

# DMQ SERIES QUICK COUPLER

DMQ35, DQC50M-7, DMQ80, DMQ140, DMQ170  
DMQ230, DMQ290, DMQ360, DMQ450, DMQ500

## Important Notice !

Read this manual carefully prior to installing, operating or maintaining the Quick Coupler.

Understand and follow the instructions carefully.

To avoid unnecessary injury or damage always observe relevant laws, regulations and safe working practices.

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# DMQ SERIES QUICK COUPLER

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# INTRODUCTION

## DMQ SERIES QUICK COUPLER

Daemo Engineering Co., Ltd. would like to thank you for having interest in our products.

Since 1987, Daemo engineering Co., Ltd. has developed a state - of - the - art hydraulic attachments. Our products play a major role in quarries and various construction sites. Such as building disassembly, braking up roads, land development, sewage system, and all kinds of constructional demolition sites. Especially, the Quick Coupler has updated technology, and tripled the safety. For the safety of the operator and those around.

Daemo has manufactured various attachments with precision and updated technology and well skilled workmanship.

For example, the Quick Coupler is made up of small number of parts, with simple structure, excellent marksmanship, and good maintenance.

Excellent durability, reliability, and trouble - free operation. Resulting in much more profit and good performance for your job.

Although we make our products that we can be proud of if you are not accustomed to operation properly, there maybe unexpected accidents or malfunctions, consequently the performance and efficiency of the product will drop down sharply.

So you must read this manual carefully and thoroughly to keep operating well and the needs to be maintenance periodically and operated correctly for optimal results. We do not warranty any damages, malfunctions, and injures caused by your misuse.

First of all, you must read and study this manual for your safety, and other around the work site. It will inform you of hazards and how to avoid them. If you have questions about the products or manual, please contact DaeMo or our agents. Everytime you want to replace any of the parts, please make sure you use Daemo genuine parts.

We wish you get more profit with our products, and we ' ll like to thank you in advance.

according to EC Machinery Directive 98/37/EC

## EC Declaration of Conformity

We here by declare 1), DAEMO ENGINEERING CO., LTD.  
No 515, 2Ba, Siwha Industrial Complex, Jeongwang-Dong,  
Siheung-City, Gyeonggi-Do, Korea

that the following described machine in our delivered version complies with the appropriate basic safety and health requirement of the The EC Machinery Directive 98/37/EC based on its design and type, as brought into circulation by us. In case of alteration of the machine, not agreed upon by us, this declaration will lose its validity.

Description of the machine/machinery part : QUICK COUPLER

Machine type :

Serial Number :

Year Of Construction :

Applicable EC Directives: EC Machinery Directive(98/37/EC)

Applicable Harmonized Standards 2) EN ISO 12100 - 1:2003  
EN ISO 12100 - 2:2003  
EN 982:1996  
EN 1050:1996  
PrEN 13778:1999

Date/Authorized Signature :



Title of signatory: Won Hae Lee / President

### Form requirements :

- His authorized representative
- Fill in block letters or typescript
- Official language of the user state
- Manufacturer must include full address
- Legally binding manufacturer's signature at least of a person empowered to sign on behalf of the manufacturer.

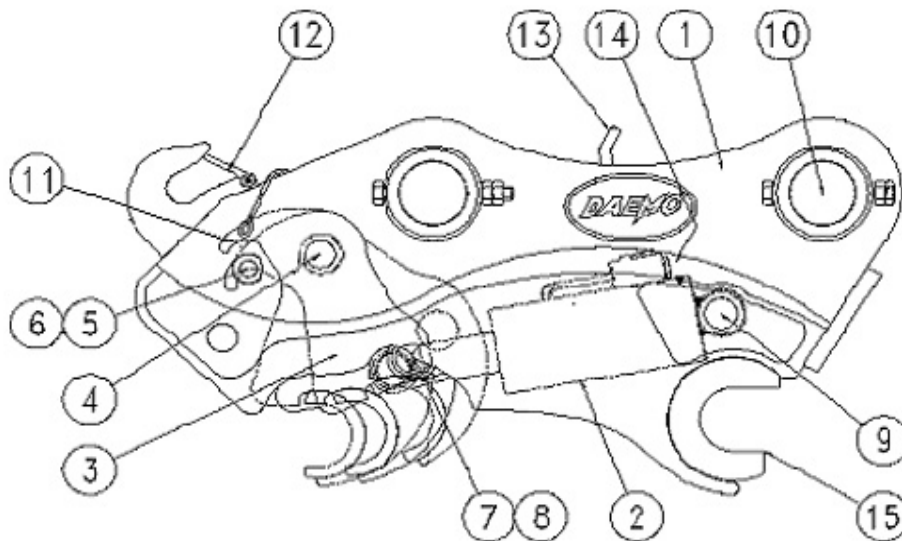
- 1) The name and address of the manufacturer or his authorized representative established in the Community.
- 2) The complete list of applied standards and technical specifications.
- 3) Provided that not corresponding harmonized standards are available yet.

## 1.1 DMQ Quick Coupler Series

### 1-1) PRODUCT

DMQ35, DMQ80, DMQ140, DMQ170, DMQ230

### 1-2) PARTS LIST



No,	PART NAME	No,	PART NAME
1	Body	9	Frame Pin
2	Cylinder	10	Bracket Pin
3	Hitch	11	Safety Bar
4	Hitch Pin	12	Latch of Safety
5	Safety Pin	13	Hydraulic Hose
6	Snap Pin	14	Check Valve
7	Cylinder Pin	15	Fixed Hook
8	Snap Ring		

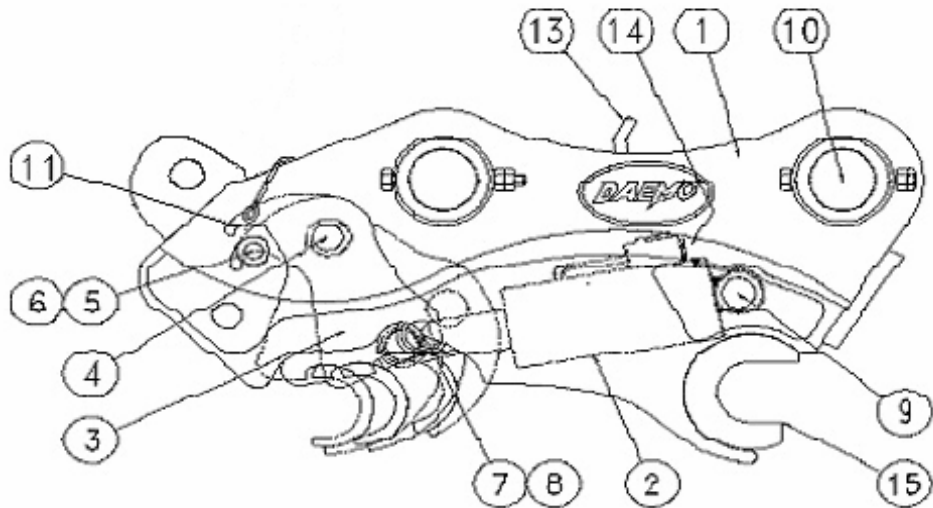
# 1

## PRODUCT & STRUCTURE

2-1) PRODUCT(Australia, New Zealand)

DMQ35, DMQ80, DMQ140, DMQ170, DMQ230

2-2) PARTS LIST



No,	PART NAME	No,	PART NAME
1	Body	9	Frame Pin
2	Cylinder	10	Bracket Pin
3	Hitch	11	Safety Bar
4	Hitch Pin	12	
5	Safety Pin	13	Hydraulic Hose
6	Snap Pin	14	Check Valve
7	Cylinder Pin	15	Fixed Hook
8	Snap Ring		

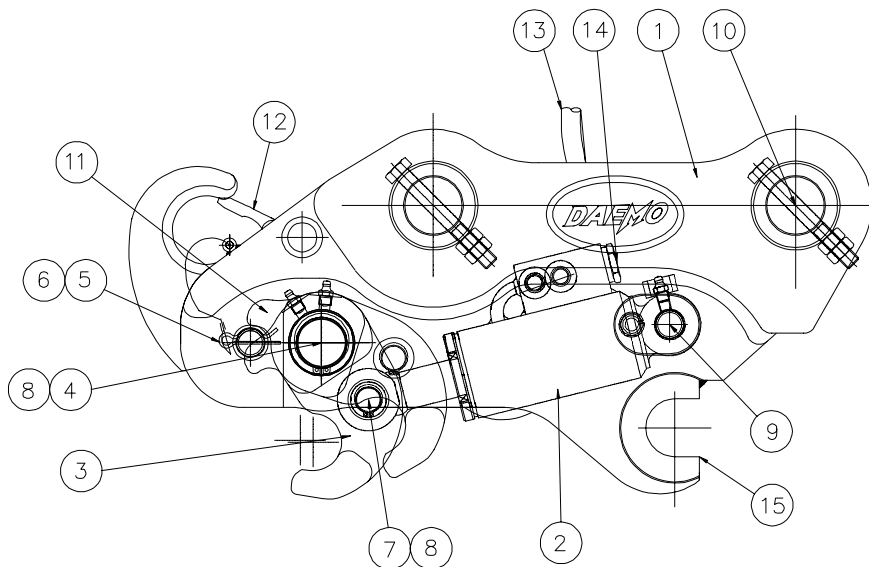
# 1

## PRODUCT & STRUCTURE

### 3-1) PRODUCT

**DMQ50M - 7**

### 3-2) PARTS LIST



No,	PART NAME	No,	PART NAME
1	Body	9	Frame Pin
2	Cylinder	10	Bracket Pin
3	Hitch	11	Safety Bar
4	Hitch Pin	12	Latch of safety
5	Safety Pin	13	Hydraulic Hose
6	Snap Pin	14	Check Valve
7	Cylinder Pin	15	Fixed Hook
8	Snap Ring		



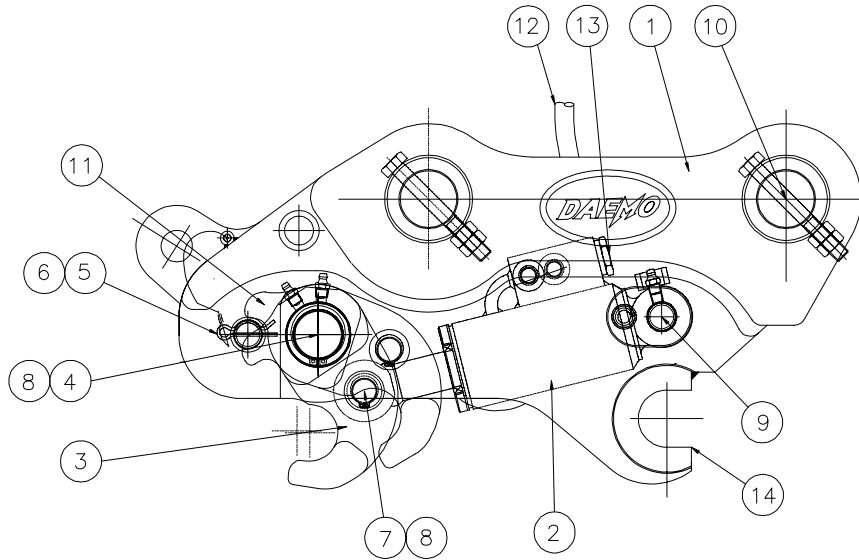
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## PRODUCT & STRUCTURE

4-1) PRODUCT(Australia, New Zealand)

**DMQ50M-7**

4-2) PARTS LIST



No,	PART NAME	No,	PART NAME
1	Body	8	Snap Ring
2	Cylinder	9	Frame Pin
3	Hitch	10	Bracket Pin
4	Hitch Pin	11	Safety Bar
5	Safety Pin	12	Hydraulic Hose
6	Snap Pin	13	Check Valve
7	Cylinder Pin	14	Fixed Hook

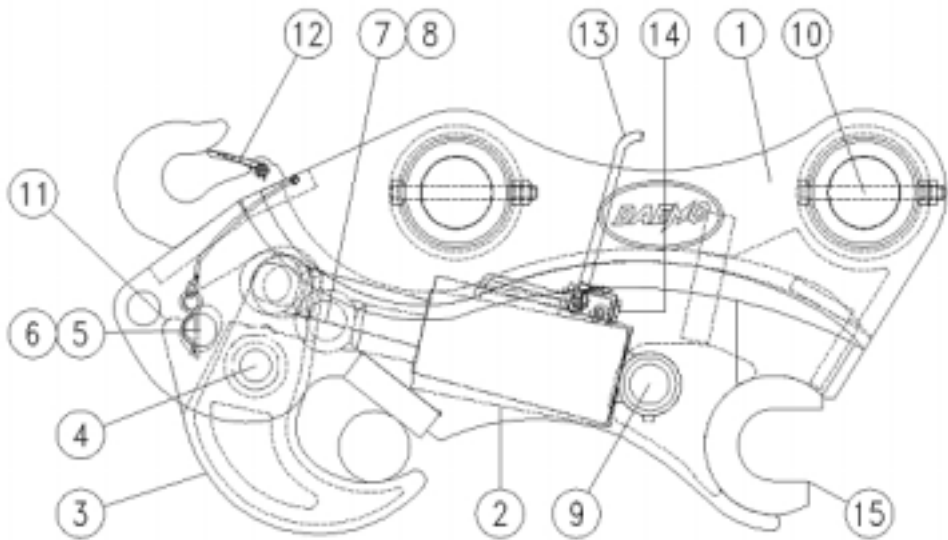
# 1

## PRODUCT & STRUCTURE

### 5-1) PRODUCT

DMQ290, DMQ360, DMQ450, DMQ500

### 5-2) PARTS LIST



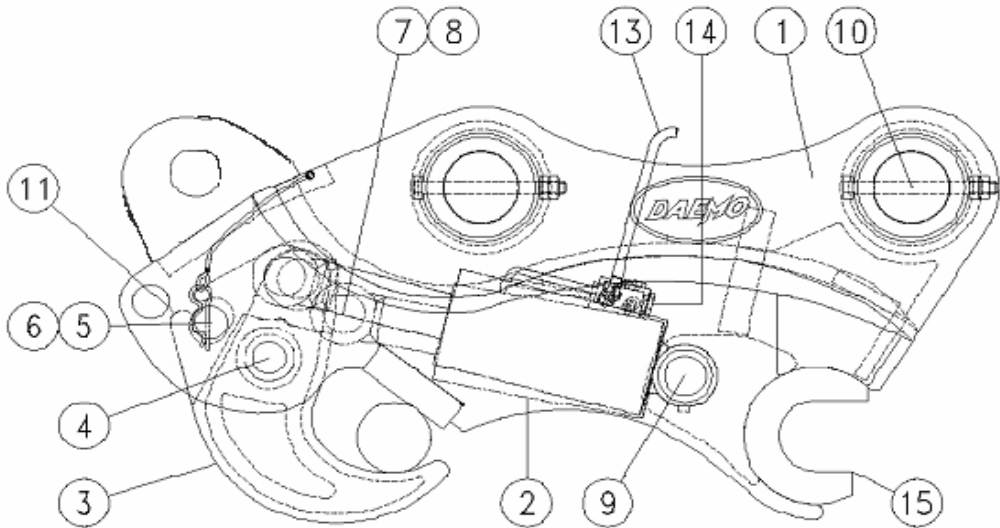
No,	PART NAME	No,	PART NAME
1	Body	9	Frame Pin
2	Cylinder	10	Bracket Pin
3	Hitch	11	Safety Bar
4	Hitch Pin	12	Latch of safety
5	Safety Pin	13	Hydraulic Hose
6	Snap Pin	14	Check Valve
7	Cylinder Pin	15	Fixed Hook
8	Snap Ring		

# 1

## PRODUCT & STRUCTURE

6-1) PRODUCT(Australia, New Zealand)  
 DMQ290, DMQ360, DMQ450, DMQ500

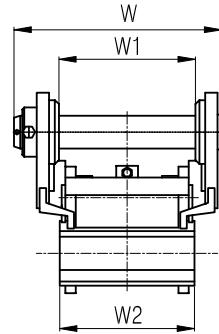
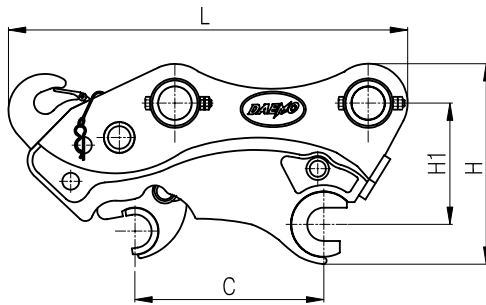
6-2) PARTS LIST



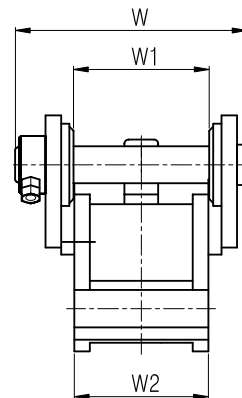
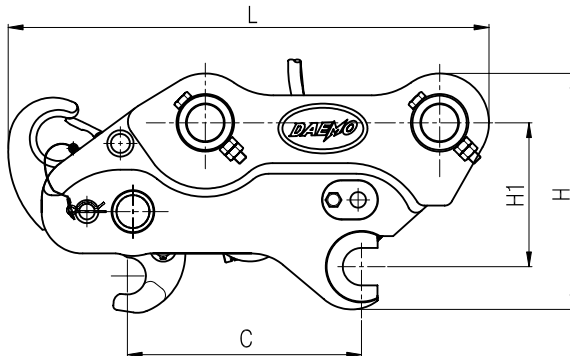
No,	PART NAME	No,	PART NAME
1	Body	9	Frame Pin
2	Cylinder	10	Bracket Pin
3	Hitch	11	Safety Bar
4	Hitch Pin	12	
5	Safety Pin	13	Hydraulic Hose
6	Snap Pin	14	Check Valve
7	Cylinder Pin	15	Fixed Hook
8	Snap Ring		

## 2.1 SPECIFICATION &amp; APPLY EQUIPMENT

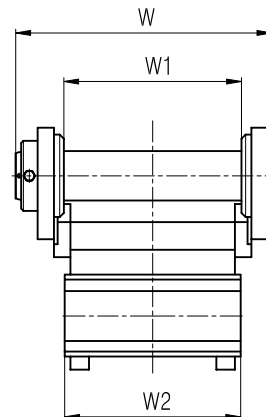
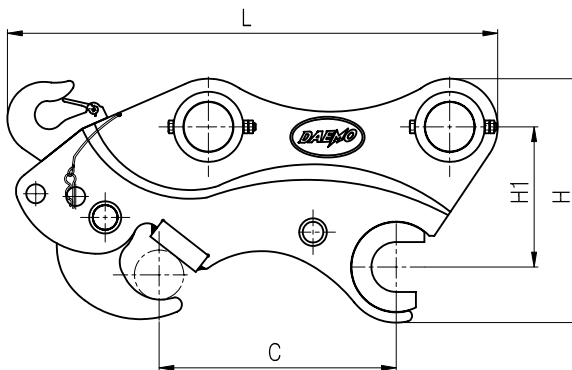
DMQ35, DMQ80, DMQ140, DMQ170, DMQ230



DQC50M-7



DMQ290, DMQ360, DMQ450, DMQ500



## 2

## SPECIFICATION &amp; APPLY EQUIPMENT

## 1) HYDRAULIC QUICK COUPLER SPECIFICATION

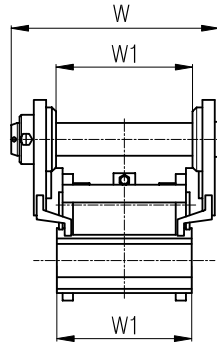
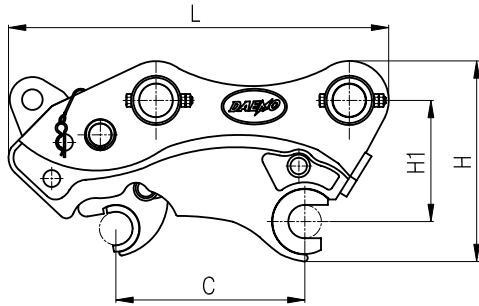
MODEL		DMQ35	DQC50M - 7	DMQ80	DMQ140	DMQ170
CATEGORY						
Operation Weight	Kg	53	65	95	127	229
Length (L)	mm	475	585	618	865	908
Height (H)	mm	263	287	325	393	496
Width (W)	mm	243	282	326	409	481
Width #1 (W1)	mm	136	165	195	260	308
Width #2 (W2)	mm	133	163	191	256	304
Installation distance (C)	mm	169~228	255~295	275~360	351~443	385~450
Diameter (D)	mm	40	45	55	65	70
Height between pins (H1)	mm	170	175	200	240	300
Pressure	Kg/cm <sup>2</sup>	40~210	40~210	40~210	40~320	40~320
Capacity	/min	10~20	10~20	10~20	10~20	10~20
Excavator model		R35 - 7	EC55 R555W - 7 R555 - 7K	R80 - 7	R130W R130W - 3 R130LC - 3 R1400LC - 7 R1400W - 7	R170W - 3 R170W - 7 R180LC - 3 R180LC - 7

MODEL		DMQ230	DMQ290	DMQ360	DMQ450	DMQ500
CATEGORY						
Operation Weight	Kg	257	376	530	575	580
Length (L)	mm	971	1086	1165	1198	1192
Height (H)	mm	488	544	582	592	587
Width (W)	mm	505	570	625	625	625
Width #1 (W1)	mm	332	400	432	432	432
Width #2 (W2)	mm	328	397	428	428	428
Installation distance (C)	mm	440~500	510~530	540~560	570~580	570~580
Diameter (D)	mm	80	90	100	100	120
Height between pins (H1)	mm	295	330	340	340	340
Pressure	Kg/cm <sup>2</sup>	40~320	40~350	40~350	40~350	40~350
Capacity	/min	10~20	10~20	10~20	10~20	10~20
Excavator model			R290LC - 7 R250LC - 7 R3000LC - 7	R3200LC - 7 R350 R360LC - 3 R360LC - 7	R450LC - 7	R500LC - 7

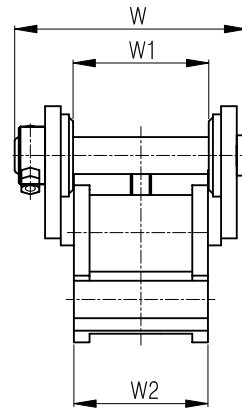
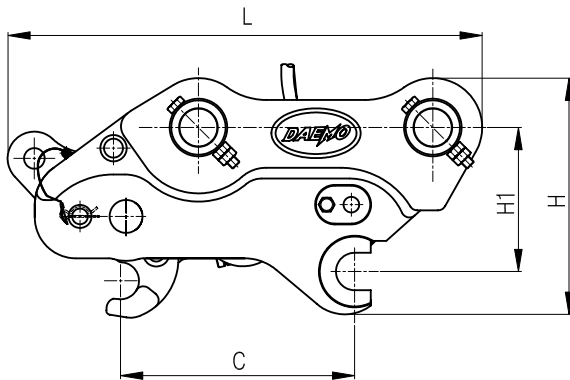
- 1) Above weight are including bracket pin.
- 2) Above contents can be changed without any advanced notice to upgrade the quality level.

## 2.2 SPECIFICATION &amp; APPLY EQUIPMENT(Australia, New Zealand)

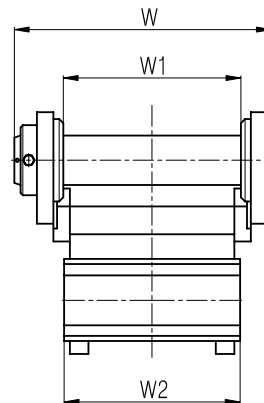
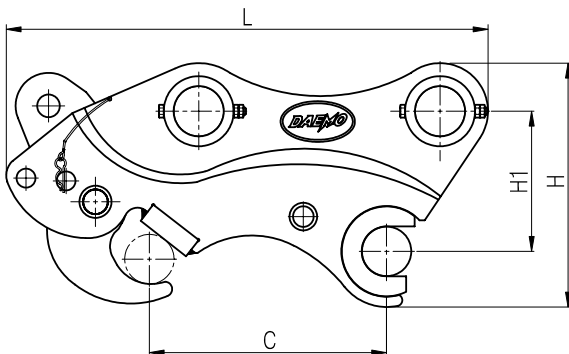
DMQ35, DMQ80, DMQ140, DMQ170, DMQ230



DQC50M-7



DMQ290, DMQ360, DMQ450, DMQ500



## 2

## SPECIFICATION &amp; APPLY EQUIPMENT

## 1) HYDRAULIC QUICK COUPLER SPECIFICATION (AUSTRALIA, NEW ZEALAND)

MODEL		DMQ35	DQC50M - 7	DMQ80	DMQ140	DMQ170
CATEGORY						
Operation Weight	Kg	53	65	95	127	229
Length (L)	mm	455	577	590	811	872
Height (H)	mm	263	287	325	393	496
Width (W)	mm	243	282	326	409	481
Width #1 (W1)	mm	136	165	195	260	308
Width #2 (W2)	mm	133	163	191	256	304
Installation distance (C)	mm	169~228	255~295	275~360	351~443	385~450
Diameter (D)	mm	40	45	55	65	70
Height between pins (H1)	mm	170	175	200	240	300
Pressure	Kg/cm <sup>2</sup>	40~210	40~210	40~210	40~320	40~320
Capacity	/min	10~20	10~20	10~20	10~20	10~20
Excavator model		R35 - 7	EC55 R555W - 7 R555 - 7K	R80 - 7	R130W R130W - 3 R130LC - 3 R1400LC - 7 R1400W - 7	R170W - 3 R170W - 7 R180LC - 3 R180LC - 7

MODEL		DMQ230	DMQ290	DMQ360	DMQ450	DMQ500
CATEGORY						
Operation Weight	Kg	257	376	530	575	580
Length (L)	mm	924	1082	1145	1178	1172
Height (H)	mm	488	544	582	592	587
Width (W)	mm	505	570	625	625	625
Width #1 (W1)	mm	332	400	432	432	432
Width #2 (W2)	mm	328	397	428	428	428
Installation distance (C)	mm	440~500	510~530	540~560	570~580	570~580
Diameter (D)	mm	80	90	100	100	120
Height between pins (H1)	mm	295	330	340	340	340
Pressure	Kg/cm <sup>2</sup>	40~320	40~350	40~350	40~350	40~350
Capacity	/min	10~20	10~20	10~20	10~20	10~20
Excavator model		R200W - 7 R210LC - 7 R225LC - 7 R2200LC - 7	R290LC - 7 R250LC - 7 R3000LC - 7	R3200LC - 7 R350 R360LC - 3 R360LC - 7	R450LC - 7	R500LC - 7

- 1) Above weight are including bracket pin.
- 2) Above contents can be changed without any advanced notice to upgrade the quality level.

### 3.1 GENERAL INFORMATION



#### CAUTION

Do not touch excavator's arm, link or quick coupler's pin hole during the alignment of excavator's pin hole.

Must insert the safety pin after the connecting quick coupler.

#### 1) Hydraulic Quick Coupler

Before the daily operation, please carefully review the information shown below. During the operation, quick coupler is recommended to position on flat ground surface and operator is recommended to wear proper working uniform. In order to prevent any unexpected hazards, operator is recommended to inspect the quick coupler periodically.

##### A. HITCH & HOOK

Function of hitch & hook is to tighten the attachment's pin.

##### B. CYLINDER

Install and release of the pin is done by spinning the hitch through hydraulic coming from excavator when the switch is turned on. Please make sure to prevent any movement of attachment during the operation.

##### C. SAFETY BAR

Fixed with hitch and connected with safety pin to prevent falling apart.

##### D. SAFETY VALVE

Safety valve is installed in the cylinder to prevent cylinder from moving in reverse direction and also prevent attachments from dispatching from the arm during the operation.

##### E. SAFETY PIN



Safety pin must be installed during the operation.

##### F. BRACKET PIN, CYLINDER PIN, HITCH PIN, FRAME PIN

Function of bracket pin, cylinder pin, hitch pin, frame pin is to connect various spinning parts of the quick coupler.



## 2) IMPORTANT OPERATIONAL SIGNS

No.	Referent	Image content	Image example
1	Recommendation for applying proper service.	Engineering manual	
2	Adhere the grease using grease gun periodically.	Grease gun	

## 3) Safety Information

**Read and understand the manual and safety information before the operation and installation of the machine. Especially pay attention to OPERATION GUIDE TO SAFETY LOCK SYSTEM. Below procedures should be follow before the start of daily operation.**

Inspect the body damage, connecting hose, loose parts, cracks and other noticed changes to the quick coupler.

Hitch cylinder of Quick coupler has to be located on backward when the lock hook is fastened on bucket (attachment) arm pin after fasten it. Please let hitch cylinder forward fasten after the bucket(attachment) is fully folded up toward cabin to prevent releasing.

Very important to inspect that hitch is lock onto the pin tightly when installing the quick coupler and also need to inspect any possible crack on the arm of excavator.

Once the installation is completed, insert the safety pin tightly to prevent the cylinder from moving in reverse direction, which will allow the attachment to fall.

Operation must be stop when there is any movement or vibration of bucket or attachment and connection of the pin should be inspected.

## 4.1 INSTALLATION

### 1-1) Installation of Quick Coupler

Set excavator and quick coupler on the flat ground surface and hook from quick coupler should be connect with hitch from excavator's arm.

Slowly operate the excavator and aligned the excavator's arm and link hole with quick coupler's pin hole and then inserted the bracket pin.

Depending on excavator model, spacer and o - ring are required to be installed onto the arm & link part of excavator.

Assembled the bolt and nut.

When connecting the hydraulic hose, have to make sure that the “install” and “release” line is not mixed up with one another. From the excavator driver’s point of view the right side is “install” and the left is “release”. **For the DQC50M - 7, from the driver’s point of view, the right side is “release” and left is “install”.**

The hose must not be twisted or bent. Make sure to prevent any dirt, dust, or any impurities from entering the hose at all times. It may cause damage to the machine.

Operate the switch repeatedly to make sure that quick coupler's hitch is operating properly.

If all pre - installation is completed then please inspect following before installing the attachment.

- Interference between excavator and quick coupler

- Twisted hoses

- Noise coming from quick coupler

- Leakage between cylinder and connected hose

- Connection of each bolt and pin

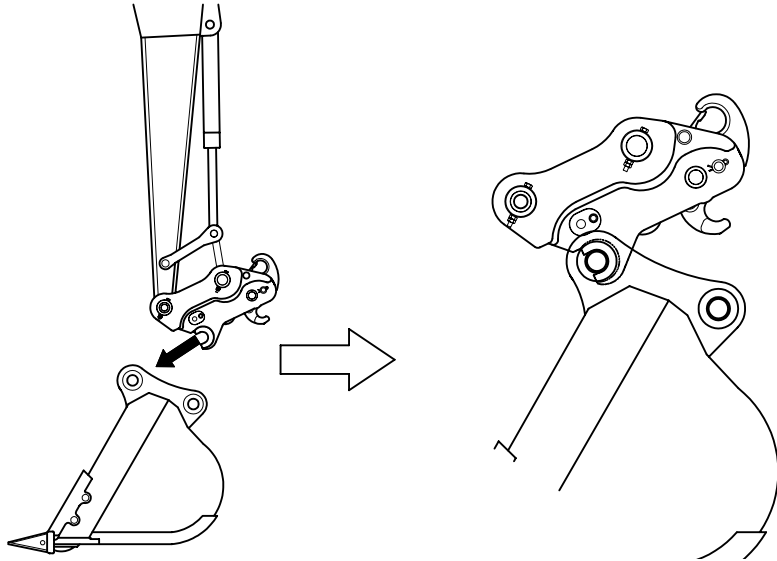
- Inspect deformation & cracks

- Connection of bracket pin

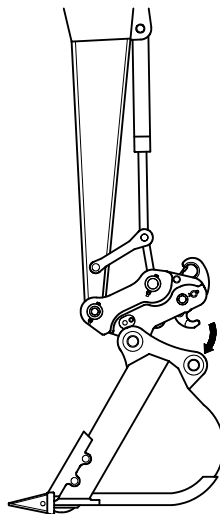
- SNAP RING connection (hitch, frame pin)

## 1-2) Installation Instructions

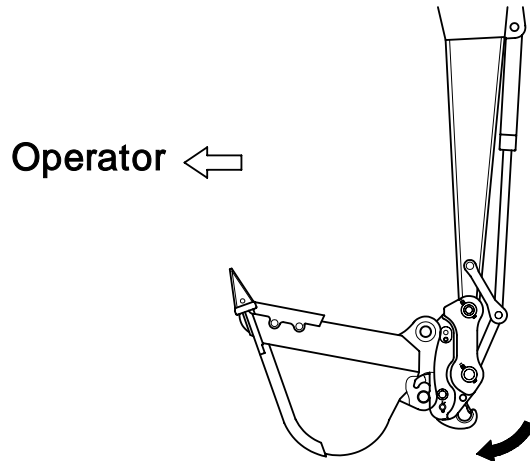
- (1) Operate the switch to “Release” position and the Quick Coupler will start to work.
- (2) Connect quick coupler hook to the bucket pin of arm side.



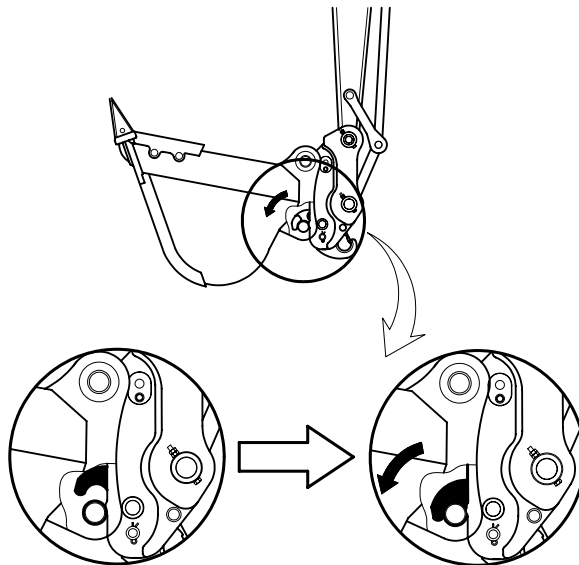
- (3) Slowly move the link portion of the Quick Coupler towards the bucket pin to connect.



- (4) The operator must fold the bucket inward toward the excavator cabin to the maximum. (As shown in picture below)



- (5) Operate the switch to "Install" position and point the hitch towards the pin of the link side.



- (6) Operate the hitch forward to completed the installation.  
(7) Once the installation is completed, locked with safety pin.

**WARNING**

Important message to know before operating the quick coupler. Make sure to insert the SAFETY PIN before the operation.

**Safety pin - to - pin distance can be installed to the excavator as listed below.**

**DMQ35**

Applicable distance between pins : 169 ~ 228mm, Applicable distance between pins for SAFETY PIN : 200mm.

Compatible excavator : R35 - 7

**DQC50M - 7**

Applicable distance between pins : 255 ~ 295mm, Applicable distance between pins for SAFETY PIN : 285mm.

Compatible excavator : R555 - 7

**DMQ80**

Applicable distance between pins : 275 ~ 360mm, Applicable distance between pins for SAFETY PIN : 275mm.

Compatible excavator : R80 - 7

**DMQ140**

Applicable distance between pins : 351 ~ 443mm, Applicable distance between pins for SAFETY PIN : 390mm.

Compatible excavator : R130W, R130W - 3, R130LC - 3, R1400LC - 7, R1400W - 7

**DMQ170**

Applicable distance between pins : 385 ~ 450mm, Applicable distance between pins for SAFETY PIN : 410mm.

Compatible excavator : R170W - 3, R170W - 7, R180LC - 3, R180LC - 7

**DMQ230**

Applicable distance between pins : 440 ~ 500mm, Applicable distance between pins for SAFETY PIN : 460mm.

Compatible excavator : R210LC - 7, R200W - 7, R225LC - 7

**DMQ290**

Applicable distance between pins : 510 ~ 530mm, Applicable distance between pins for SAFETY PIN : 510mm.

Compatible excavator : R290LC - 7

**DMQ360**

Applicable distance between pins : 540 ~ 560mm, Applicable distance between pins for SAFETY PIN : 550mm.

Compatible excavator for SAFETY PIN : R360LC - 3, R3600LC - 7

**DMQ450**

Applicable distance between pins : 570 ~ 580mm, Applicable distance between pins for SAFETY PIN : 577mm.

Compatible excavator for SAFETY PIN : R450LC - 7

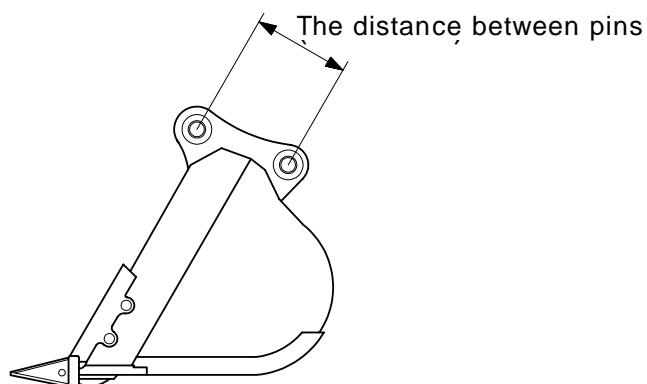
**DMQ500**

Applicable distance between pins : 570 ~ 580mm, Applicable distance between pins for SAFETY PIN : 577mm.

Compatible excavator for SAFETY PIN : R500LC - 7

**\* Notice : The distance between pins is same as the distance between holes of the bracket pin in each attachments**

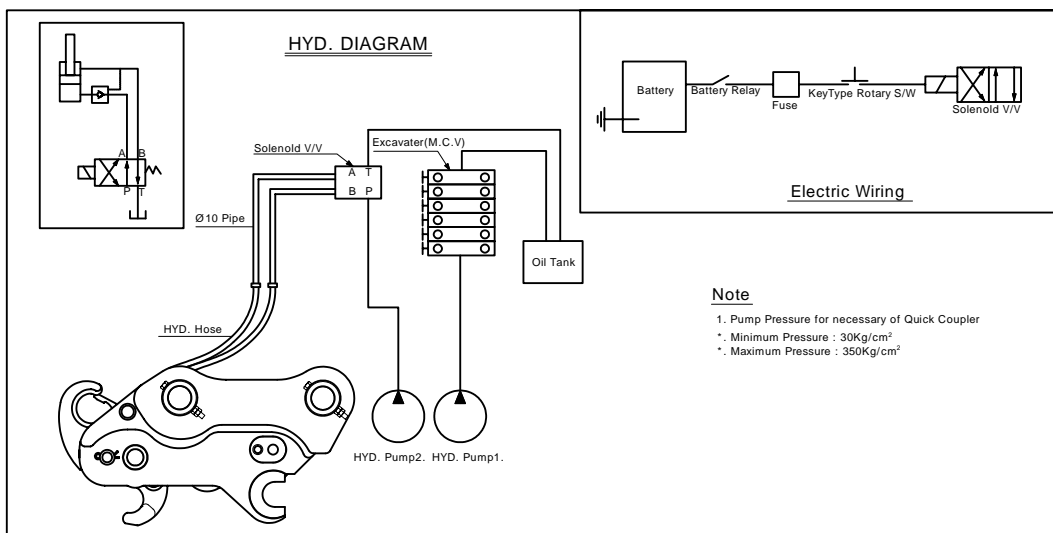
\* The distance between pins

**2) Piping Installation**

- a. Improper installation of piping may caused short life span of the excavator, therefore please refer to service center for installation of the piping.

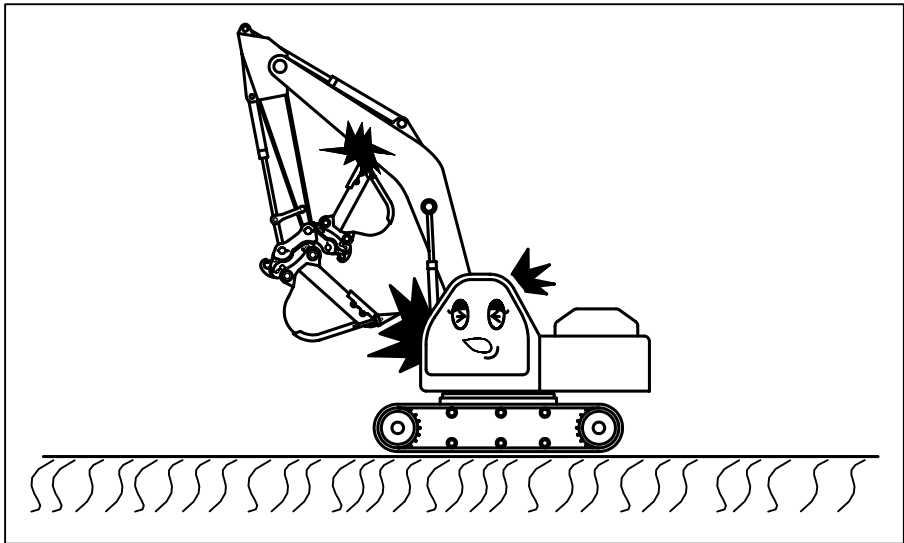
- b. Pipe, hose, solenoid valve & other parts must be able to resist the maximum pressure allowed by the pump. Strongly recommended to use the original parts offered by the manufacturer.
- c. Any dust and impurities in the hose should be clean at all time for proper maintenance.
- d. Supply line of quick coupler must be connected to the excavator pump that is above the minimum pressure allowed to operated the quick coupler.
- e. Direction of the piping is decided based from the driver's side of the excavator, right side is "install" and the left side is "release". For DQC50M - 7, view from the driver's side, right is "release" and the left side is "install". For example, if the hose is installed in reverse direction, then the operating switch of the Quick Coupler automatically becomes reverse therefore a detailed attention is required before operating.
- f. Operating voltage of solenoid valve has to be same as excavator battery voltage. Careful with +/- connection of the wires, in general negative (-) side is connect to the body part of the excavator.
- g. Switch wire must be connected with battery relay from the excavator. Direct connection from the battery may cause damage to the parts and machine.

#### HYD. DIAGRAM

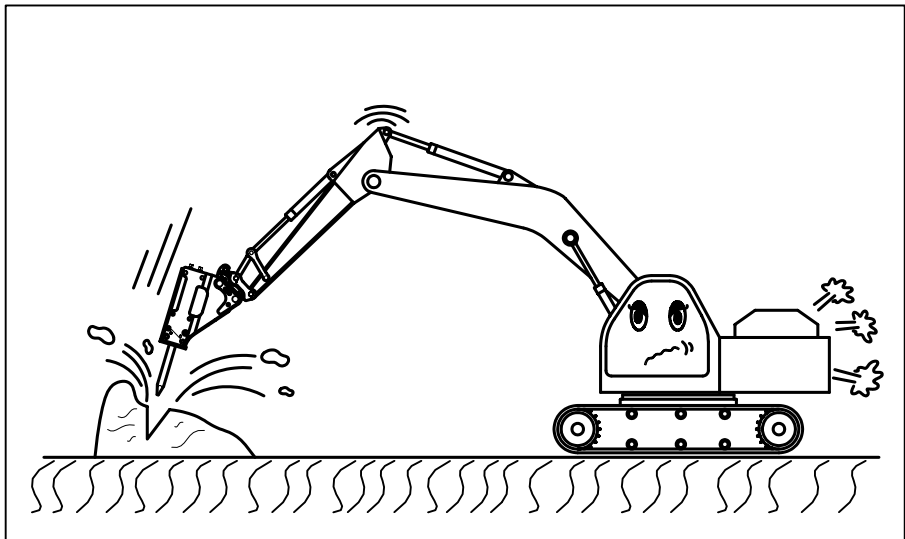


### 5.1 Important reminders during the operation

- 1) Once the quick coupler is installed, operating (spinning) distance increases, therefore be careful with operating the bucket or attachment to prevent any collision with the crane.

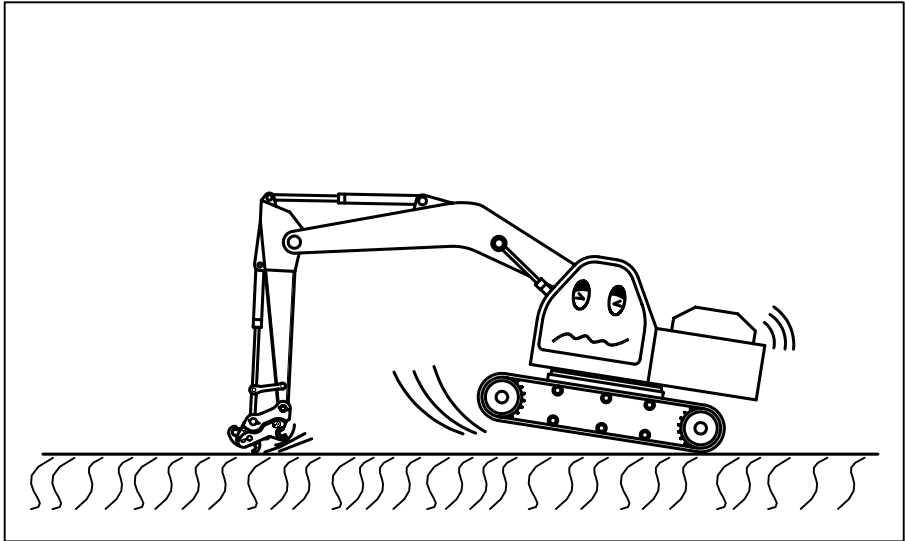


- 2) Overload operation may caused the short life span of quick coupler, attachment and crane.

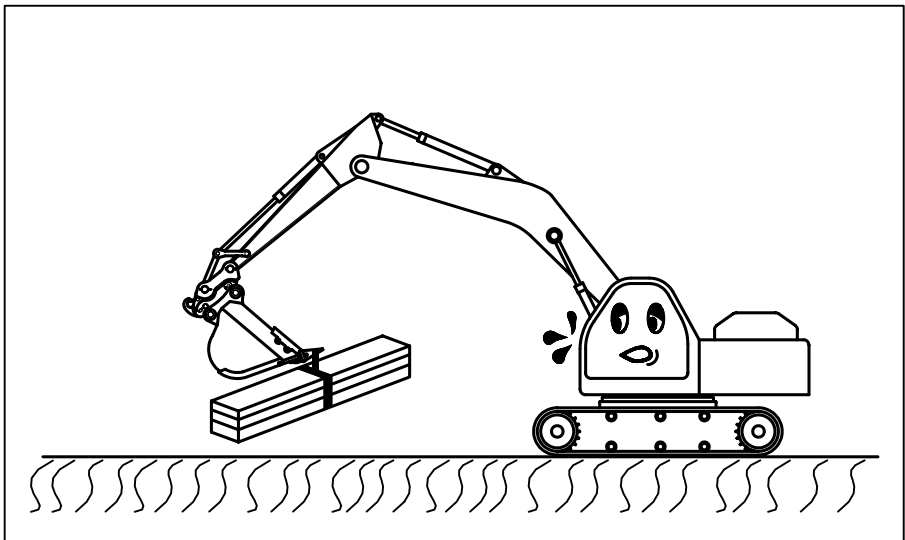




- 3) Quick coupler may not be operated without the installation of bucket or attachment.

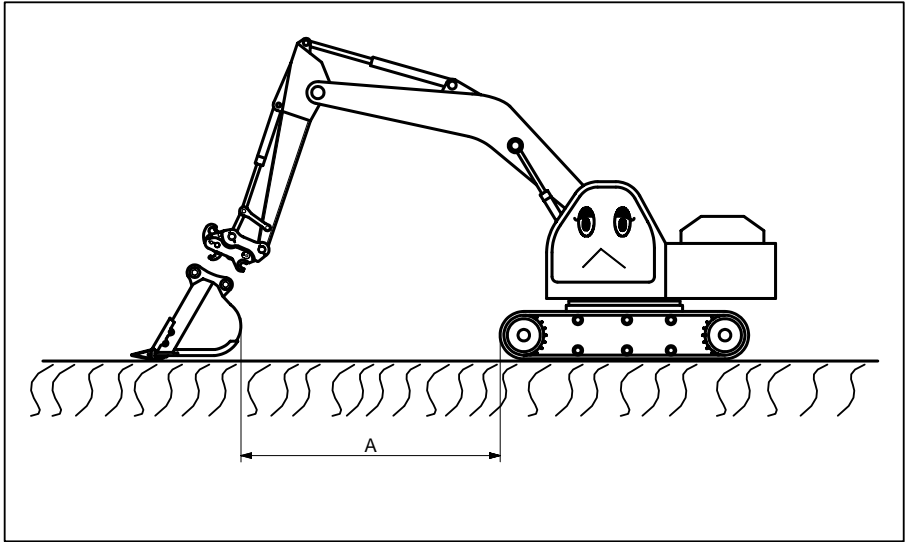


- 4) Lifting of heavy object through quick coupler is very dangerous and may cause the short life span of quick coupler.



**5****NOTICE ISSUES DURING THE OPERATION**

- 5) Often find that operating the bucket and attachment in reverse direction, quick coupler is not installed properly. Please make sure to maintain the distance "A" to provide enough angle for hook to enter.



- 6) You must install the safety pin before starting operations, for your safety it is essential to obey this rule. If you do not obey this rule, we will not be held responsible if a problem occurs.



## WARNING

For maximum life span and efficient operation of the quick coupler, periodic inspection is required.

Following are inspection and maintenance information.

### 6.1 Inspection & Maintenance

- (1) Please keep hands away from the moving parts or inner body part during the operation of quick coupler. It may caused a serious injury.
  - (2) Moisture or impurities must be kept away during the cleaning or assembly of cylinder.
  - (3) When replacing or installing parts, we strongly recommend using genuine Daemo parts. When not using genuine Daemo parts, we will not be responsible for any problems that may occur.
  - (4) Before operation, any dirt or dust from the quick coupler must be clean. Apply grease every fifth time that part is changed and it must be apply 3 times per each part.
    - \* Apply grease onto the hitch part twice a day.
  - (5) It is easy for cylinder rod and pin to be adhere, therefore must be clean after using. Manufacturer is not responsible and reliable with any cylinder problem caused due to not following the instructions.
- 1) Important issue on repair inspection
- (1) Cylinder : Inspection must be done every 120hours, to check for any potential problem with the cylinder
  - (2) Piping : Piping is required to connect Quick Coupler to the excavator. Must be inspected every 120 working hours for any leakage or damage to the pipe or connecting pipes.
  - (3) Bolt & Nut : Prevent possible accidents by inspecting loose bolts and nuts every 120 hours.
  - (4) Cylinder rod must be kept and maintained without any damage to prevent leakage.

## 2) Reason for break down &amp; repair method

Problem	Cause	How to fix			
Pin locker is not working (cannot separate attachment)	Disconnection of the wire that should be connected to battery	Check if one side is plus and the other side is minus, and Reconnect.			
	Disconnection of link switch	Cut off the edge of wires and reconnect.			
	Turned off switch				
	Breakdown of the link hoses	Check if the hose is working by using lever. Check if the switch is "on" and when give power to the bucket, and see if the other hose is working or not. If both two hoses are working properly, cylinder inside the link must not be working. If only one hose is working, it means solenoid valve must be caught by something. Disassemble and clean the valve, and reassemble the valve after cleaning. Be careful with O-ring when you disassemble the valve, it can be lost easily.			
				Disabled fuse connected with switch	Replace fuse. (if disconnected)
				Disorder of wire jack above solenoid valve	Open the socket and take out with a minus driver, and if the jack is burned, replace it with another one.
Attachment falls apart during operation	Wrong placed control switch	(usually turned on by driver's mistake) Turn off the switch.			
	Disconnection of switch wire	If plus wire between switch and solenoid valve is disconnected from the impact by a pipe or hammer, when the two wires become connected with the plus, disconnected by minus that link to the body, the two wires work as switch. Reminding that, check even the switch inside the driver seat and if you find it disconnected, replace the plus wire.			

## 3) Proper torque

Description	Model	Torque (Kg · m)	Remarks
Safety valve	All model	4~5	Apply exclusive tools
Connecting hose	All model	5	Apply exclusive tools
Cylinder rod cover	DMQ35	45~50	Apply exclusive tools
	DQC50M - 7		
	DMQ80	55~60	
	DMQ140		
	DMQ170	75~80	
	DMQ230		
	DMQ290	85~100	
	DMQ360		
	DMQ450		
	DMQ500		

## 4) Designated tools

Model	Tool brand	Description	Quantity	Remarks
DMQ35	Spanner	17mm	1pc/each	Connecting clamp hose
DQC50M - 7				
DMQ80				
DMQ140				
DMQ170		19mm	1pc/each	Connecting hose
DMQ230				
DMQ290		24mm	1pc/each	Connecting safety valve
DMQ360				
DMQ450				
DMQ500				

## 8.1 Repair Warranty Standard

### 1) Warranty policy

When using Daemo Engineering parts, following our manual guide. Then we will provide warranty starting from the installation date to 12 months after or 2,000 operating hours. (Cylinder seals warranty is 6 months / hose warranty is 3 months).

Expiration of warranty depends on whether 12 months or 2,000 operation hours comes first. (When the product is exported the warranty terms start from the date it is shipped, up to 18 months.

Even if the product has not been used or it hasn't been 12 months after installation, the warranty expires in 18 months, starting from the shipped date.)

### 2) Exception from the warranty policy

Even during the warranty term, following cases are excluded from free of charge warranty policy.

- a. Operational failure due to existence of impurities in oil pressure line.
- b. Operational failure due to contamination of oil pressure.
- c. Operational failure due to using non-original parts supplied by the manufacturer.
- d. Operational failure due to conversions not approved by the manufacturer.
- e. Operational failure due to not following manual instructions.
- f. Operational failure due to neglecting safety, inspection and maintenance instructions from the manual.
- g. Failure due to excess operation over the limit.
- h. Non performance related changes such as color and shape.
- i. Operational failure due to improper procedure during the transportation.
- j. Designated product code has been changed or damaged intentionally.
- k. Spare parts related to the list below where the problem is not caused by the material at fault by the manufacturer.

Various type of oil pressure seal

Various type of connecting parts

Oil pressure flange hose type

Other consumption parts

3) Warranty repair Operation

- a. Free repair covers only the products manufactured by the DAEMO Industrial Company. Any defects must be notified to the manufacturer within 15 days from the date the problem occurred and within 12 months of installation or 2,000 operating hours. Also any complaint must be registered by either person or in writing and required part will be send after the payment has been made.
- b. Manufacturer is required to receive defects for further evaluation, if for some reason the defected part will not be collected then consumer or sales office may be asked to provide photo or other documents.
- c. Free repair only covers the replacement of parts and not included transportation and other costs involving the compensation.
- d. Free repair must be done by manufacturer's employee or designated sales office. Only the hours worked on will be counted as actual hours spent. Calculation of working hours and labor cost is based on manufacturer's standard rate.
- e. Transportation o replacement (free repair) is based on standard inland trucking and ocean by vessel, other special transportation method such as express parcel or air freight must be approved by the manufacturer in advance. After the replacement has been shipped, the manufacturer is not responsible for any labor cost.

4) Warranty succession

If the change in ownership occurs within the warranty period then the remaining warranty may be transferred to the new owner.

DAEMO ENGINEERING CO., LTD

President. WON HAE, LEE

## 9-1 Installation test and verification of completed training

Installation test and verification of completed training						
Document issue number :						
Item			Suitable equipment (Excavator)		The result of after installation	Instructor
Product Name	Serial No.	Quantity	Model	Serial No.		
<b>Basic check point</b>						
1. Safety pin combine or not					Special mention :	
2. Cylinder oil leakage						
3. State of cylinder rod forward, backward						
4. Hose twisted or bent						
5. Safety valve performance						
6. Fixed hook and capacity of combined hitch						
Notice attachment during operation						

I have undertaken with no objection about the result of installation test as above stated. And confirmed that I have been educated in handling of installed goods as well as education of contents about the manual of management and maintenance from daemo engineering's institutor.

Year

Month

Day

Inspector :

Department :

Position :

ID number:

Name:

(Sign)





## 9-2 A/S Reports

A/S SHEET									
Document issue number :									
Date :		Section :			Position :		Name :		
Customer information	Date of receipt		Description of goods	Purchase model name					
	Customer name			SERIAL No.					
	Contact Point			Date of purchase (installation)					
	Area			Installation equipment name					
<b>Customer complain receipt and Measure contents</b>									
1. Customer complain and requirement (Mark "0") Out of control/ damage/ Hydraulic problem/ etc				Cause of trouble					
2. Customer complain detail									
3. Customer request date to repair : . . . . .									
Measure contents				A/S Response					
Measure completed date : . . . . .									
<b>Requirement Parts Handling expense</b>									
No.	Part Name	Part No.	Description	Q'ty	Unit cost	Amount	Charge	Free of charge	Remark
Total (A)									
<b>Handling expense and customer confirmation</b>									
Travel time	Hr	Travel Cost (B)	\$	Shipment and freight (D)				\$	
Operation time	Hr	Operation cost(C)	\$	Oversea business trip cost and ETC (E)				\$	
Total cost (E) (E=A+B+C+D+E)		\$		Customer confirmation		Client :			
						Position :			
						Name : (Sign)			



