Retrofitting Pony Rod Seal Assemblies

The pony rod seal assemblies used in the Myers® crankcase have been updated with a newer version that greatly improves their oil sealing capability and longevity. The replacement version ① can be distinguished from the older version ③ by its thicker base and external O-ring ②. The previous seal assembly had a thin, green base with a paper oil gasket ④.

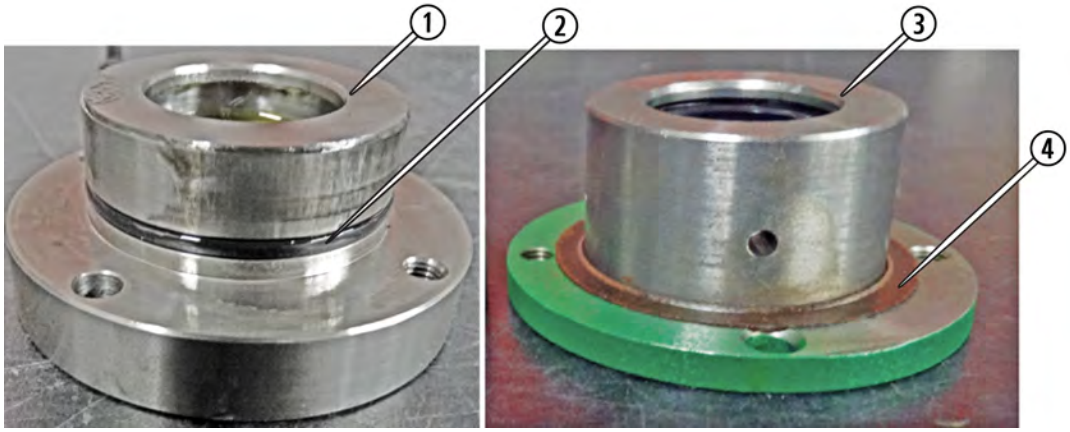


Figure 1

The Myers crankcase is used in both the OMAX®, and MAXIEM® high-pressure pumps. This document provides pony rod seal assembly replacement procedures for all Myers crankcases.

CAUTION!

It is recommended this retrofit be done in conjunction with a full crankcase overhaul and replacement of plunger assemblies. Contact OMAX Customer Service for details.

Contents

Safety

The following safety instructions must be followed when installing, operating or servicing OMAX equipment. If ignored, physical injury or death may follow, or damage may occur to the equipment. Always observe applicable safety precautions when working with this equipment.

WARNING!

Indicates the presence of life-threatening voltages. Never access areas labeled as such without first taking appropriate safety precautions: locking out power, verifying no voltage present on circuits prior to maintenance activities, etc.

WARNING!

Indicates potential health, physical and environmental hazards which, if not avoided, can result in serious damage to the product or injury or death. Always proceed using extreme caution.

MANDATORY ACTION!

Lock out power

Never do maintenance on your OMAX equipment with the main AC disconnect ON, unlocked, or with the pump in operation. Always follow standard lockout/tagout procedures.

MANDATORY ACTION!

Read the user's guide

Read your equipment's user's guide for specific operator instructions and additional safety requirements.

Replacing the Pony Rod Seal Assemblies

Replacement of the seal assemblies ① requires removal of all wet end components down to the crankcase ②. For this reason, it is recommended that replacement be done in conjunction with your routine wet end pump rebuild.

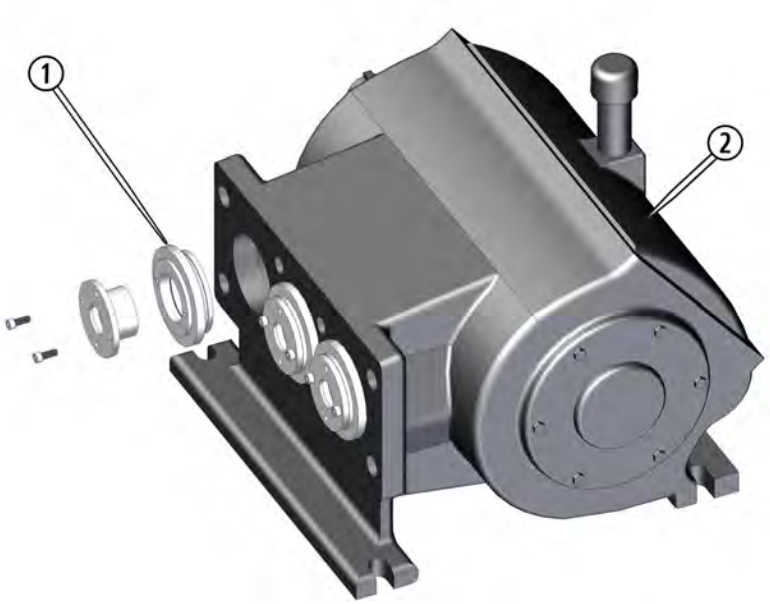


Figure 2

Additional service information for the Myers crankcase is available by contacting Myers for their C-series pump manual, Myers P/N 23833A169 (http://files.pentairliterature.com/Myers/26850A005.pdf).

Before beginning these pony rod seal assembly retrofit instructions, inventory the parts in your kit to ensure that all necessary components are available during the retrofit.

Retrofit Kit Pony Rod Seals, P/N 312499	
Cup Seal	6 ea.
O-ring , 3/32x1-5/16x1-1/2.	3 ea.
Spring, retainer housing	3 ea
Retrofit Procedure, Pony Rod Seals	1 ea.
Seal Housing	3 ea.
Screws, 10-32 x 3/4 in.	6 ea.
O-ring, 2.5 in. OD; 2-3/8 in. ID	3 ea.

Disassembling the Seal Assemblies

1. Ensure that pump, water, air, and main power are switched OFF and standard lockout/tag-out procedures are followed.
2. Drain the crankcase oil. See the pump operator's manual.
3. Remove the pump's wet end components by following the instructions provided in your pump's user's guide for doing a major or minor seal repair.

Pump User's Guides	
OMAX JetMachining Center - (EnduroMAX)	P/N 400433
MAXIEM Waterjets - (non-EnduroMAX)	P/N 400588 or 400873

4. For **EnduroMAX** pumps only: remove the high-pressure plumbing ① from the two port adapters ② and remove the two M-8 screws securing the manifold mounting bracket ③.

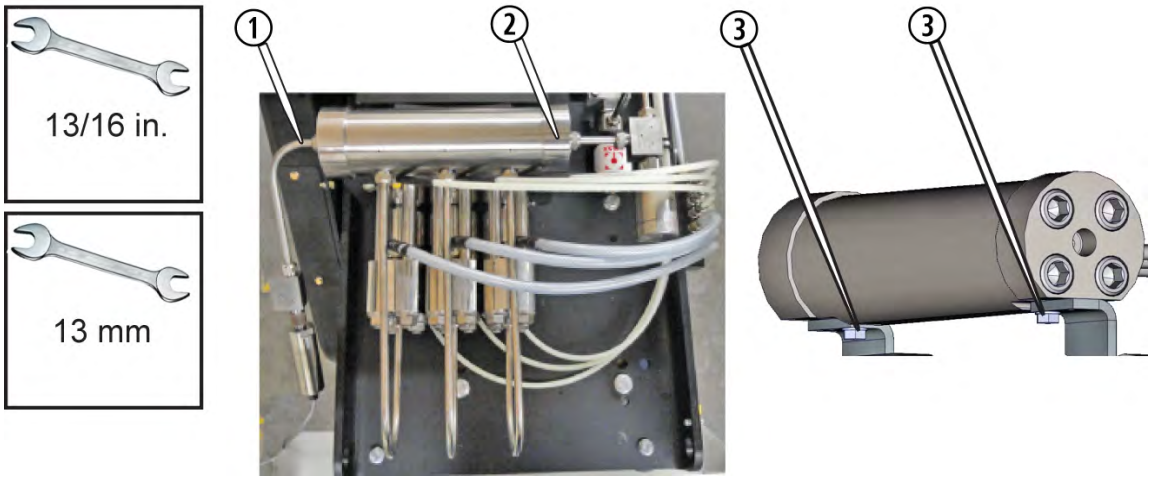


Figure 3

5. For **all pumps**: remove the plunger assemblies ① from the adapter block ② by following the instructions in your pump's user's guide.

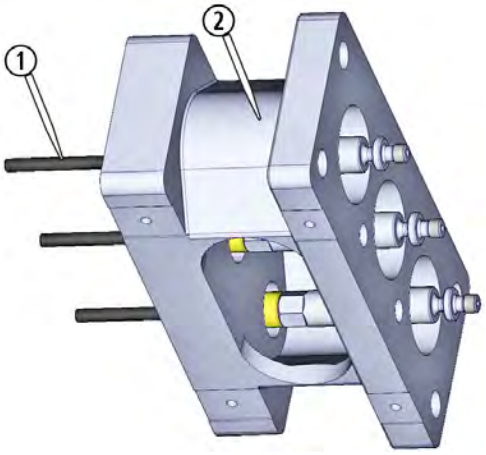


Figure 4

6. Remove and save for reassembly the four 5/8 in. bolts with nuts and washers and the four 1/2 in. bolts that attach the block adapter to the crankcase as illustrated below. Lift out the adapter block.

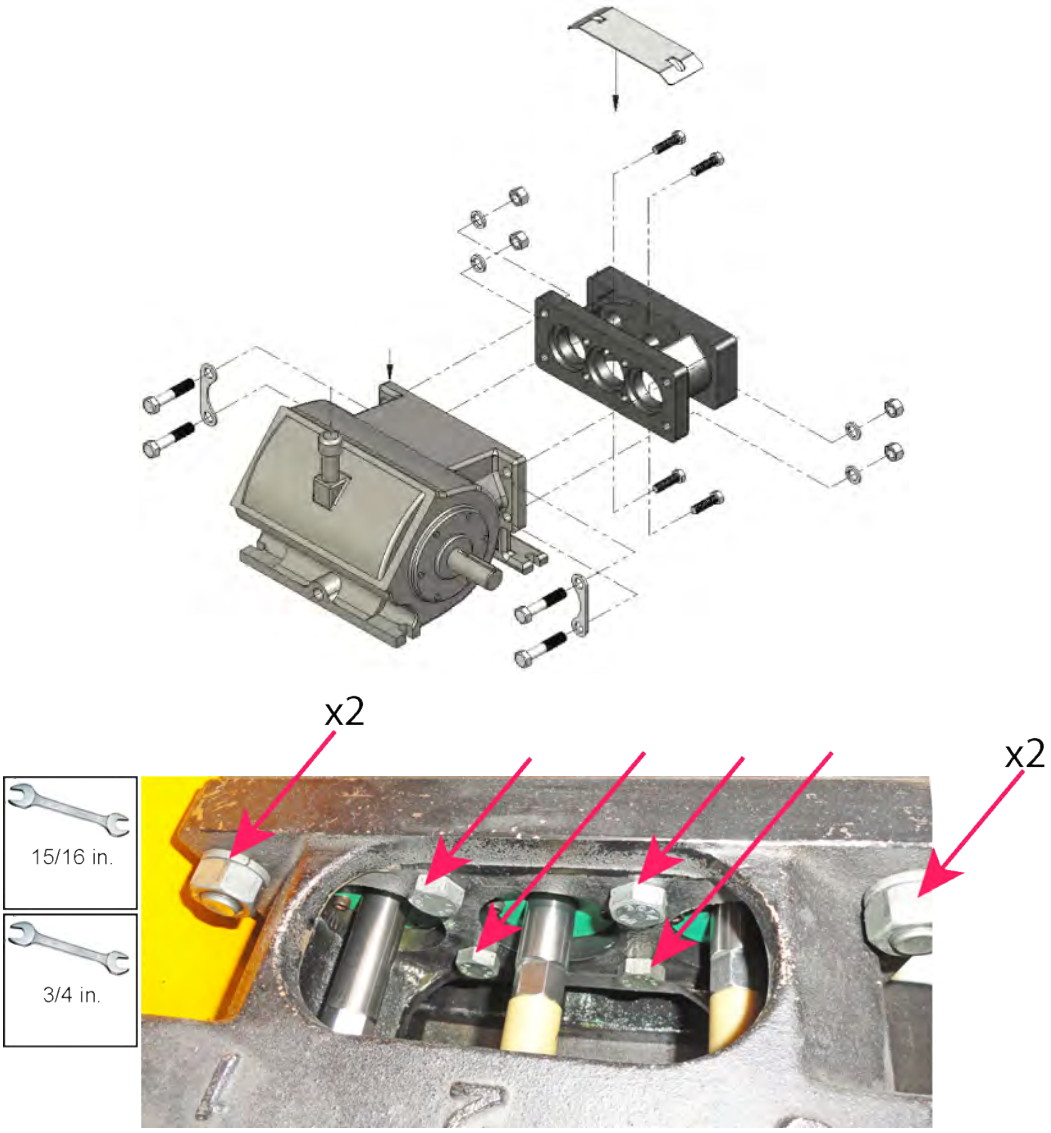


Figure 5

7. Remove and discard the spring rings ① (3 ea.) located in the adapter block. Replacements are provided in retrofit kit.

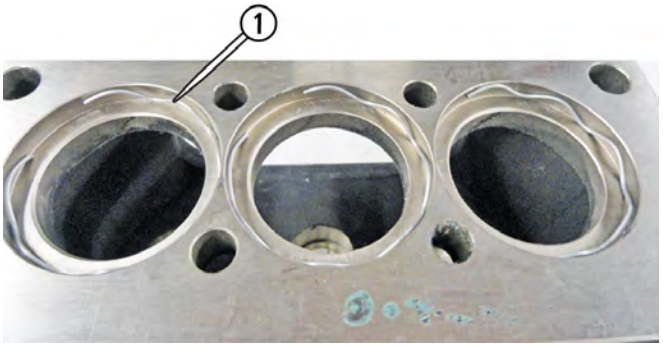


Figure 6

8. Remove the existing pony rod seal assemblies ① (3 ea.) from the crankcase.

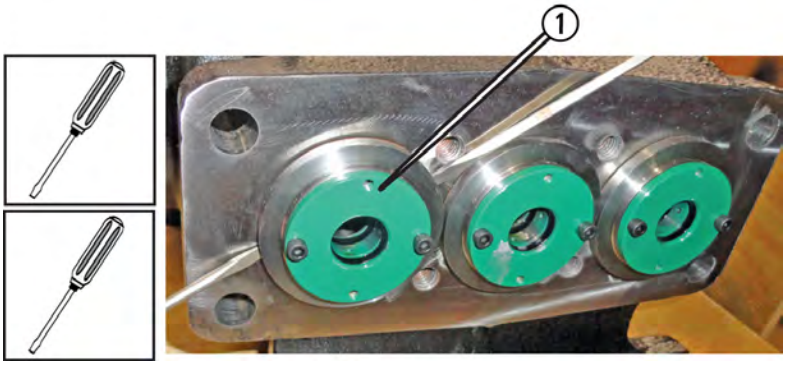


Figure 7

9. Remove the 10-32 screws ① (2 ea.) from the seal assembly.

Figure 8

10. Screw the removed screws ① (2 ea.) into the threaded “jacking” holes in the seal assembly and tighten to remove the outer oil seal housing from the oil seal housing retainer.

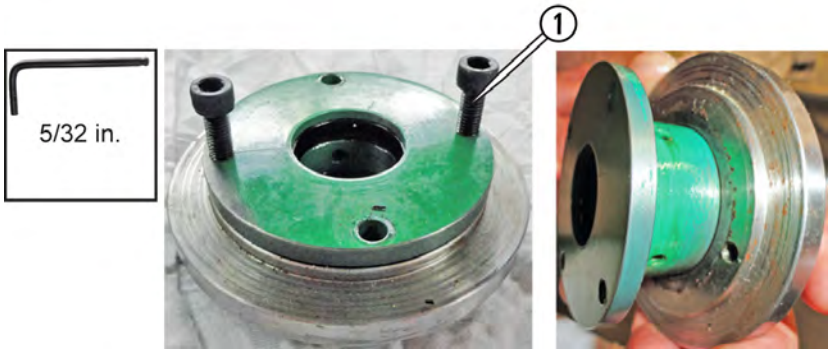


Figure 9

11. Discard the green seal assembly along with the two internal oil seals.
12. Remove the O-ring ① from the oil seal housing retainer.

Figure 10

13. Inspect the O-ring for nicks or other damage which could indicate a sharp leading edge into the crankshaft bore.
14. Inspect the crankcase where the seal assemblies are inserted for any nicks and sharp edges. Carefully remove any noted using 600 grit or finer sandpaper.
15. Clean the surface of the oil seal housing retainer.

Reassembling the Cup Seal Components

16. Lightly coat the replacement O-ring with Lubriplate.

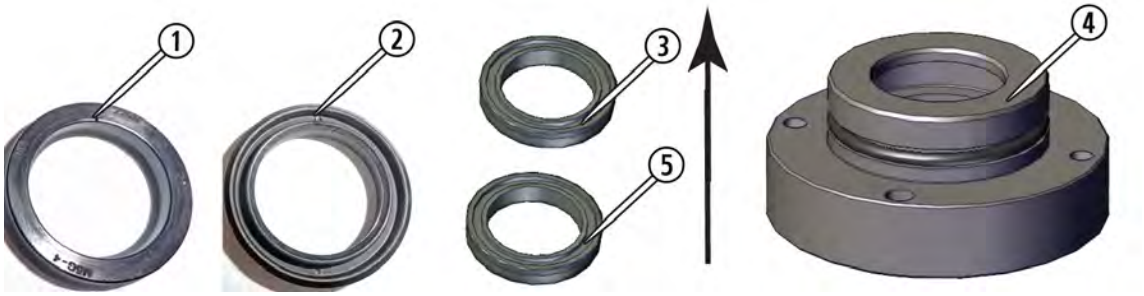
Figure 11

17. Install the new cup seals and O-ring into the replacement oil seal assembly, using the rod seal installation tool for installing the two cup seals.

Figure 12

CAUTION!

Insert both cup seals with the lip side ②③⑤ (not flat side ①) facing toward the oil side ④ (toward Myers crankcase).



18. Lightly coat a layer of Lubriplate on the O-ring for the oil seal housing retainer and install it ①.

Figure 13

19. Insert the oil seal housing ① with O-ring installed into the oil seal housing retainer ②.

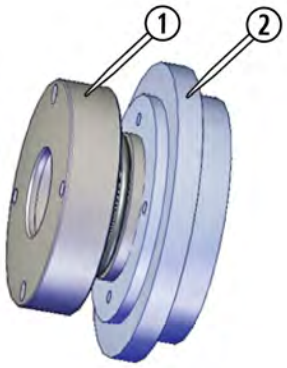


Figure 14

20. Rotate the seal housing until the two non-threaded holes align with the two threaded holes below in the oil seal housing retainer. Install the two replacement 10-32 x 3/4 in. screws ① in the two non-threaded top holes and torque both to 85 in-lb.

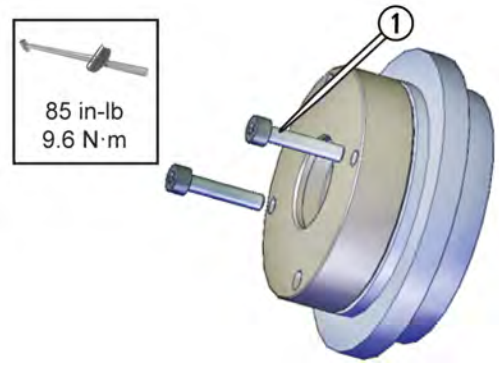


Figure 15

21. Repeat steps **14** through **18** for each of the remaining two oil seal assemblies.

22. Insert the rebuilt seal assemblies ② into the crankcase ①.

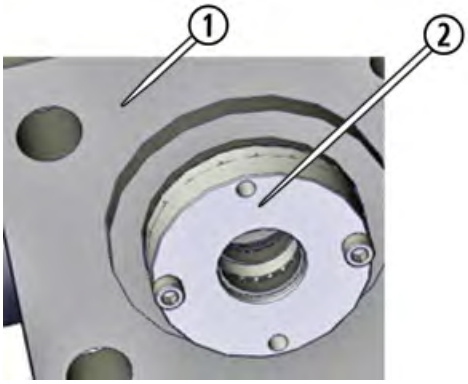


Figure 16

23. Place all three springs ① into the adapter block bores.

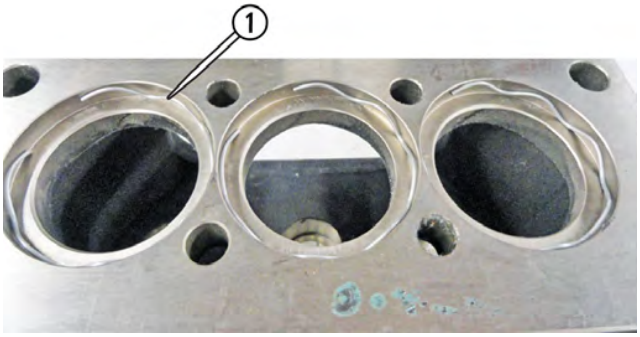


Figure 17

24. Insert the four center 1/2 in. bolts through the adapter block and into the crankcase. Torque to 65 ft-lb (88 N·m).

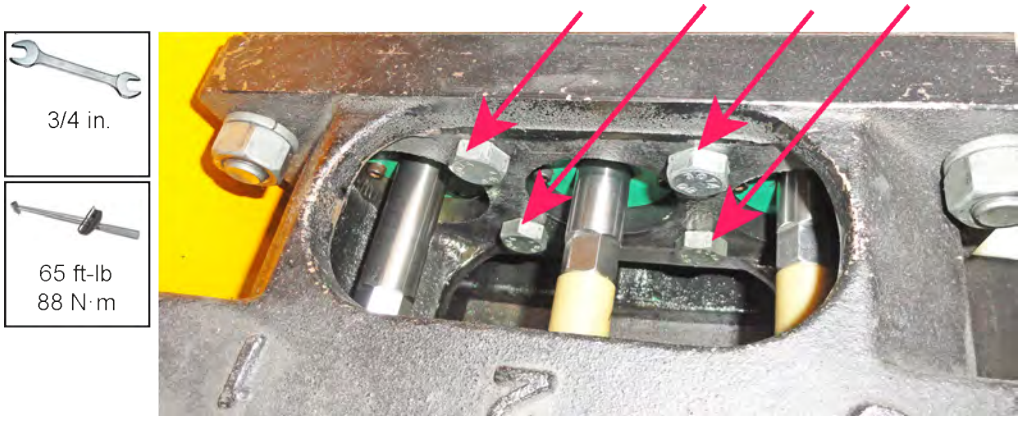


Figure 18

25. Attach the adapter block to the crankcase using the four outside 5/8 in. bolts with nuts and washers. Torque to 125 ft-lb. (169 N·m).

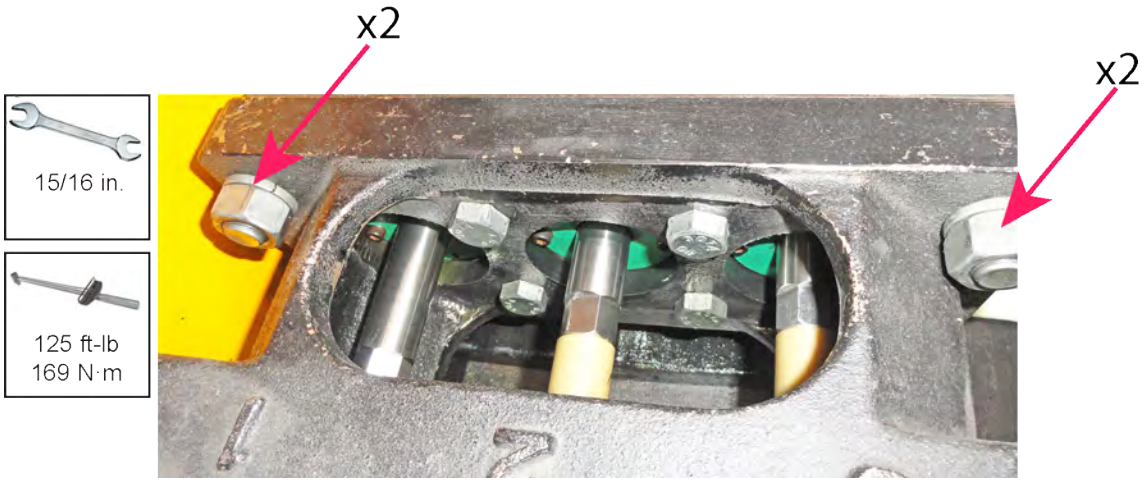


Figure 19

26. Inspect the plungers for nicks or bumps, then install.

27. **For an EnduroMAX pump**, replace the high-pressure plumbing and manifold onto its mounting bracket.

28. Complete the major or minor rebuild of the OMAX wet end per your pump's user's guide.

Customer Support

Refer to the **omax.com** web site for technical support contact information.

Original Instructions in English
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