

Contents
 (A) DRE-BLK Base block
 (B) DRE-STP Stopper
 (C) DRE-DRS Disk remove tool
 (D) DRE-SPS Spacer push tool
 (E) DRE-DPS Disk push tool
 (F) DRE-EPH Electrode polishing holder

This tool kit is used in order to assemble and/or disassemble the disk replaceable electrode (DRE), assembled and disassembled. DRE-PGK (013336), DRE-GCK (013362) are not included in this kit. They are purchased separately.

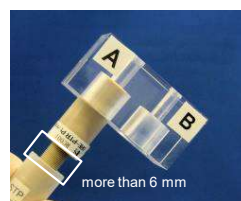
ATTENTION:

DRE assembly has the rear side with a label and front side for the electrode surface. Disk electrode and spacer also have frontal "electrode side" and back "contact side", respectively.

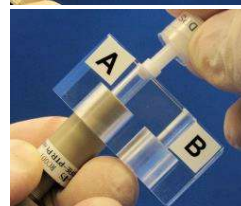
The disk has chamfering on the "contact side". The spacer has small hole ($\Phi=2.5\text{mm}$) and chamfering. So take care of these details on the time of construction. No guarantee for results coming from reversal construction.



There are two assembly methods for DRE: front assembly & rear assembly. Front assembly: the disk rod is inserted from the "electrode side", which is mainly used for the measurement with no pretreatment for disk rod. Rear assemble: The disk rod is inserted from the "contact side", which can be used for the measurement required for disk surface pretreatment (such as catalyst modification etc.).



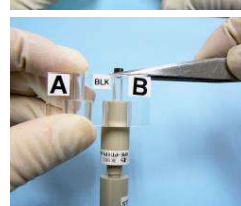
1-1. Connect DRE-STP stopper to DRE assembly (013337 or 013361) by keeping the condition in which the screw thread area is exposed more than 6mm. Insert the "electrode side" of DRE assembly into A big-hole of the DRE-BLK Base block securely.



1-2. Fit DRE-DPS Disk push tool into the DRE-SPC Teflon spacer (013339), and insert SPC to the hole A of the base block by pressing DRE-DPS in the axial direction carefully. After that, press the SPC into the DRE assembly with the DRE-SPS Spacer push tool.



1-3. Screw the DRE-STP Stopper until the edge of the SPC is flat to Pt ring surface, then insert the "electrode side" of DRE assembly to B big-hole of the BLK securely.



1-4. Insert the "contact side" of DRE disk to B small-hole of the BLK. Care about the orientation of the GCD. Press the GCD into the SPC with the DRE-DPS.



1-5. Adjust the height of the GC electrode surface by revolving the DRE-DRS Disk remove tool. Polish the assembling electrode before using. (<https://www.als-japan.com/1735.html>)

2. DRE Rear-assembly



2-1. Screw slightly the STP into the DRE-EPH electrode polishing holder. Set the EPH to A big-hole of BLK. Stick DRE-DPS into the hole of DRE-SPC spacer, and put SPC into the hole A with DRE-DPS carefully. Press the SPC into the EPH by the SPS. Then screw the STP to keep the SPC and the EPH surface in same plane.



2-2. Set the EPH to B big-hole of the BLK. Insert the GCD "contact side" to B small-hole of the BLK. Press the GCD into the SPC with the DPS. Then screw the DRS until the SPC and GCD surface are in same plane.



2-3. Polish the disk together with the DRE-EPH Electrode polishing holder linked to the DRE-STP Stopper and DRE-DRS Disk remove tool.



2-4. After polish, remove DRE-DRS firstly, then remove the GCD&SPC set from EPH by screwing the STP. Pretreat the GCD in this state. After GCD pretreatment, insert from the "electrode side" of the GCD-SPC to the "contact side" of the DRE assembly (rear assembly).



2-5. Screw the STP slowly to match the same height of GCD&SPC set to the surface of DRE assembly. If the GCD&SPC set position is higher than the PTR, you have to screw in the STP completely to remove the GCD&SPC set from the DRE assembly, and do assembling 2-4 again.

3. DRE disassembly



3-1. Screw in the STP until touching the SPC lightly and insert the DRS to the DRE assembly.



3-2. Remove the GCD by screwing the DRS.



3-3. Screw the DRS till the last to remove the SPC.

CAUTION

- In order to get the excellent RRDE measurement data, the front assembled DRE should be used for rotation speed lower than 3000 rpm, while rear assembled DRE should be used for rotation speed lower than 2000 rpm. Any applications with rotation speed exceeding above rpm range may possibly cause the unsatisfied RRDE measurement data.
- DRE-SPC Teflon spacer is consumptive material. Please replace SPC if it was distorted.
- If the surface of DRE-GCD, DRE-PTR and DRE-SPC were not in the same plane after assembling process, the RRDE measurement data would be poor.
- In a case of burr formation in Teflon spacer, please try the rear assembly method instead.

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