
INTRODUCTION

The **Attachment Quick Coupler** for a wheel loader permits effective utilization of the wheel loader where previously only special purpose machines could be used. The use of **Attachment Quick Coupler** is able to make one machine be operated within different working fields. The **Loader Quick Coupler** is designed to fit easily into hook-mounted attachments with large rounded hooks using hydraulic locking.

The purpose of this manual is to give users detail information about the method for assembling, operating, inspection, maintenance and adjustment of the **Attachment Quick Coupler** for a Wheel Loader.

For the safe operation and maintenance of **Wheel Loader Quick Coupler**,

1. Please, be sure to refer to this user manual before operating machine.
2. Please, operate safely by checking environment of worksite and by checking safety rules.

Please, contact our company if you have questions on this manual.

Tel. No. : 82-31-312-4418

Fax. No. : 82-31-312-4419

Model	LQC701
P/N	
Year of Manufacture	2019

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1. Safety

1-1 Safety assurance

This manual describes the basic items related to safety. ‘Caution’ mark is attached where safety shall be ensured.

1-2 Symbol mark of “Safety Caution”

This symbol mark indicates 『Safety Caution』. Please pay attention to safety when you identify this mark in the nameplate of caution or this manual. Safe operation and proper management is recommended by taking preventive measures according to the descriptions.

1-3 Safety Alert Symbol

The words 『DANGER』 『WARNING』 and 『CAUTION』 used in this manual and on decals on the machine indicate degree of risk of hazards or unsafe practices. All three degrees of risk indicate that safety is involved. Observe precautions indicated whenever you see the Safety Alert “Triangle”, no matter which signal word appears next to the “Exclamation Point” symbol.

『DANGER』 indicates imminent hazard of a situation that, if not avoided, is very likely to cause death or extremely serious injury.

『WARNING』 indicates potential of a hazardous situation that, if not avoided, could result in serious injury or death.

『CAUTION』 indicates potential of a hazardous situation that, if not avoided, could result in minor or moderate injury.

1-4 Cautions for basic items

Read this manual and nameplate for caution on the attachment, and fully understand it.

- The attachment shall be maintained so that it always has normal state.
- It is not permitted to any modifications on attachment.
- The functions and durability of attachment will be decreased if safety is not ensured.
- Special attention shall be paid to safety-related matters other than those described in this manual.

1) Prohibition of modification of attachment

Any modification made without authorization or written approval from Hyundai can create a safety hazard, for which the machine owner must be held responsible. If you need any modifications, please consult Hyundai.

2) *Caution for handling oil*

- Oil is dangerous because it is inflammable.
- Do not place heat or fire near the oil.
- High-inflammable oil must be kept away from flames.
- Do not stock dust-cloth which is stained with oil because there is potential to occur spontaneous combustion.

3) *Burn prevention*

- Inspection or maintenance work must be performed when the machine is fully cooled after turning engine off.
- Pay full attention not to have burn with hot oil.
- High-pressure hoses, pipes and etc become hot.

4) *Furnishing fire-fighting equipment*

- Prepare for the possible damages or fires.
- An emergency medical kit and a fire extinguisher must be equipped. Particularly, you must have a full knowledge of a fire extinguisher.
- Memorize the emergency telephone number of emergency hospital, emergency vehicle, fire house and so on.

5) *Injury due to attachment and work tools*

- Be careful that body such as hands, arms is not inserted into movable parts such as gaps between work attachment and machine and between work attachment and cylinder.
- Serious injury may occur if the gap is changed by the moves of work attachment.

6) *Windows must be closed when operating the machine*

When operation, people other than necessary operator must be separated from the site where drop and scattering from the machine may occur.

7) *Assure safety at the work site*

- Check whether there are risks at the worksite before starting work.
- Determine optimum safe work method after checking working conditions at the worksite.
- If there is slope at the worksite, make machine flat before starting work.

8) *Fire protection*

- Remove any the inflammables around the machine.
 - Check the leakage of hydraulic oil.
 - Be assure where the extinguisher and how to use it.
-

9) Collision of front attachment shall be prevented

- If the machine is in any limited place of overhead, make sure that there is adequate overhead clearance for differ front.

10) Ensuring sufficient sight

- Be careful when working in dark area, use the additional working lamp if the light is insufficient from the machine.

11) Machine stop

- Park the machine on flat and hard place.

12) Cautions when checking or repairing hydraulic parts

- Park the machine where plat and stable place.
- Down the bucket on the ground and stop engine.
- Right after working, waiting and repairing until devices temperature down.
- If you hurry to start repair within the machine still hot and remaining pressure, there will be serious damaged with burning or outburst of hot oil.
- Get rid of the pressure from hydraulic oil tank before repairing the hydraulic devices.
- Get rid of the pressure from hydraulic circuit with fully operate joystick lever on several time.
- Must be careful, when disconnect the hydraulic lines, plugs or fittings. Keep your face at a distance from the possible leakage point.

13) Warning indication during checking or repairing

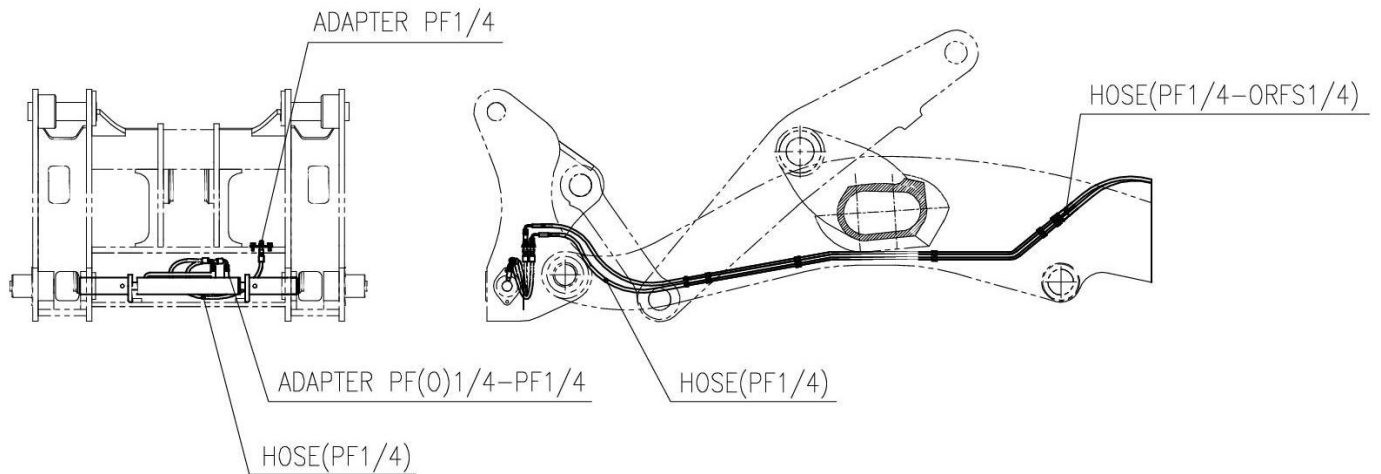
- Put the sign of “checking” or “repairing” on the operating room or the operating lever to prevent somebody operates during the repairing.

14) Use of proper tool

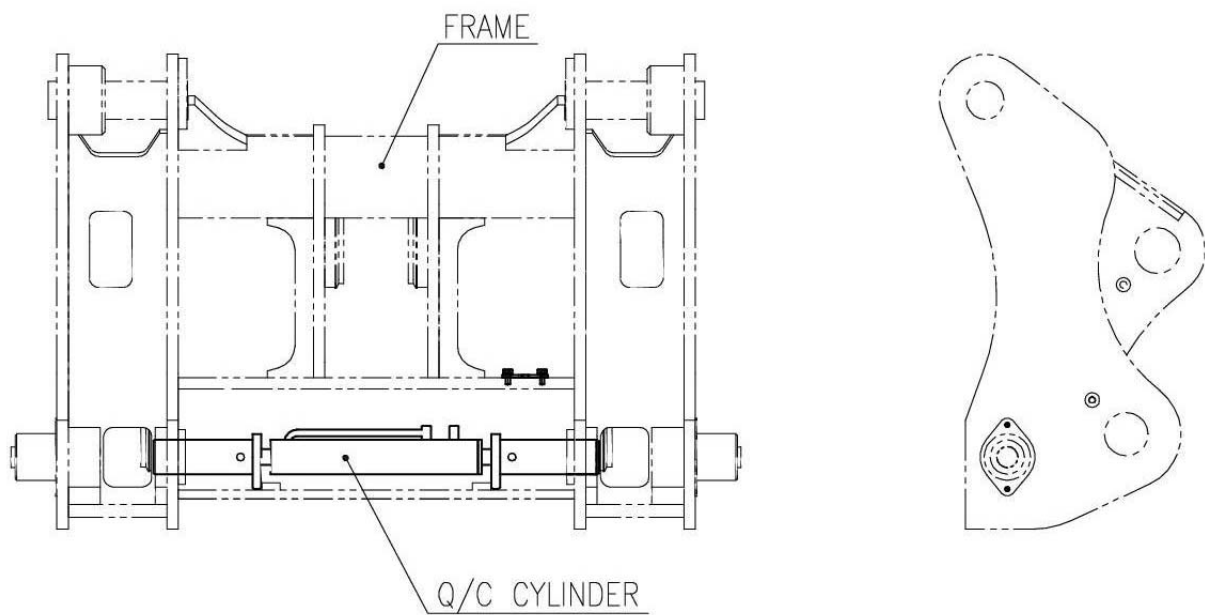
15) Stop the machine when checking or repairing it

2. The Names of each Part

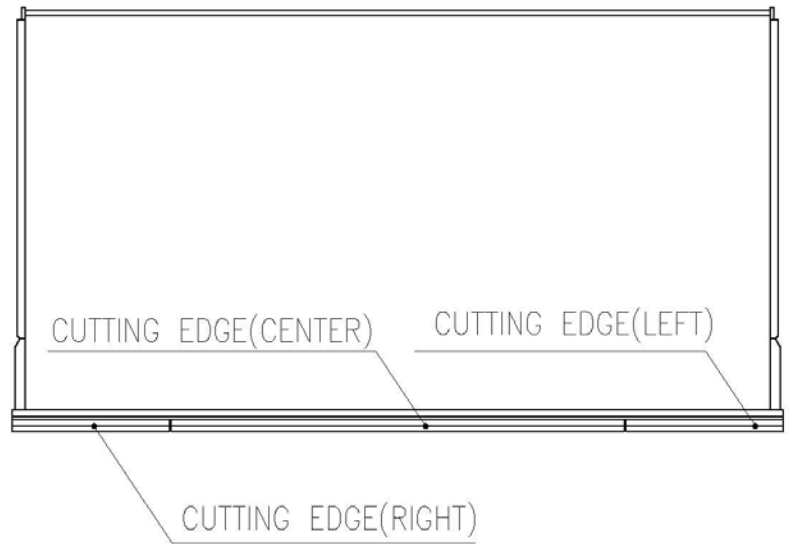
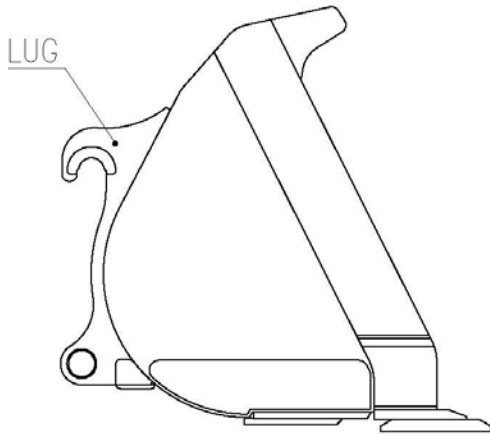
Jump Piping



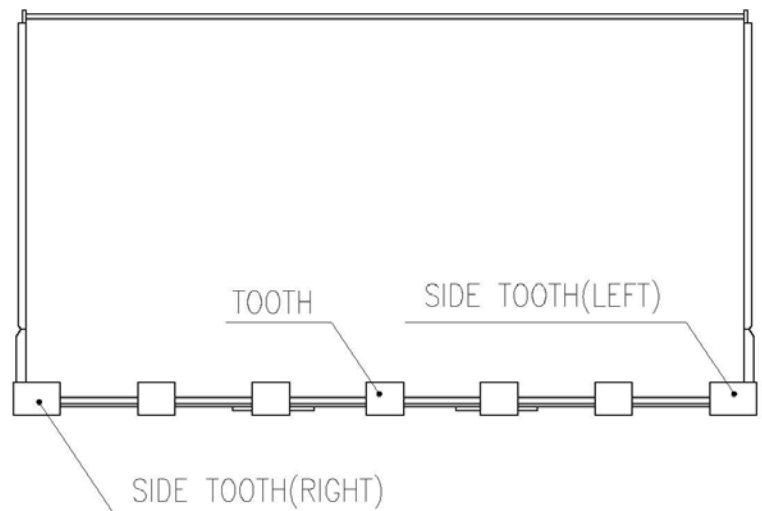
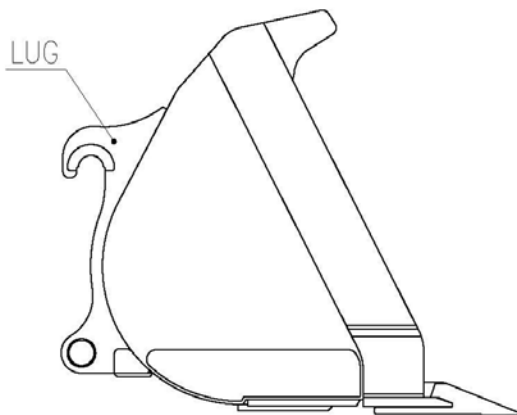
Quick Coupler



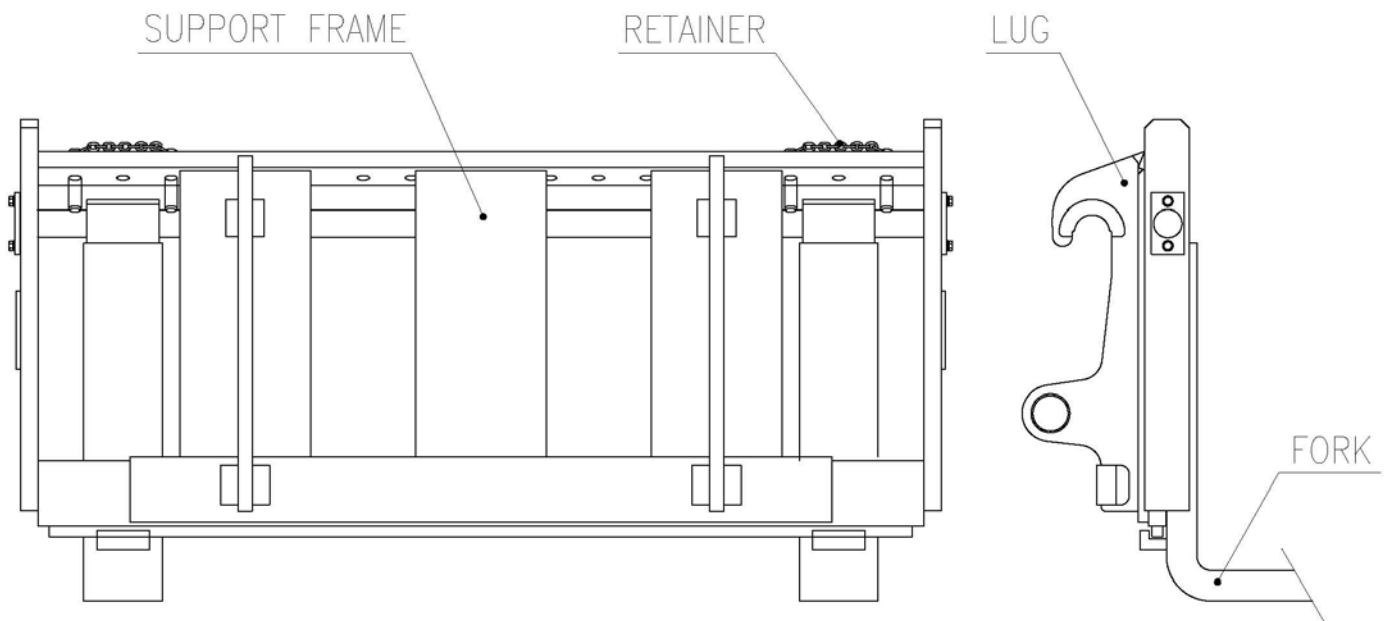
BUCKET (CUTTING EDGE TYPE)



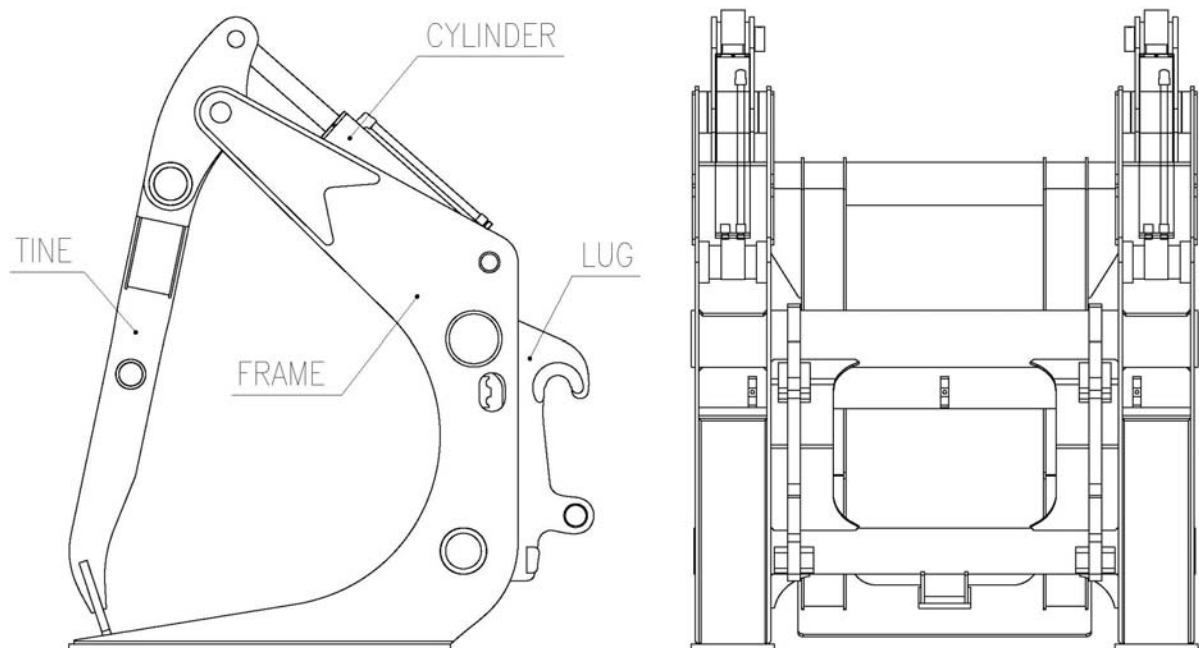
BUCKET (TOOTH TYPE)



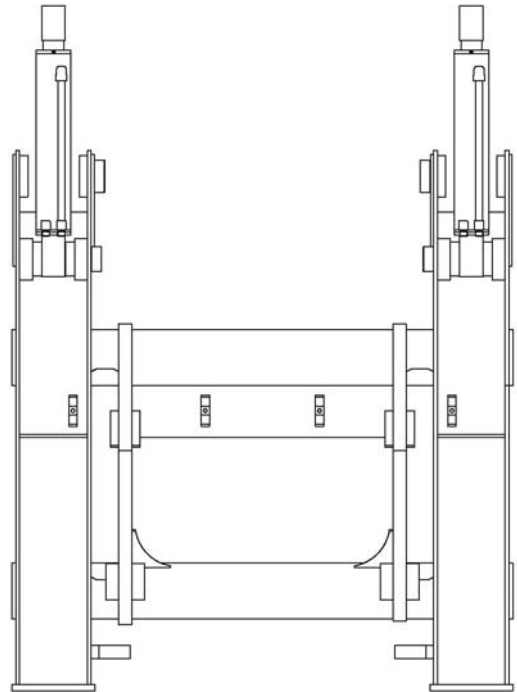
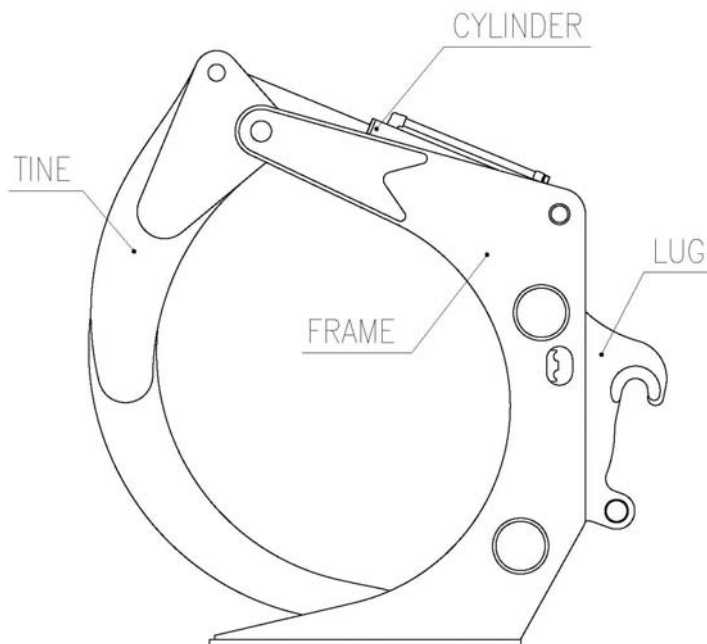
PALLET FORK



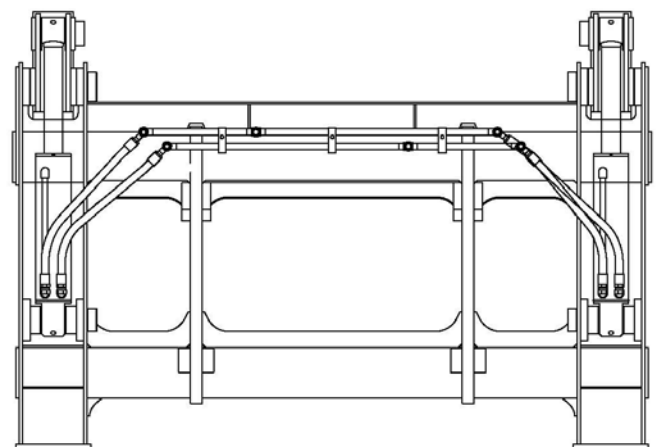
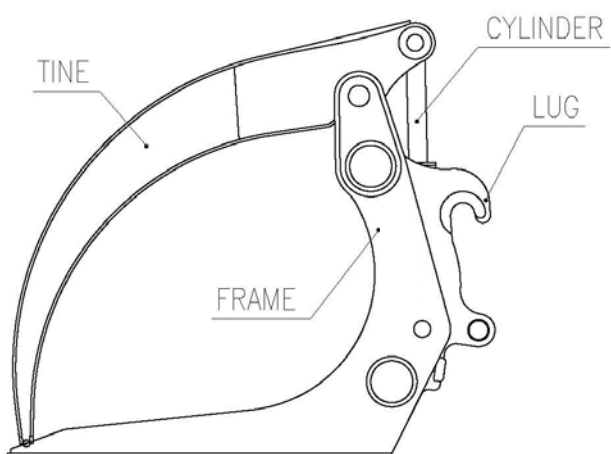
LOG GRAPPLE (GENERAL PURPOSE)



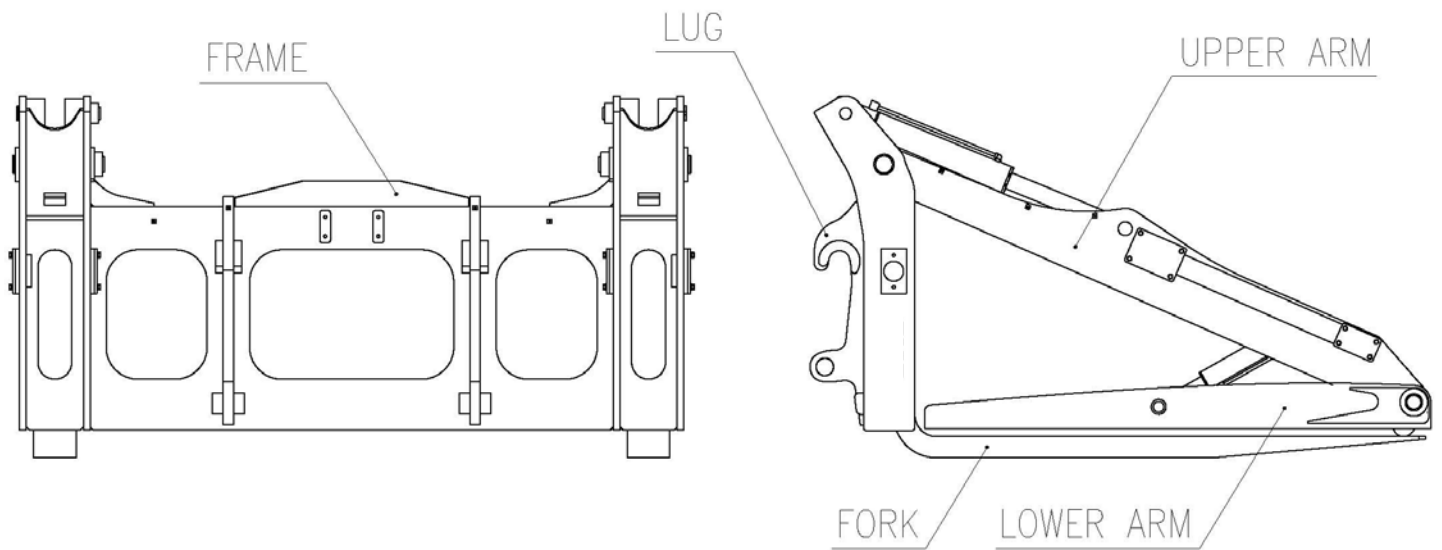
LOG GRAPPLE (SORTING TYPE)



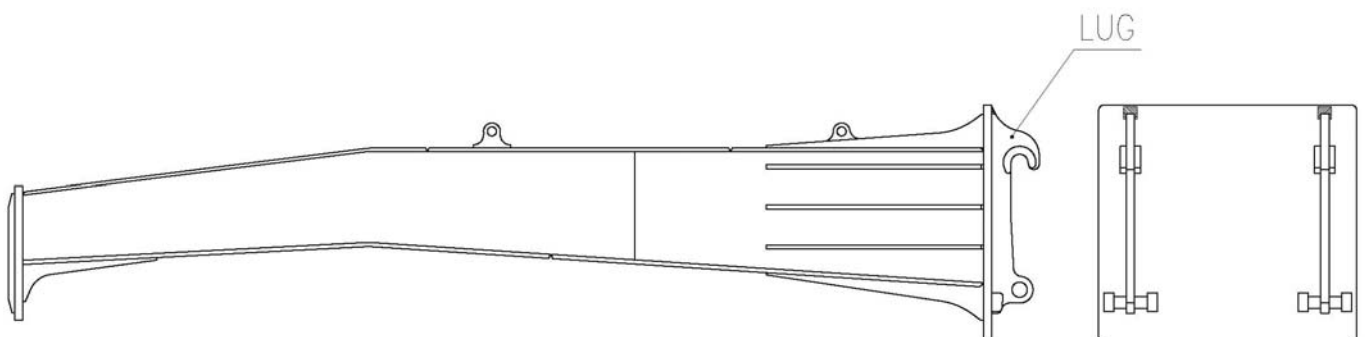
LOG GRAPPLE (TROPICAL TYPE)



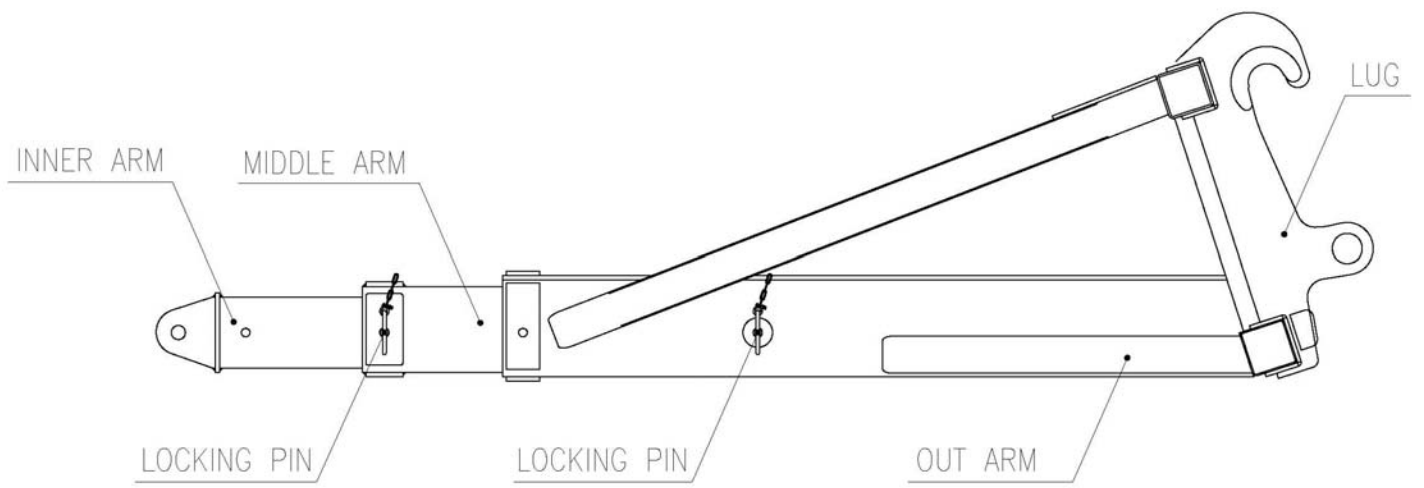
PIPE CLAMP FORK



CLEARING RAKE

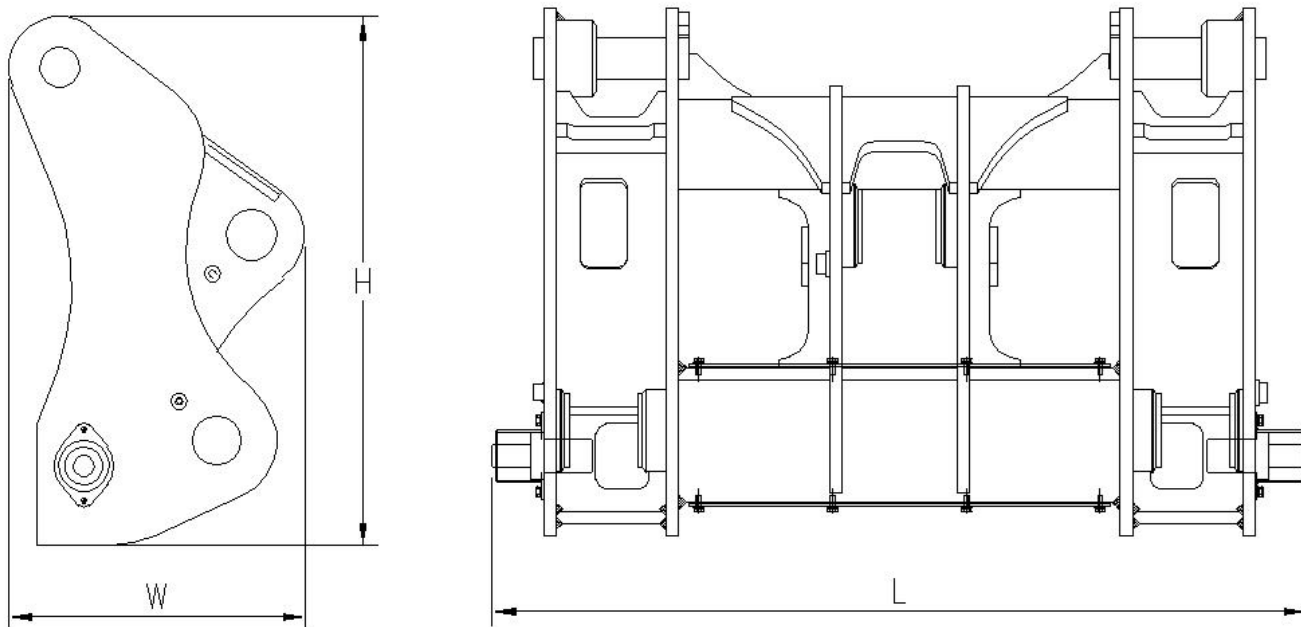


MECHANICAL CRANE



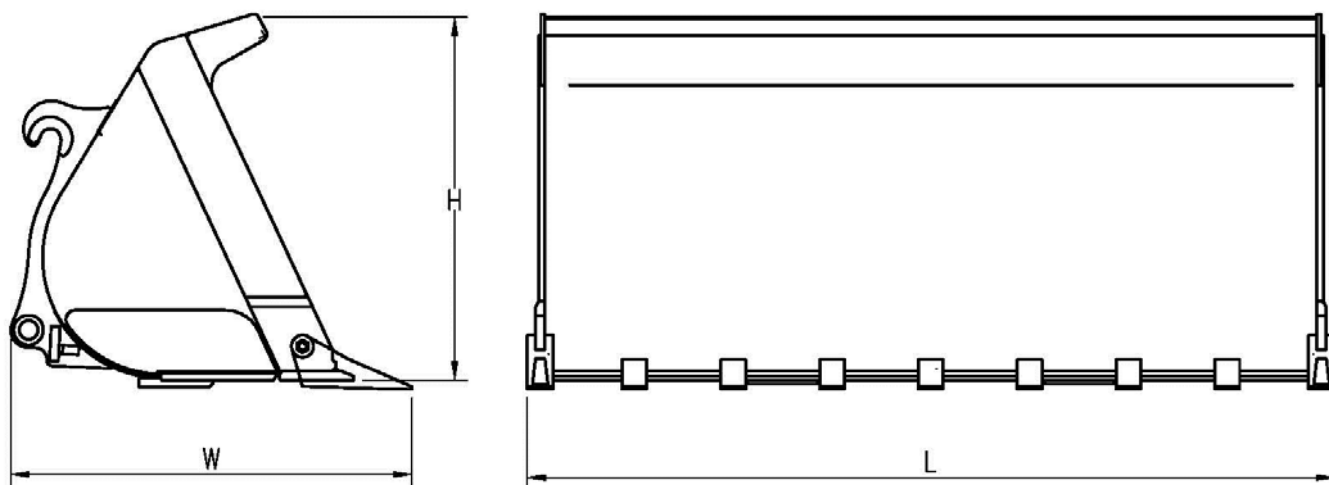
3. Dimension

3-1 Quick Coupler (LQC701)



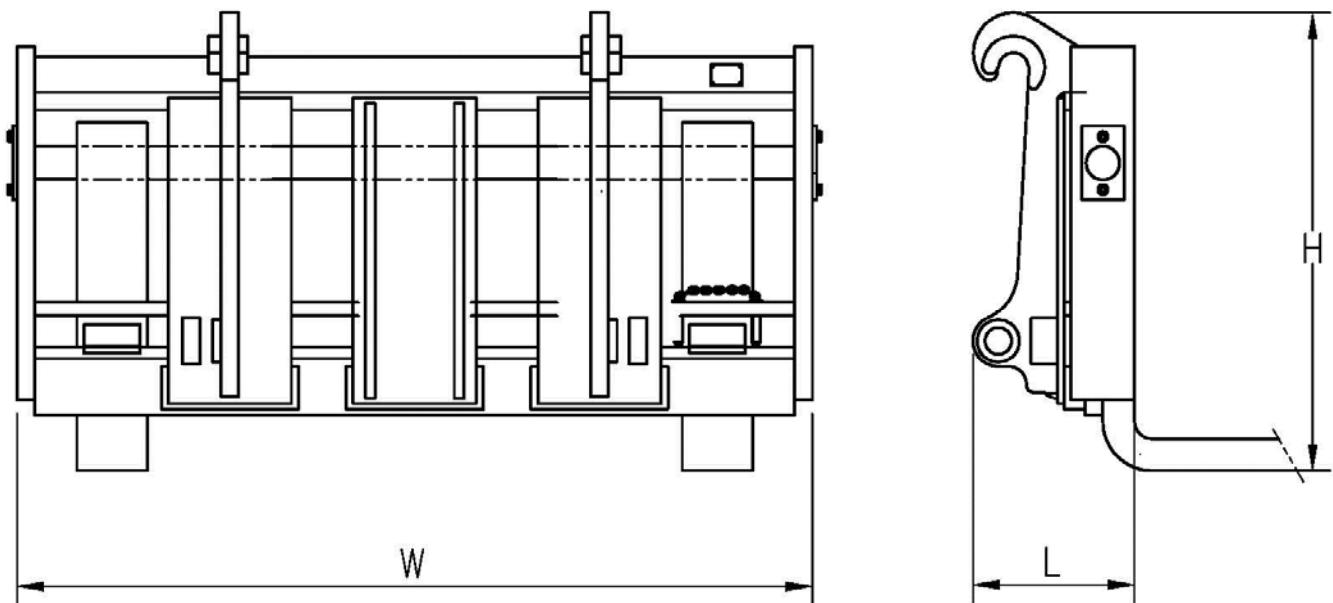
	Unit	LQC701
W	mm	606
H	mm	1,035
L	mm	1,588
Weight	kg	718

3-2 General Purpose Bucket (GP701Q-126)



	Unit	GP701Q-126
W	mm	1,631
H	mm	1,469
L	mm	3,258
Weight	kg	2,083

3-3 Pallet Fork (PF701Q-84)

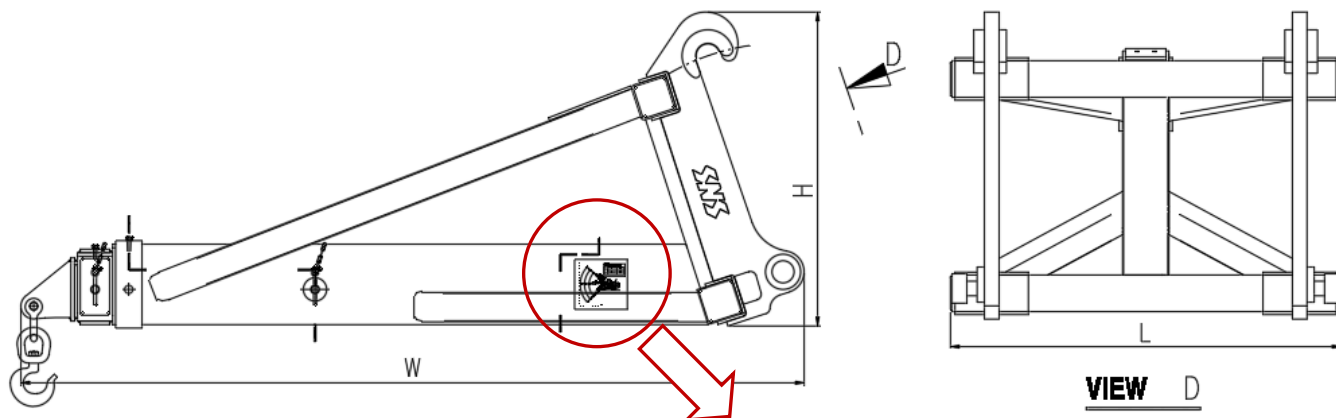


	Unit	PF701Q-84
W	mm	2,160
H	mm	1,300
L	mm	460
Fork	mm	75 X 200 X 2130H
Weight	kg	1,724

3-4 Loader Handling Arm (LHA701Q)

1) Lifting capacity

The meaning of safe working loads from LHA701 Sticker is capacity of crane itself, so lifting capacity of lha701 depends on base machine.

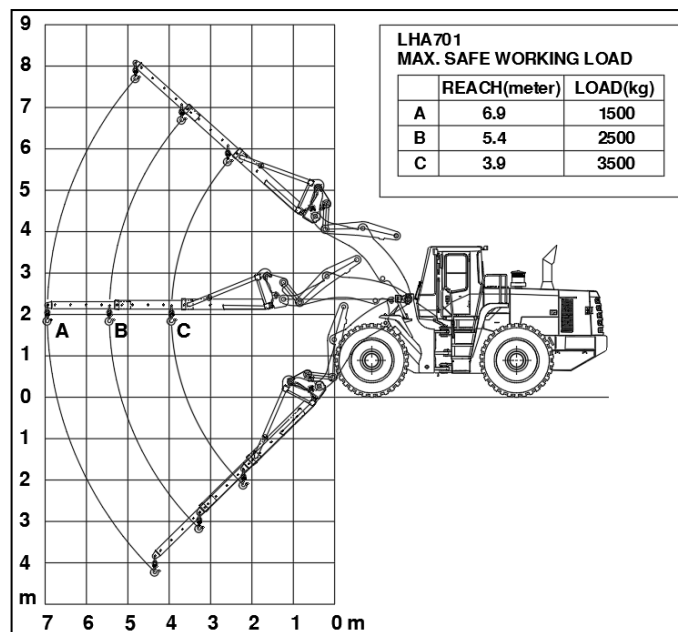


	Unit	PF701Q-84
W	mm	2,672
H	mm	1,070
L	mm	1,332
Weight	kg	770

Lifting capacity of LHA701Q for HL770-9S

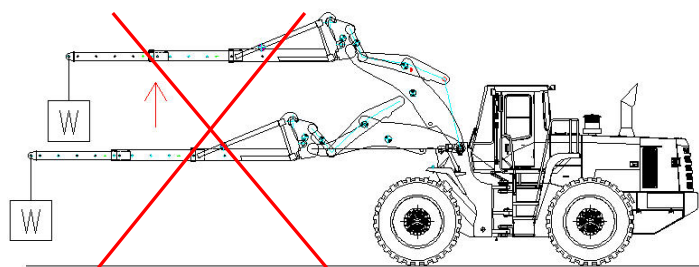
Position	Reach (mm)	Allowable loads**
A : max.	6,900	1,500 kg
B : middle	5,400	2,500 kg
C : min.	3,900	3,500 kg

* hydraulic limit of bucket cylinder capacity (96%)

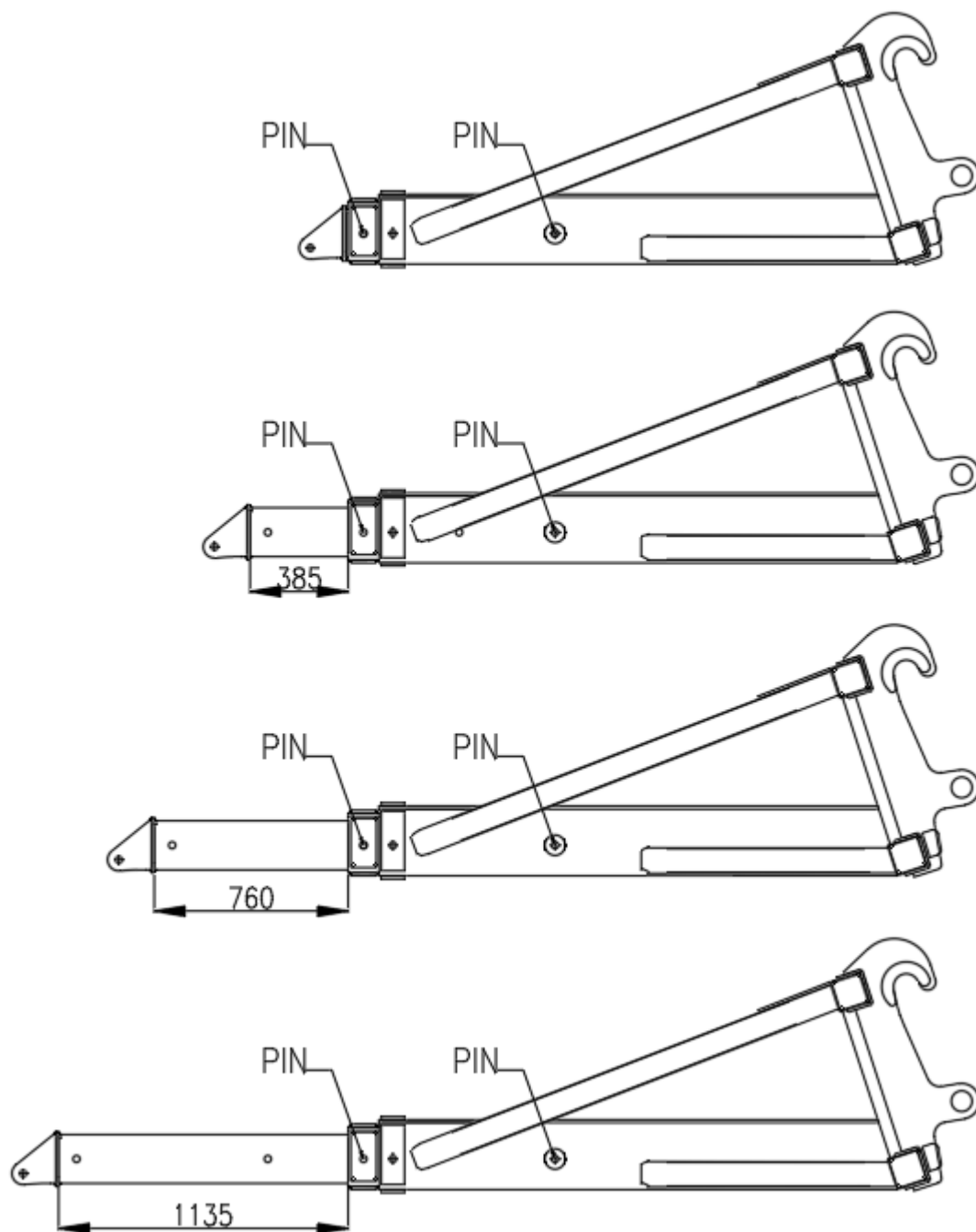


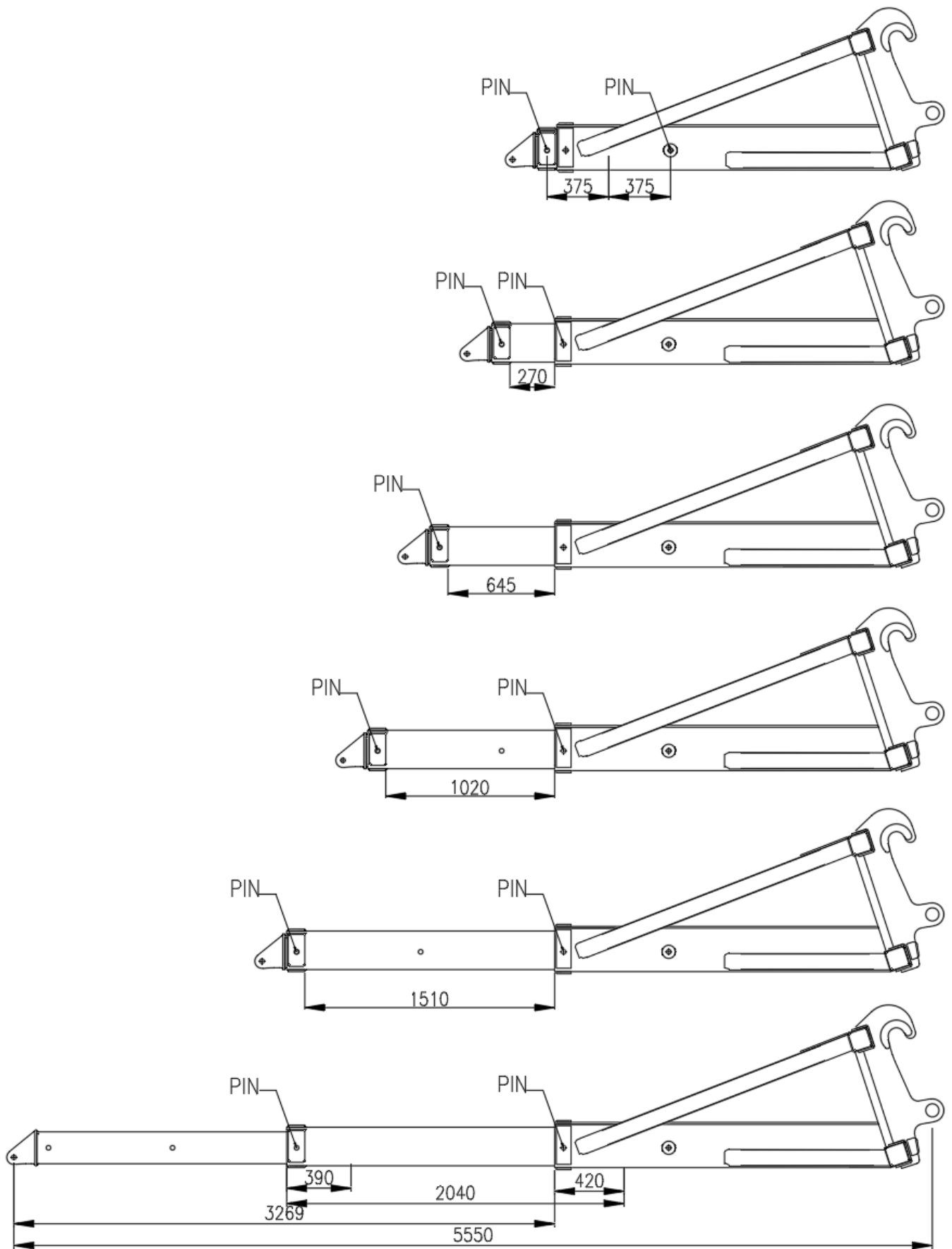
Warning

Do not operate the crane in horizontal position during lifting weight, because bucket cylinder force might be limited easily.



2) Pin position





4 Check and Maintenance

Only the person who was authorized or trained by our company can repair and maintain the attachment.

4-1 General Items

Perfect checking and maintenance make machine's functionalities fully operational and extend a length of machine's life.

Particularly, pay a special attention to the following items when operating the machine.

- 1) Operating devices, gauges and etc are normal?*
- 2) Are there any abnormalities in appearance? Are there any strange noise, heat generation, and etc?*
- 3) Are there any loose of bolts or nuts?*
- 4) Are there any damages, wears and disassemblies of structures or components?*
- 5) Is the operation of each part OK?*

If disorders are found during checking or operation, please grasp the reason and repair them immediately.

If the reason is unclear or hydraulic parts have problems, please contact us.

4-2 Directions when checking or having maintenance

- 1) Pay close attention to safety*
- 2) Make a plan suitable for the operating condition or environment so that the checks and repairs are executed effectively*
- 3) Use proper lubricating oil*
- 4) Use parts approved by the manufacturer*
- 5) Any changes or modifications of the machine are not permitted.*

4-3 Preparations before starting repair

Before starting repairs described in this manual, the machine should be stopped as follows, except otherwise described.

- 1) Attachment should be placed on the safe place.*
- 2) Make 'Lock' status by raising control stand of machine*
- 3) A message label of 'No start-up' should be attached on the control lever*

4-4 Regular replacement of important parts

The machine should be inspected regularly to secure safety when working or operating.

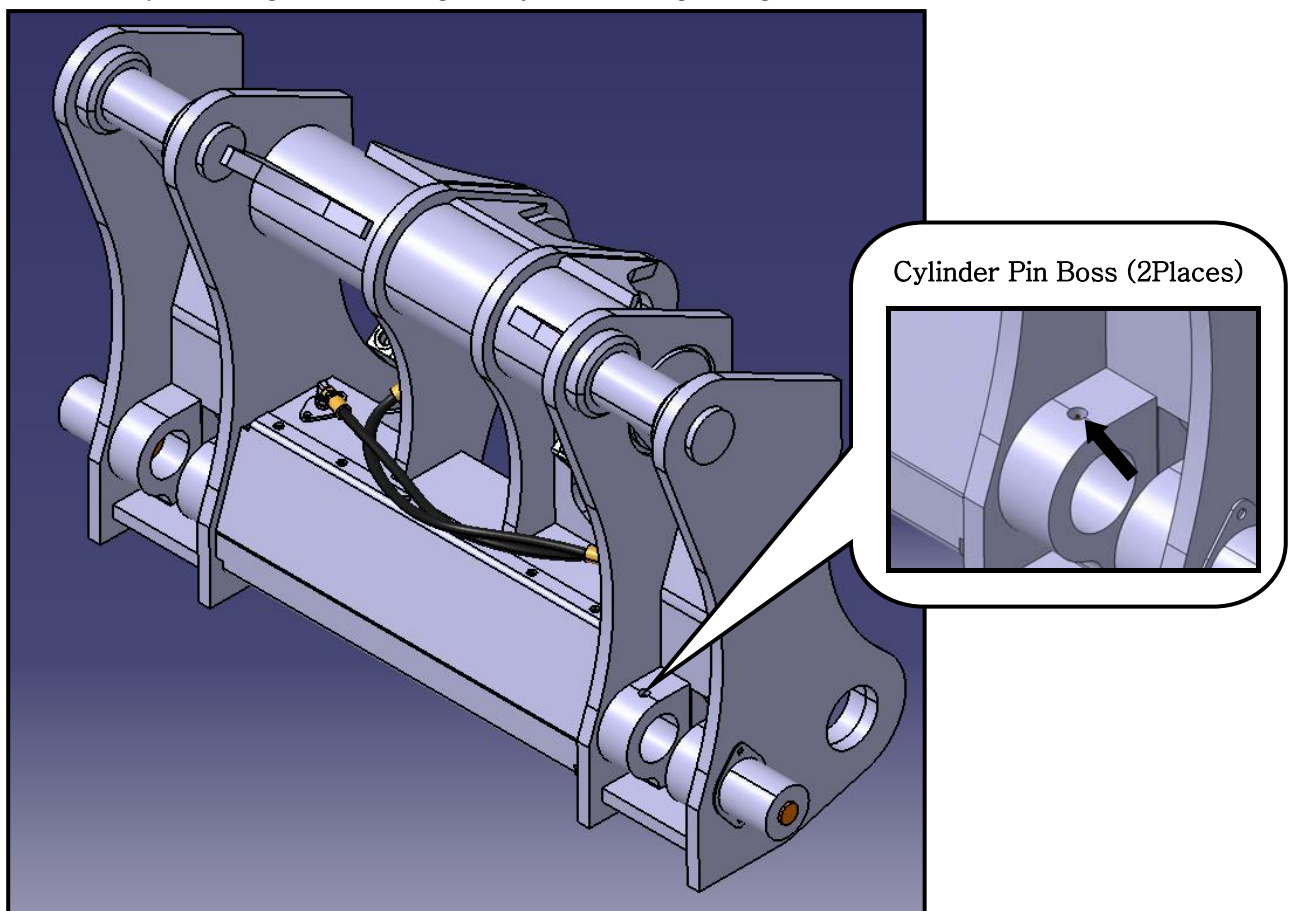
Furthermore, particularly the following parts related to fire should be replaced regularly for higher safety. These parts, if particular abnormalities are not found after used for specific period, should be replaced with the new ones to keep their full functionalities, since wear, heat deterioration and fatigue in these parts are to be occurred and their degree of damage is hard to be decided only by regular maintenance. Furthermore, when the deformations, cracks or so on in the hose clamps are occurred at the hose connections, clamps should be replaced simultaneously. O-RINGS and GASKETS are recommended to be replaced together with the hose.

For the replacement of important parts, please contact A/S or R&D department in our company

4-5 Locations where greases are to be inserted

They should be inserted at every 50 hours (If during initial 100 hours, it should be inserted everyday)

- 1) *Pose the machine according to following figures, and then lower the front attachment on the ground and stop the engine.*
- 2) *Push the grease fittings indicated in the following figures by using grease gun.*
- 3) *Wash out clearly the old grease coming out after inserting new grease.*



5. Operation and Caution

5-1 Operation for new attachment

The attachment is required that the operator follow these two steps during initial break-in period. Failure to follow these two steps may result in damage to the equipment or reduced performance.

OPERATION HOUR	LOAD
FIRST 50 HOURS	Maintain about 80% load of full capacity(Engine RPM: 80% of rated RPM)
AFTER 50 HOURS	Full load

Note:

1. *Check daily for leakage of hydraulic oil.*
2. *Inspect all lubricants daily and add as required.*
3. *During operation, monitor all instruments and gauges from time to time.*
4. *Operate unit at 80% load until engine and all other components are at operating temperature.*
5. *Check that equipment is working normally during operation.*
6. *After assemble the attachment, fully remove air inside hydraulic line.*

5-2 Operating precautions

1) Before starting work

- ① Keep attention when working where there is a possibility of falling objects.
- ② Check the operating of attachment is normal or not.
- ③ Check any leakage of coolant or oil.

2) During work

- ① Make sure nothing remain inside machine working range.
- ② These are unique noise of the attachment not in trouble.
 - There is sharp noise sometime when the actuator break-in working. These sounds are cracking sounds from relief valves when sudden start or stop.
- ③ Add more additional counter weight when the stability of machine is not normal during the work. (Make an inquiry to our office when modify the machine.)

3) After work

- ① Check any leakage, any damage on hoses or pipes and loosening of bolt/nut etc.
- ② Check hydraulic level from the tank.
- ③ Keep clean the machine.

6. Troubleshooting

Trouble	Probable cause	Remedy
The Q/C cylinder does not work	Make-up check hydraulic line leaking	Repair or replace as required.
	Hydraulic pump failed	Contact your dealer.
	Low hydraulic oil level	Add hydraulic oil as required.
	Miss flow direction.	Check knob position of sol' valve.
The Q/C cylinder has poor power	Low hydraulic oil level.	Add hydraulic oil as required.
	Hydraulic pump failed.	Contact your dealer.
The Q/C cylinder speed is too low	Make-up check hydraulic line leaking	Repair or replace as required.

C. Hydraulic System

QUICK COUPLER PIPING	·C080
QUICK COUPLER JUMPING PIPING	·C080a
QUICK COUPLER ASSEMBLY	·C210
INDICATOR ASSEMBLY	·C210a

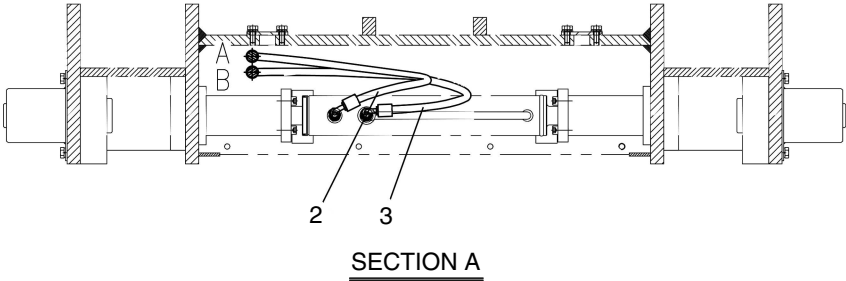
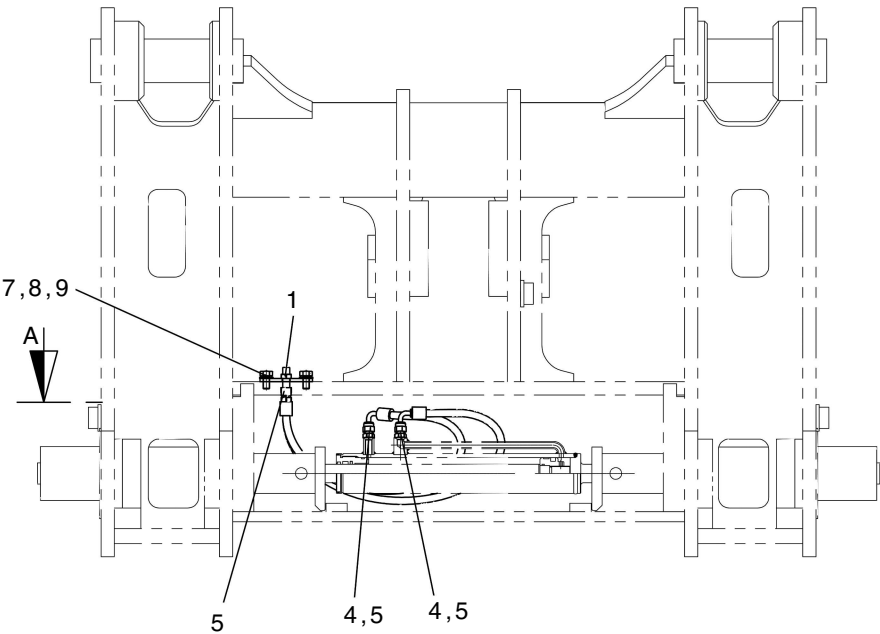
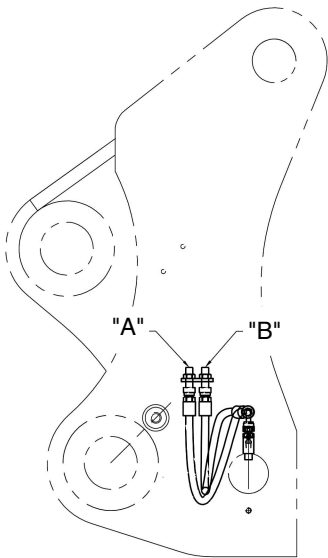
D. Hydraulic Component

QUICK COUPLER CYLINDER ASSEMBLY	·D120
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H. Attachment System

LOADER HANDLING ARM	·H020
GENERAL PURPOSE BUCKET	·H030
PALLET FORK	·H090

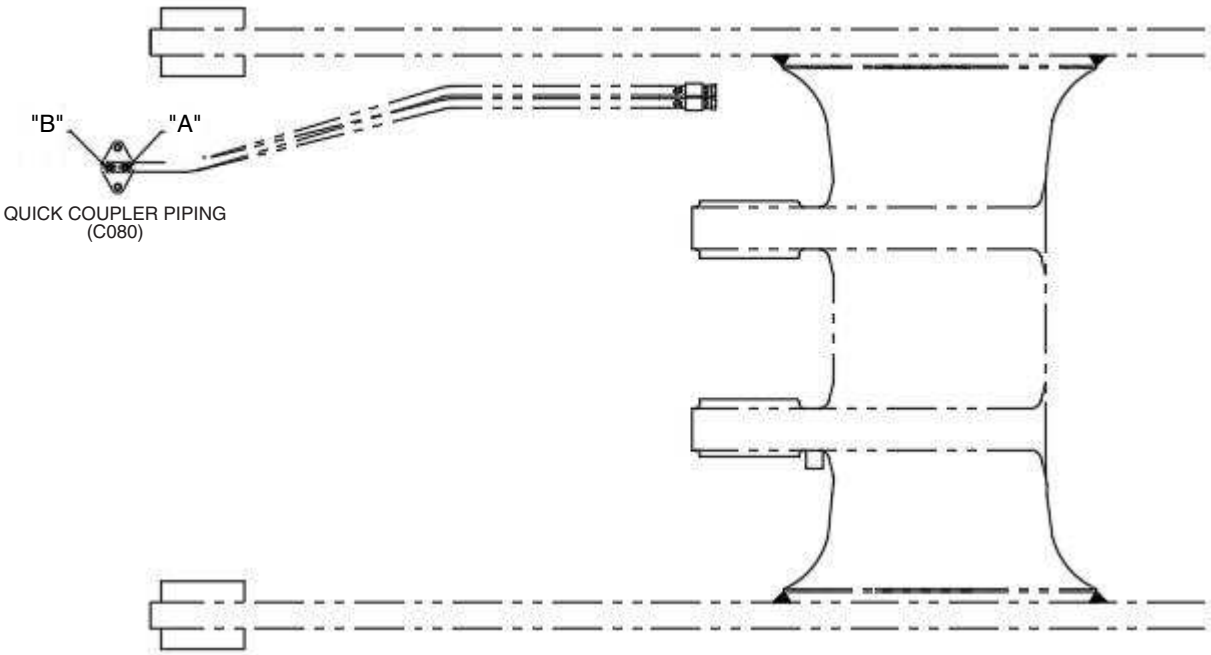
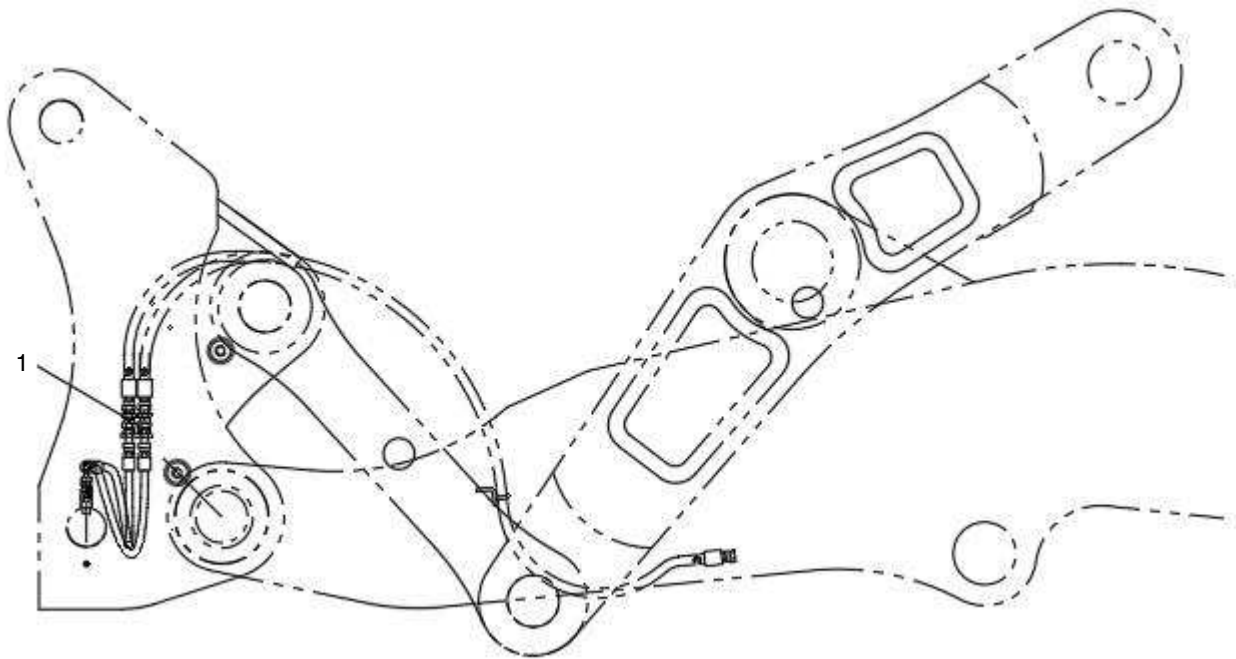
QUICK COUPLER PIPING



QUICK COUPLER PIPING

HL770-9S PF

ITEM	PART NO	DESCRIPTION	QTY	SERIAL NO	ITC	REMARK
*	XKDA-01553	PIPINGKIT- QUICKCOUPLER	1			
1	XKDA-01535	. COVER-ADAPTER	1			
2	XKDA-01554	. HOSE	1			L=710
3	XKDA-01555	. HOSE	1			L=820
4	XKDA-01556	. ADAPTER	2			
5	XKDA-01557	. O- RING	4			
7	XKDA-00091	. BOLT-HEX	2			
8	XKDA-01537	. WASHER-SPRING	2			
9	XKDA-01538	. WASHER-PLAIN	2			

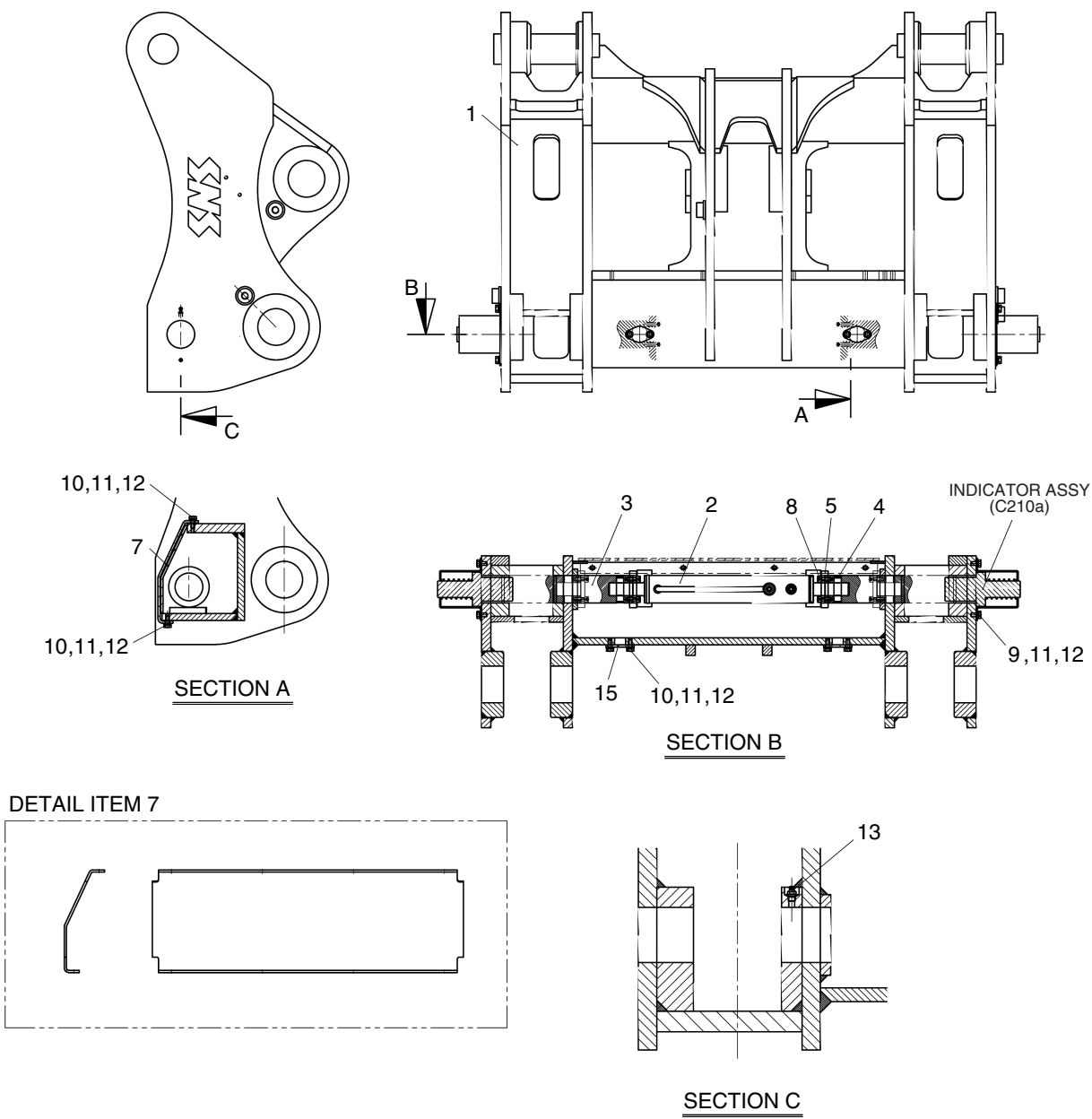


QUICK COUPLER JUMPING PIPING

HL770-9S PF

ITEM	PART NO	DESCRIPTION	QTY	SERIAL NO	ITC	REMARK
1	* XKDA-01576	HOSE ASSY-JUMPING	1			
	XKDA-01539	. ADAPTER-SWIVEL	2			

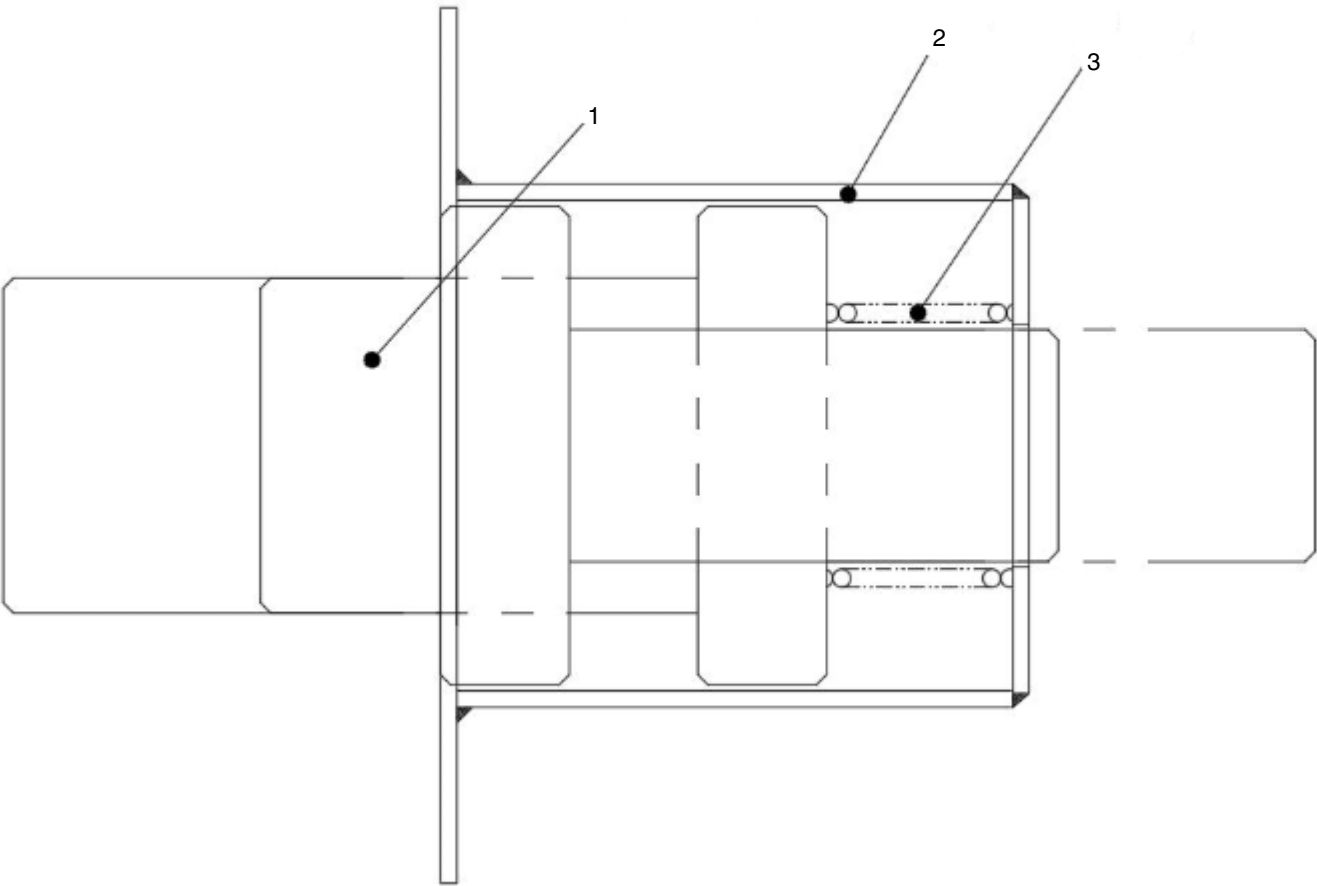
QUICK COUPLER ASSEMBLY



QUICK COUPLER ASSEMBLY

HL770-9S PF

ITEM	PART NO	DESCRIPTION	QTY	SERIAL NO	ITC	REMARK
*	XKDA-01540	QUICKCOUPLER ASSY	1			
1	XKDA-01541	. QUICKCOUPLER	1			
2	XKDA-01542	. CYLINDER ASSY- QUICKCOUPLER	1			
3	XKDA-01543	. PIN	2			
4	XKDA-01544	. PIN- LOCK	2			
5	XKDA-01545	. STOPPER	2			
7	XKDA-01546	. COVER	1			
8	XKDA-01352	. BOLT-SOCKET	16			
9	XKDA-01088	. BOLT-HEX	4			
10	XKDA-00900	. BOLT-HEX	12			
11	XKDA-00168	. WASHER-SPRING	16			
12	XKDA-01547	. WASHER-PLAIN	16			
13	XKDA-00124	. FITTING- GREASE	2			
15	XKDA-01549	. COVER	2			

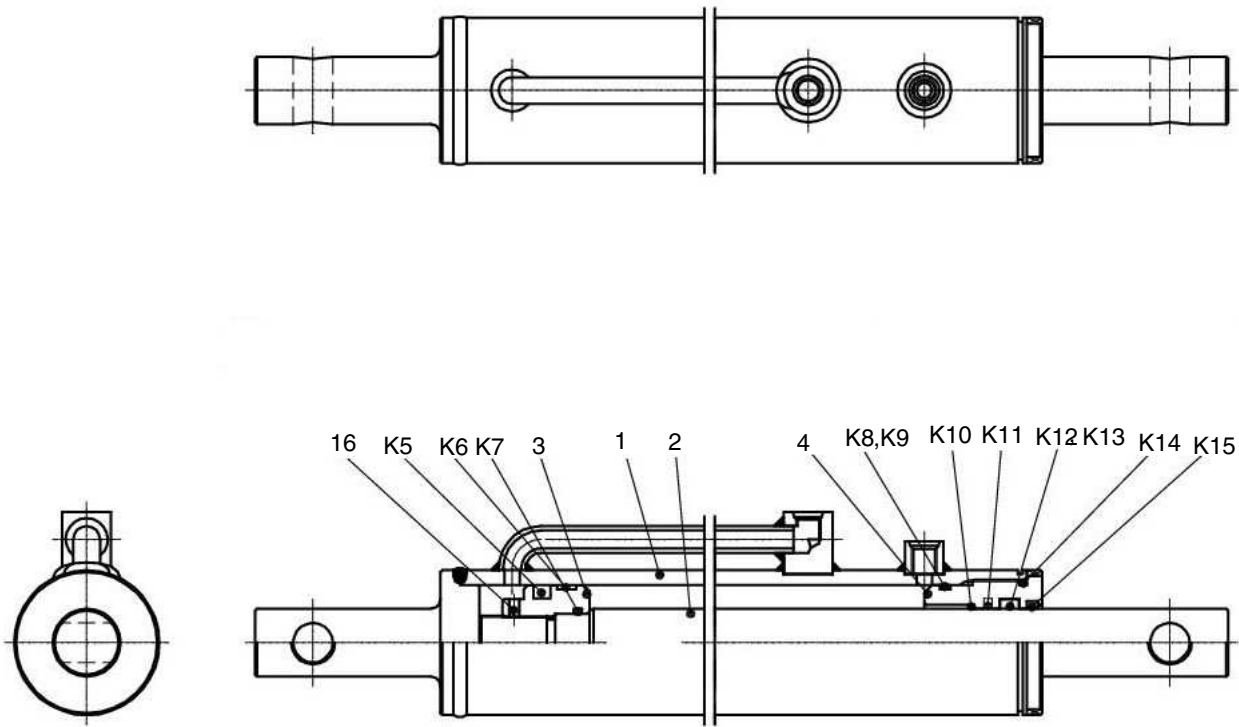


INDICATOR ASSEMBLY

HL770-9S PF

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QUICK COUPLER CYLINDER ASSEMBLY

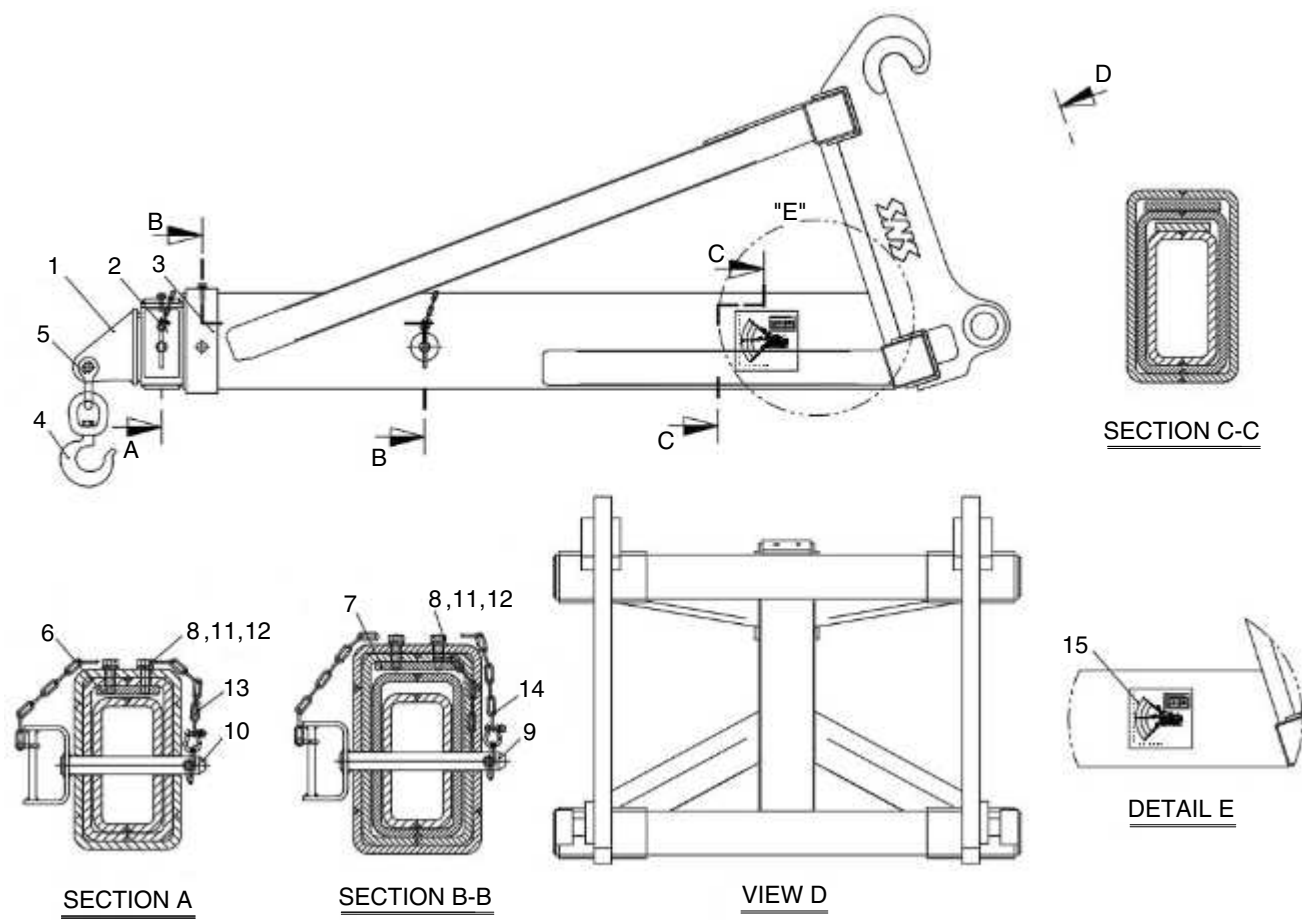


QUICK COUPLER CYLINDER ASSEMBLY

HL770-9S PF

ITEM	PART NO	DESCRIPTION	QTY	SERIAL NO	ITC	REMARK
*	XKDA-01558	CYLINDER ASSY- QUICKCOUPLER	1			
1	XKDA-01559	. TUBE ASSY- CYL	1			
2	XKDA-01560	. ROD ASSY- CYL	1			
3	XKDA-01561	. PISTON- CYL	1			
4	XKDA-01562	. COVER- ROD	1			
K5	XKDA-01563	. SEAL -SLIPPER	1			
K6	XKDA-01564	. RING - WEAR	1			
K7	XKDA-01565	. O - RING	1			
K8	XKDA-01566	. O - RING	1			
K9	XKDA-01567	. RING - BACK UP	1			
K10	XKDA-01568	. BUSHING - DU	1			
K11	XKDA-01569	. SEAL -STEP	1			
K12	XKDA-01570	. PACKING - U	1			
K13	XKDA-01571	. RING - BACK UP	1			
K14	XKDA-01572	. O - RING	1			
K15	XKDA-01573	. WIPER -DUST	1			
16	XKDA-01574	. SCREW-SET	1			
K	XKDA-01575	. SEAL KIT	1			

LOADER HANDLING ARM

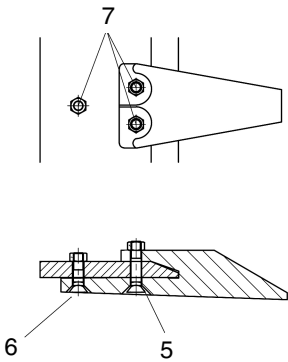
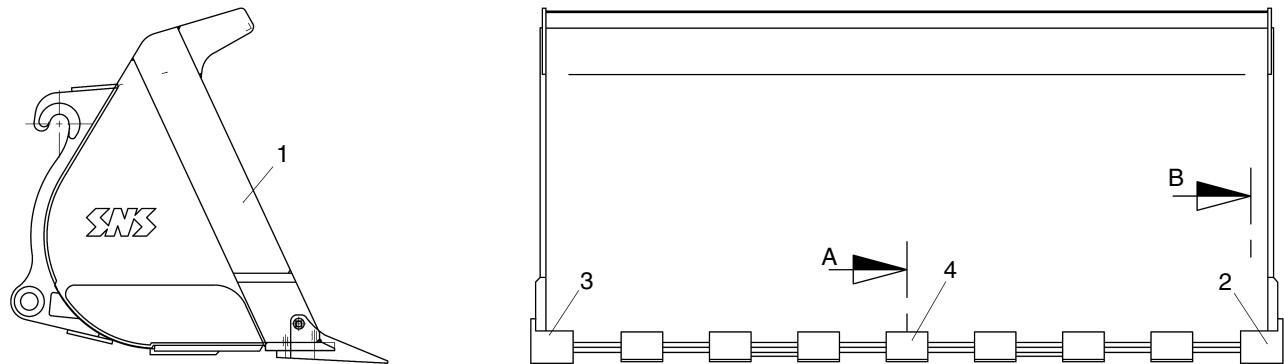


LOADER HANDLING ARM

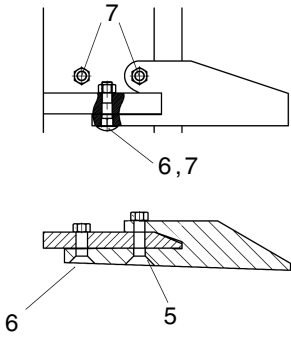
HL770-9S PF

ITEM	PART NO	DESCRIPTION	QTY	SERIAL NO	ITC	REMARK
*	XKDA-01592	ARM ASSY-HANDLING	1			
1	XKDA-01593	. ARM- INNER	1			
2	XKDA-01594	. ARM- MIDDLE	1			
3	XKDA-01595	. ARM- OUT	1			
4	XKDA-01596	. HOOK-SHOVEL	1			7t
5	XKDA-01597	. PIN-SCREW	1			
6	XKDA-01598	. PLATE-STOPPER	1			
7	XKDA-01599	. PLATE-STOPPER	1			
8	XKDA-01600	. BOLT-HEX	4			
9	XKDA-01601	. PIN ASSY	1			
10	XKDA-01602	. PIN ASSY	1			
11	XKDA-01537	. WASHER-SPRING	4			
12	XKDA-01538	. WASHER-PLAIN	4			
13	XKDA-01603	. CHAIN ASSY	1			
14	XKDA-01604	. CHAIN ASSY	1			
15	XKDA-01605	. STICKER	1			

GENERAL PURPOSE BUCKET



SECTION A

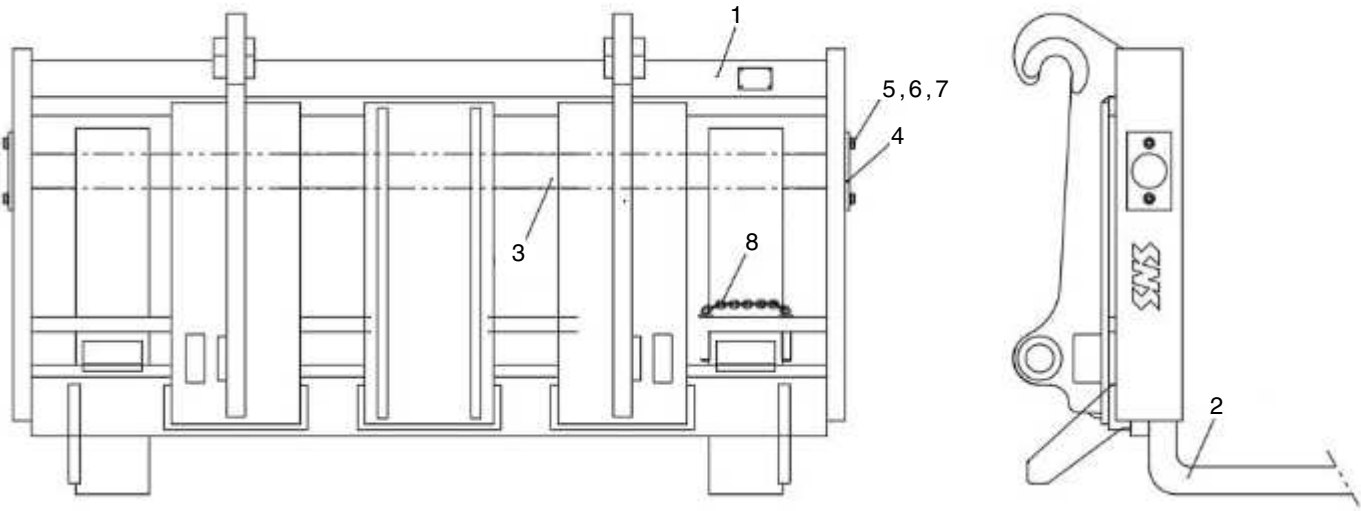


SECTION B

GENERAL PURPOSE BUCKET

HL770-9S PF

ITEM	PART NO	DESCRIPTION	QTY	SERIAL NO	ITC	REMARK
*	XKDA-01577	BUCKET ASSY	1			
1	XKDA-01578	. BUCKET	1			
2	XKDA-01579	. TOOTH-SIDE LH	1			
3	XKDA-01580	. TOOTH-SIDE RH	1			
4	XKDA-01581	. TOOTH	7			
5	XKDA-01582	. BOLT	16			
6	XKDA-01583	. BOLT	11			
7	S206-22100B	. NUT-HEX	27			



PALLET FORK

HL770-9S PF

ITEM	PART NO	DESCRIPTION	QTY	SERIAL NO	ITC	REMARK
*	XKDA-01584	FORK ASSY-PALLET	1			
1	XKDA-01585	. SUPPORT - FORK	1			
2	XKDA-01586	. FORK	2			
3	XKDA-01587	. SHAFT	2			
4	XKDA-01588	. PLATE	2			
5	XKDA-01589	. BOLT	4			
6	XKDA-00048	. WASHER-SPRING	4			
7	XKDA-01590	. WASHER-PLAIN	4			
8	XKDA-01591	. RETAINER ASSY	2			

NUMERICAL PART INDEX

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XKDA - 00048	H090	6	XKDA - 01567	D120	K9			
XKDA - 00091	C080	7	XKDA - 01568	D120	K10			
XKDA - 00124	C210	13	XKDA - 01569	D120	K11			
XKDA - 00168	C210	11	XKDA - 01570	D120	K12			
XKDA - 00900	C210	10	XKDA - 01571	D120	K13			
XKDA - 01088	C210	9	XKDA - 01572	D120	K14			
XKDA - 01352	C210	8	XKDA - 01573	D120	K15			
XKDA - 01535	C080	1	XKDA - 01574	D120	16			
XKDA - 01537	C080	8	XKDA - 01575	D120	K			
XKDA - 01537	H020	11	XKDA - 01576	C080a	*			
XKDA - 01538	C080	9	XKDA - 01577	H030	*			
XKDA - 01538	H020	12	XKDA - 01578	H030	1			
XKDA - 01539	C080a	1	XKDA - 01579	H030	2			
XKDA - 01540	C210	*	XKDA - 01580	H030	3			
XKDA - 01541	C210	1	XKDA - 01581	H030	4			
XKDA - 01542	C210	2	XKDA - 01582	H030	5			
XKDA - 01543	C210	3	XKDA - 01583	H030	6			
XKDA - 01544	C210	4	XKDA - 01584	H090	*			
XKDA - 01545	C210	5	XKDA - 01585	H090	1			
XKDA - 01546	C210	7	XKDA - 01586	H090	2			
XKDA - 01547	C210	12	XKDA - 01587	H090	3			
XKDA - 01548	C210a	*	XKDA - 01588	H090	4			
XKDA - 01549	C210	15	XKDA - 01589	H090	5			
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XKDA - 01551	C210a	2	XKDA - 01591	H090	8			
XKDA - 01552	C210a	3	XKDA - 01592	H020	*			
XKDA - 01553	C080	*	XKDA - 01593	H020	1			
XKDA - 01554	C080	2	XKDA - 01594	H020	2			
XKDA - 01555	C080	3	XKDA - 01595	H020	3			
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XKDA - 01565	D120	K7	XKDA - 01605	H020	15			