

# **Smart Construction 3D Machine Guidance Dredging Add-on Kit Installation Manual (20t STD Arm)**

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# Before reading this manual



## ● Introduction

- This manual describes an optional kit that allows a machine already equipped with the Smart Construction 3D Machine Guidance Kit to dredge. Note that this optional kit alone does not fulfill the original function of the Retrofit Kit.
- For the installation precautions and installation procedure of the Smart Construction 3D Machine Guidance Kit, refer to the separate document (Smart Construction Retrofit Kit Installation Manual).
- Since this add-on kit is compatible with all models in 20t class, this manual provides only installation dimensions that must be observed. Install the kit on your model according to the reference images. Read this manual and check the machine conditions beforehand to see if this kit is installable.
- The existing harness of the Smart Construction 3D Machine Guidance Kit is damaged if submerged in water. Be sure to take caution during dredging operation.

## ● Items required for kit installation

- Prepare a new bucket link that is suitable for a shovel on which you install this kit.  
\* Installation is possible by modifying and reusing the existing bracket, instead of using a new bucket link. However, it is recommended to carefully remove the existing bracket so that additional sheets can be attached.

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# 01

## Chapter

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### Existing part removal and replacement

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- 1-1 Bucket IMU/harness removal and arm harness partial removal
- 1-2 Bucket link replacement

# 1-1 Bucket IMU/harness removal and arm harness partial removal

- (1) Remove the existing IMU, which was mounted on the bucket link during the installation of the Smart Construction 3D Machine Guidance Kit.



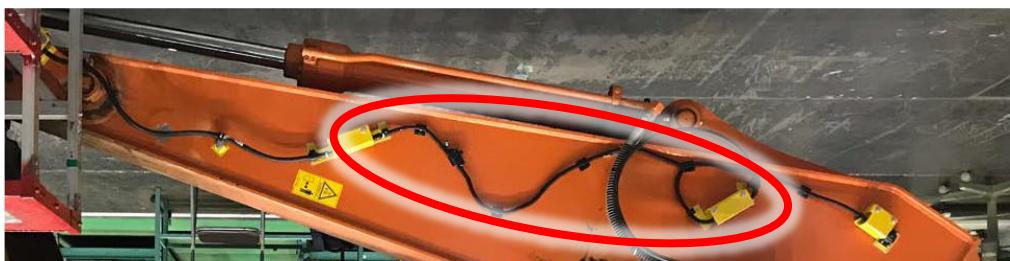
\* Reuse the removed one bucket IMU, four IMU mounting bolts (01252-A0516), and four washers (10601-20513).

- (2) Remove the existing bucket harness, which was mounted on the bucket IMU during the installation of the Smart Construction 3D Machine Guidance Kit.



\* Reuse the removed sheets and bolts (some of them) for fixing the harness. Regarding clips and cushions, use the ones supplied with this kit (See Chapter 2).

- (3) Partially remove the existing arm harness, which was mounted on the arm IMU during the installation of the Smart Construction 3D Machine Guidance Kit.



# 1-2 Bucket link replacement

- (1) Replace the existing bucket link, on which the bracket of the Smart Construction 3D Machine Guidance has been mounted, with a new one.



\* Prepare a new bucket link appropriate for your model and use it for replacement. The above image is from ZX200-6.  
You can modify and reuse the existing bucket link, instead of using a new one. However, it is recommended to carefully remove the existing bucket link so that additional sheets can be attached.

# 02

## Chapter

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### Add-on kit installation

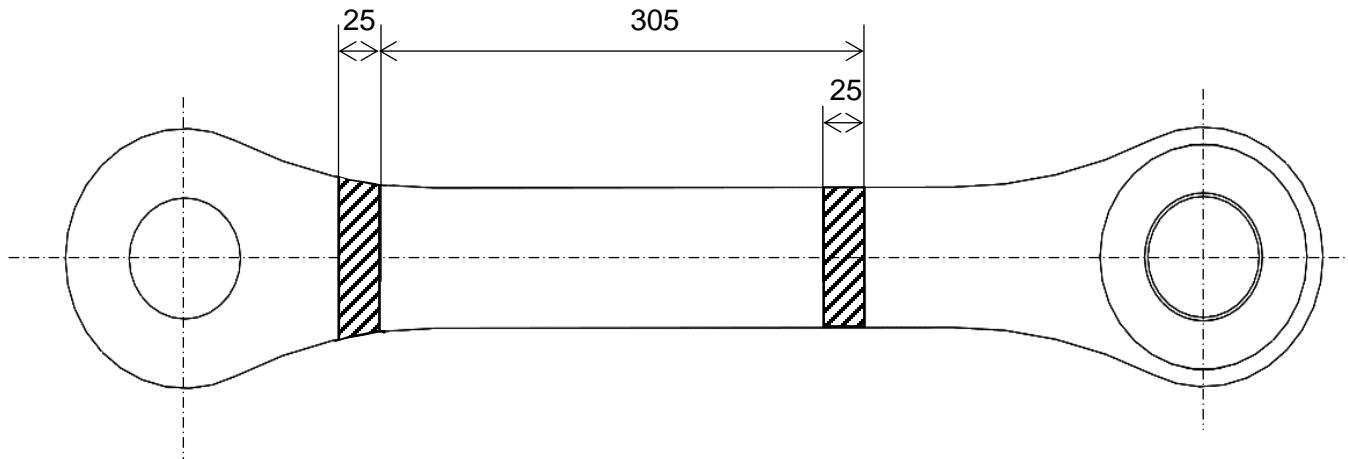
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- 2-1 Bucket link welding modification
- 2-2 Dredging box sub-assembly
- 2-3 Bucket harness and arm harness rerouting

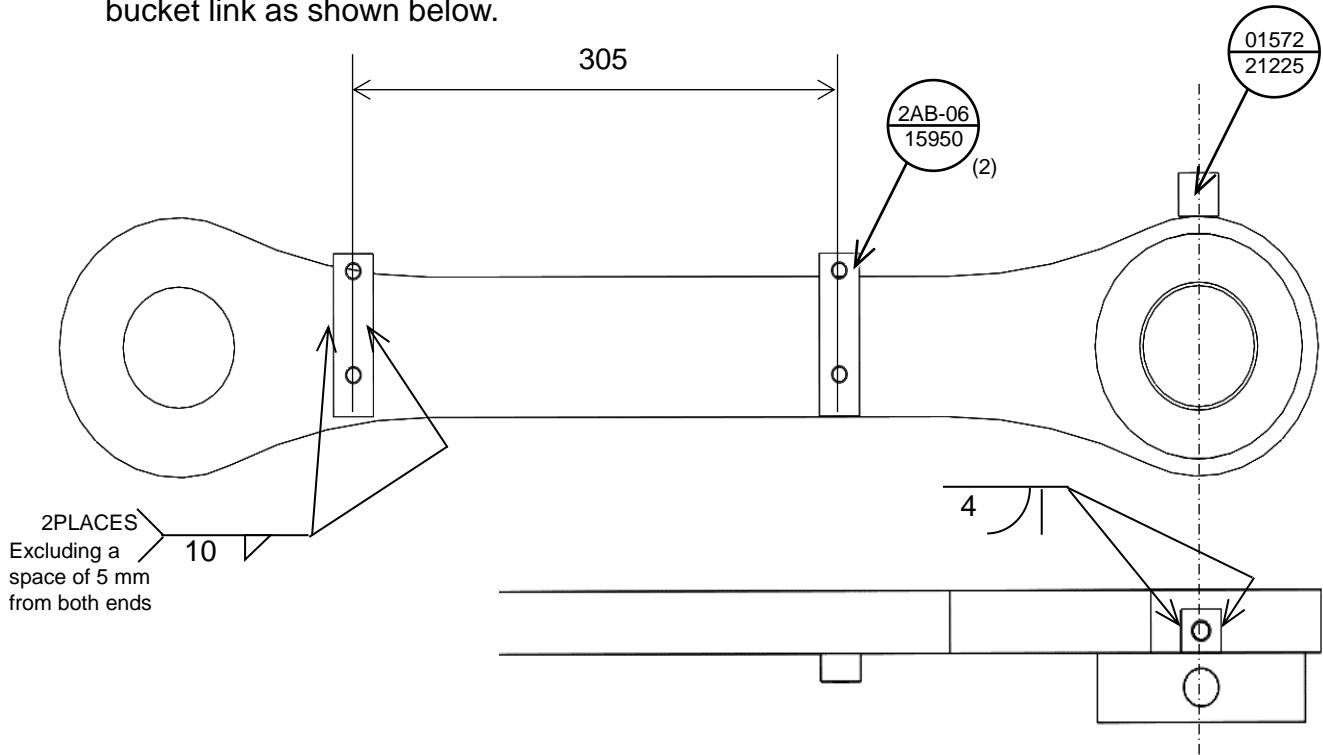
## 2-1 Bucket link welding modification



- (1) To add two sheets (2AB-06-15950) to the new bucket link, remove the paint.



- (2) Add the two sheets (2AB-06-15950) to the areas from which the paint was removed. While preventing interference with the hose, attach the clip sheet (01572-21225) to the bucket link as shown below.

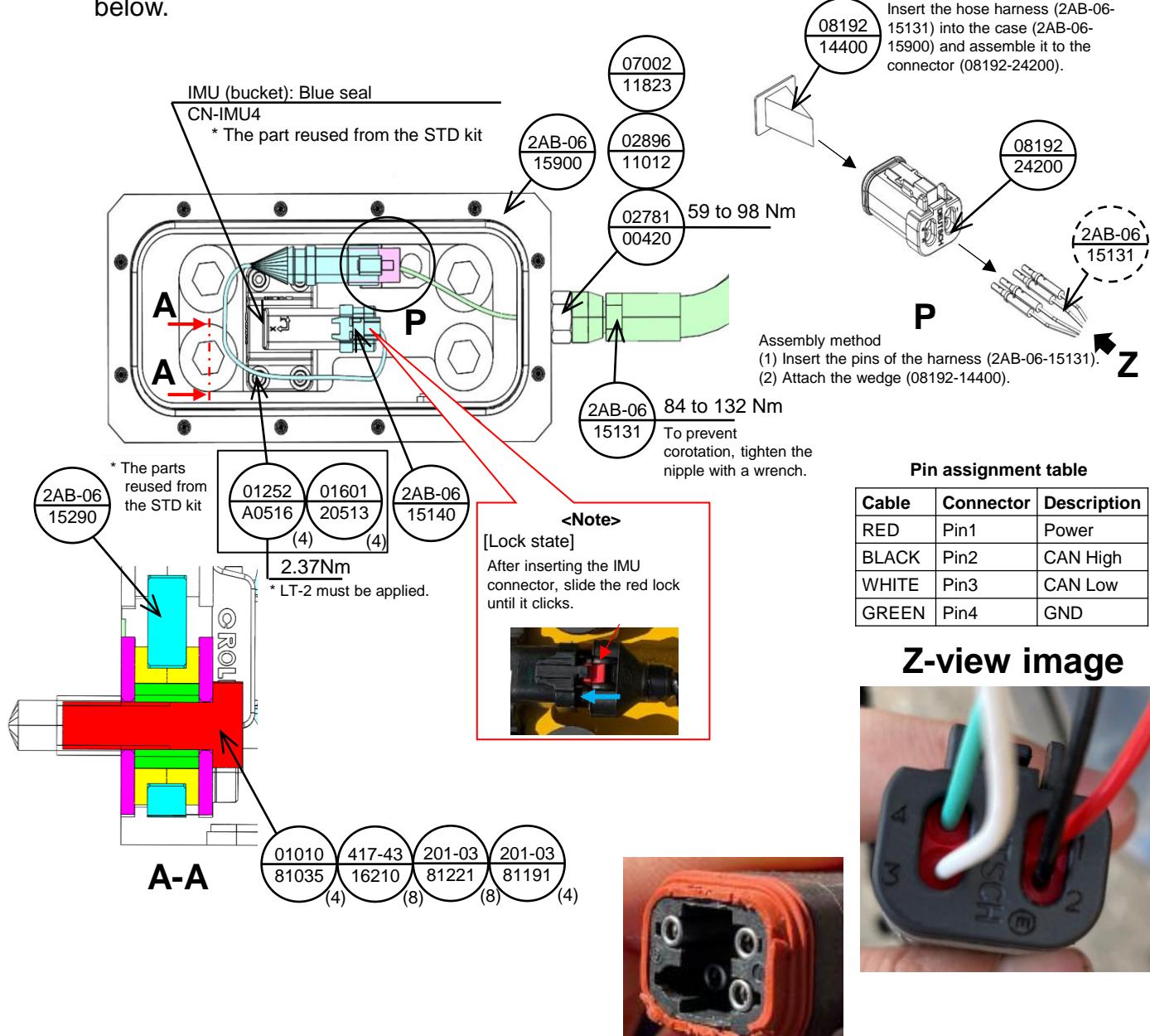


\* The above link figure is for PC200. Adjust the sheet position according to your model as necessary.

# 2-2 Dredging box sub-assembly



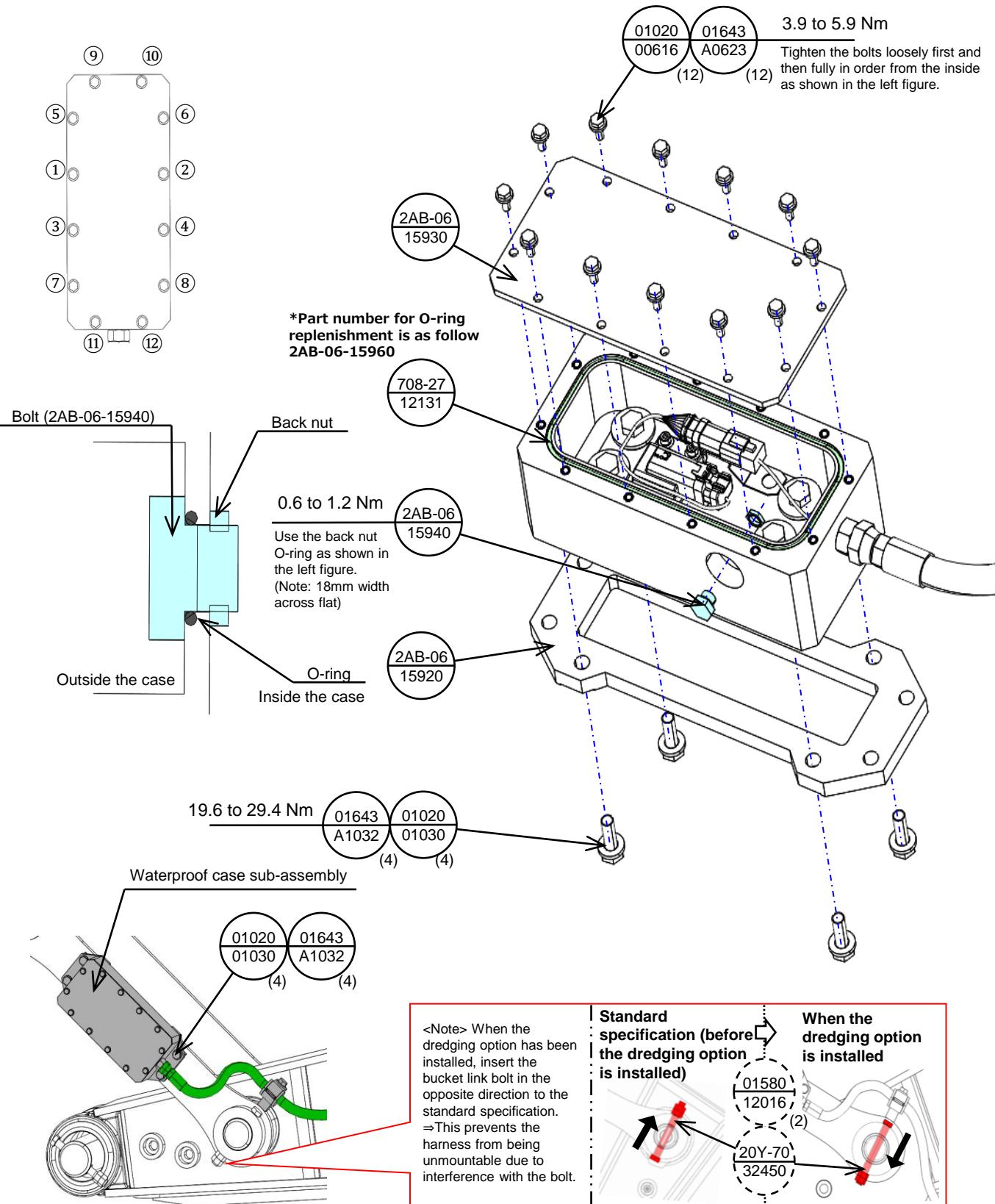
(1) Sub-assemble the box by jointing the hose harness to the protective case as shown below.



\* The pins must be inserted all the way in.

\* If you push the connecting pins into the wrong positions, remove and reinsert them correctly using an appropriate tool.

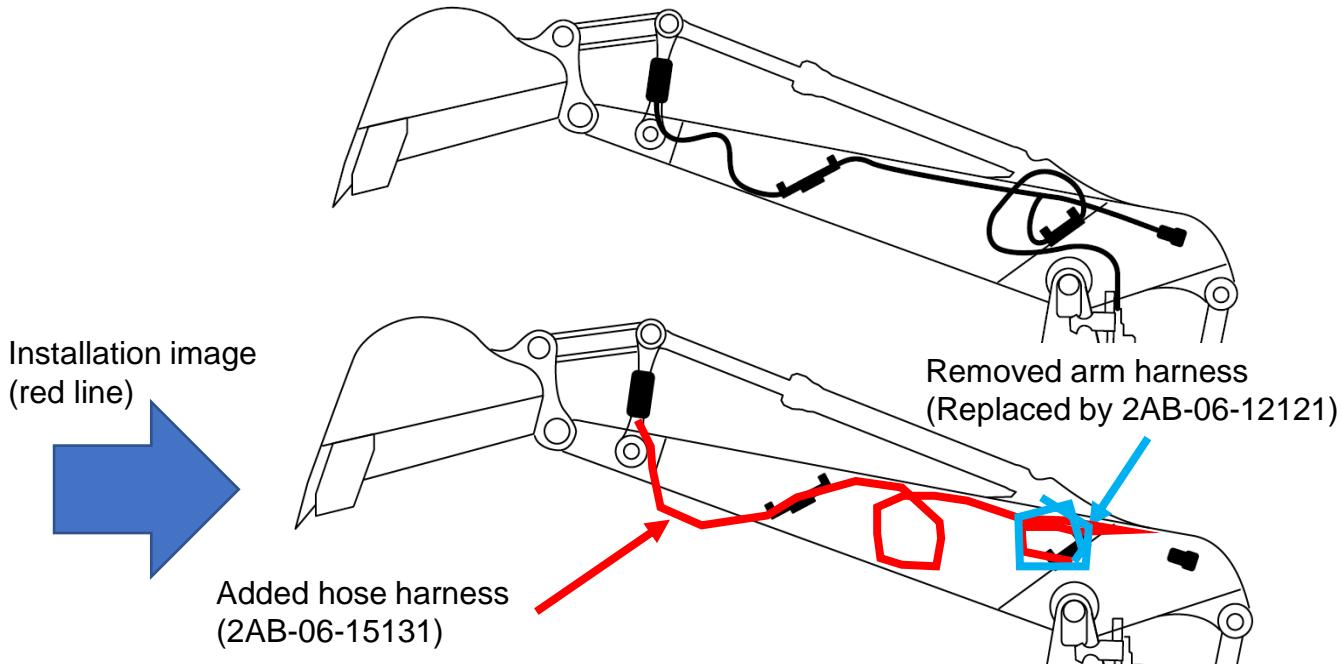
## Box sub-assembly (continued)



## 2-3 Bucket harness and arm harness rerouting



(1) Perform rerouting, such as adding a bucket hose harness and removing the arm harness, as shown below. If the harness for tilt (2AB-06-11530) is attached, remove and replace the 2AB-06-12121 terminator.

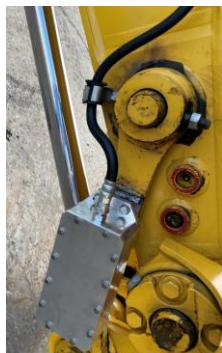


\* The above figure is for PC200. The route does not change for the bucket swing area. In other areas, however, reroute the harness according to the above and below figures. Adjust the hose length in the loop area of the added hose harness as necessary.

Entire image



Around the box



Hose harness loop area

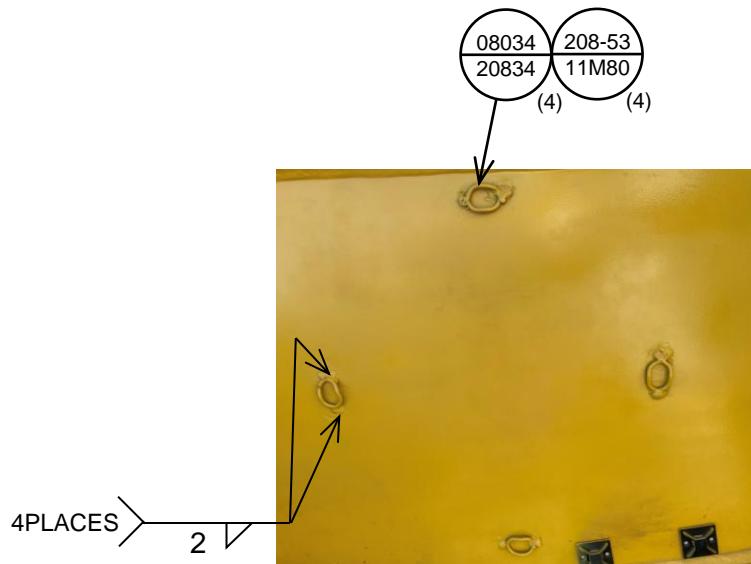


Existing harness

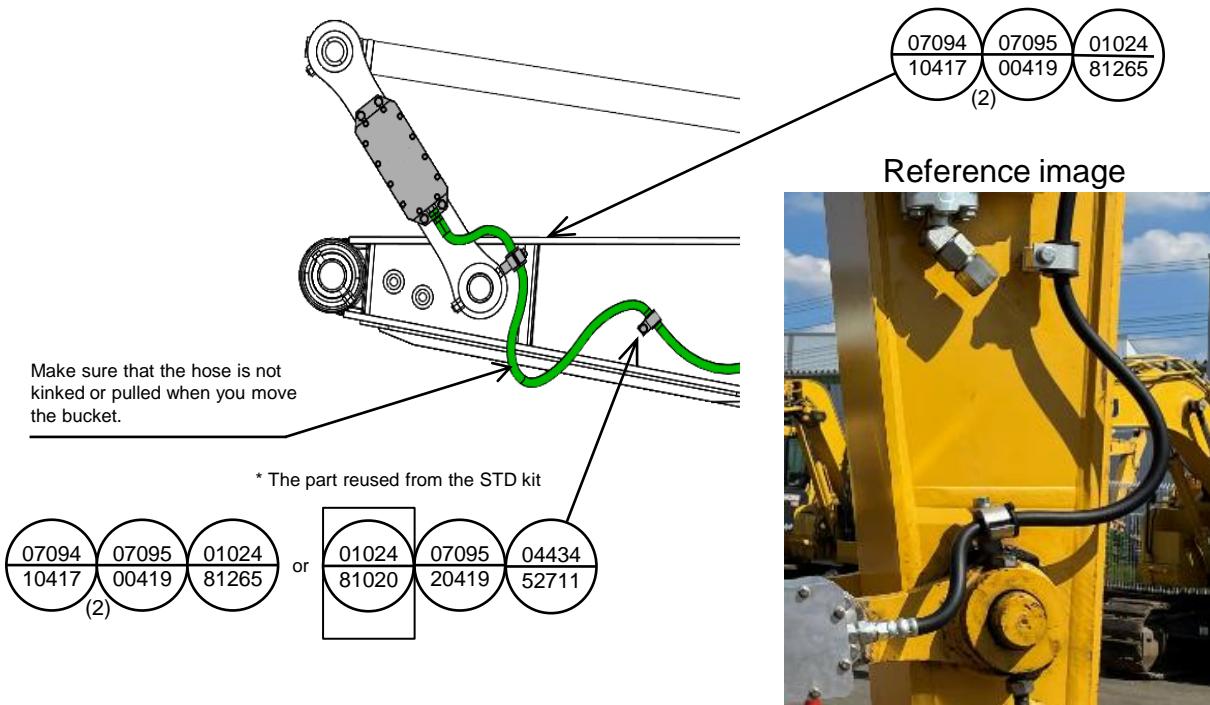


## Rerouting (continued)

(2) Weld the ring (208-53-11M80) in the loop area as shown below and reroute the hose harness using bands (08034-20834). (Below is an image of the hose harness being secured in four places.)



(3) Secure the hose harness with two clips (07094-10417) and a cushion (07095-00419), as well as the reused bolt (01024-81265) and welding sheet, as shown below. Use appropriate parts according to the bolt hole diameter in the welded sheet as necessary.



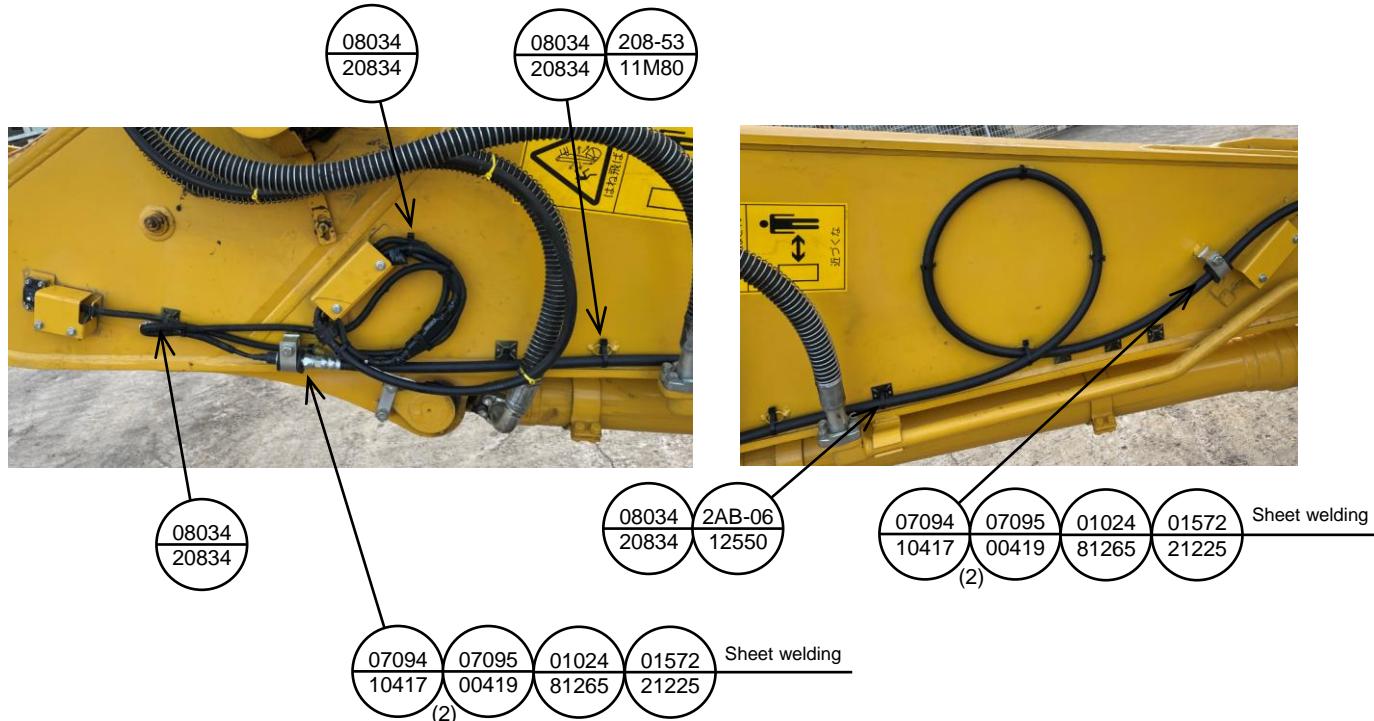
Reference image



## Rerouting (continued)

(4) Weld the sheet (01572-21225) as necessary as shown below and secure the hose harness with two clamps (07094-10417), cushion (07095-00419), and bolt (01024-81265). Use the ring (208-53-11M80) as necessary.

\* A clamp is recommended to be used for the hose metal part. Fasten it with the sticker and the band as necessary.



\* The above images show sample positions. You may use the existing stickers.

(5) Remove the existing terminator and replace it with the connector (08192-23100) with three plugs (08191-00770) attached.  
(Below is an image of the connector being wrapped with tape.)



# Contact information



- If you have any product inquiries or problems, contact us at the following link.

EARTHBRAIN Ltd.

Inquiry form page:

<https://support.smartconstruction.com/hc/requests/new>

Select the language as per your region in the top right menu of the page.