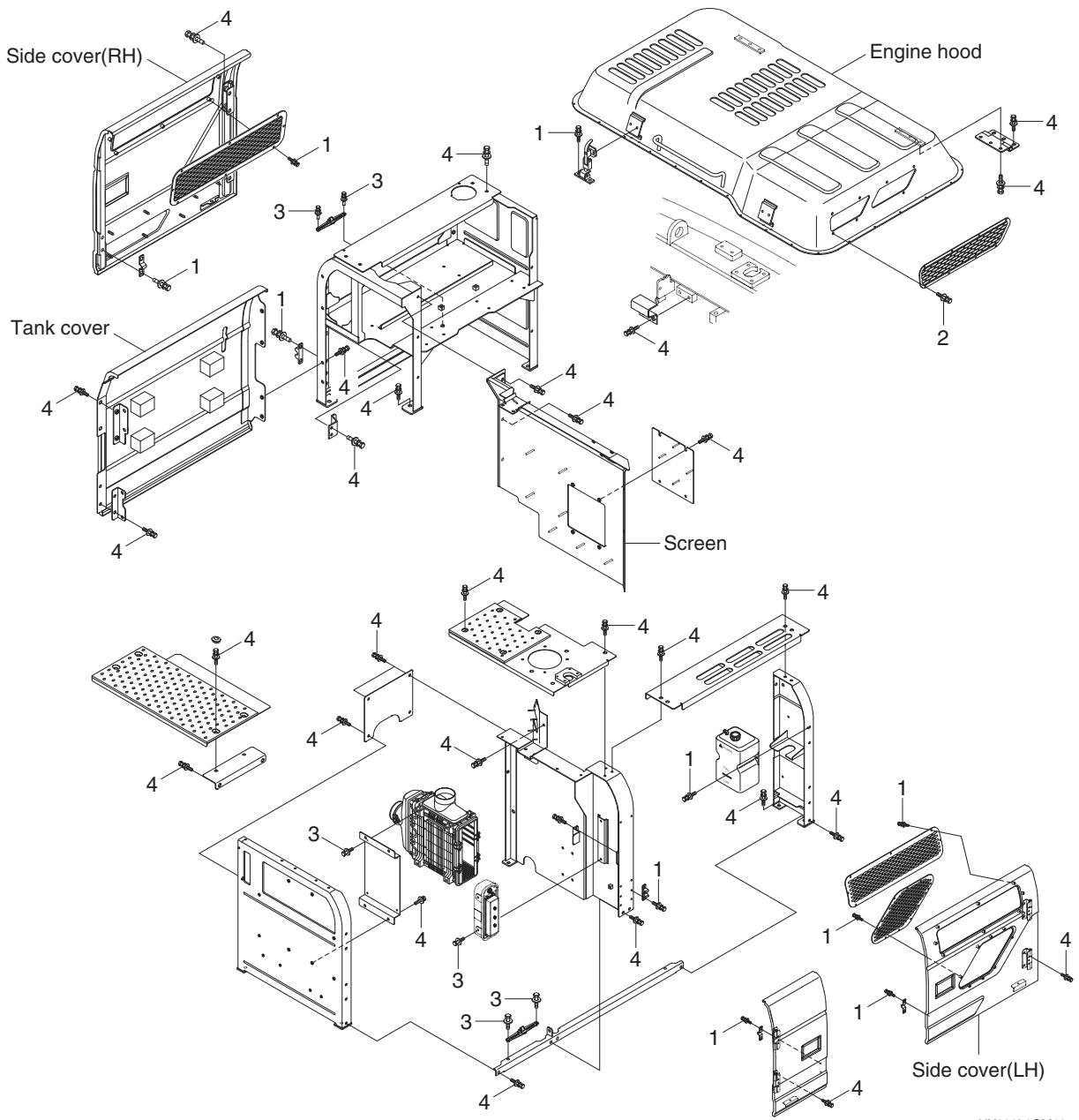
HX220L9CM11

## · 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



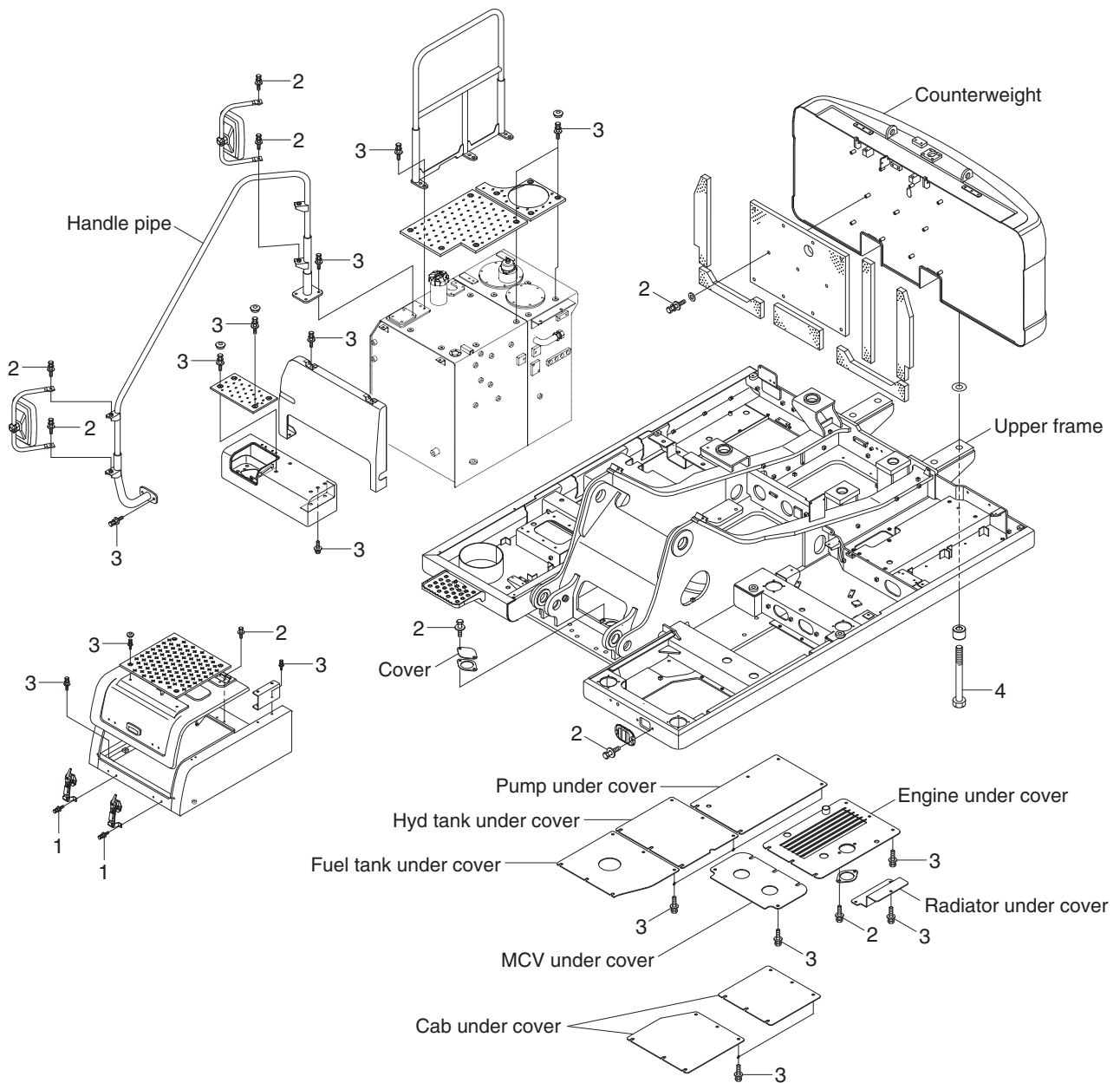
HX220L9CM12

## · 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	3.43±0.7	24.8±5.1

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

# COUNTERWEIGHT AND COVERS MOUNTING



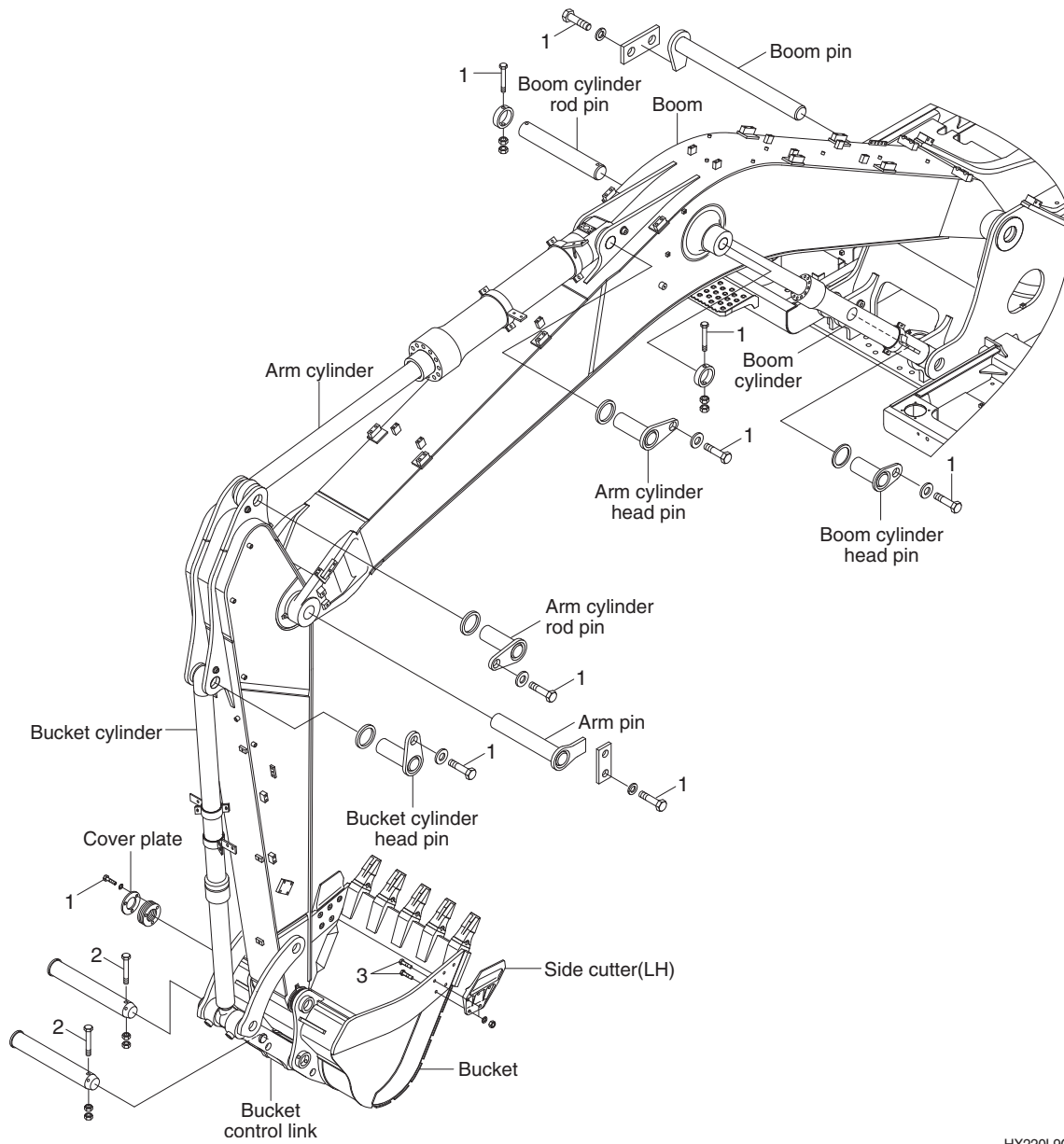
HX220L9CM13

## · 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



HX220L9CM14

## · 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	M22×2.5	81.9±16.1	592±116