American Darling Hydrant
Hydrant Upper Rod Replacement Procedure
4 ½" MK73-1, 4 ½" MK73-2, 5 ¼" B84B, and 6" B84B Models

1. Be sure to use all appropriate safety equipment during this procedure.
2. Close the control valve to isolate the hydrant from line pressure.
3. Remove one nozzle cap and open the hydrant several turns to relieve the pressure in the hydrant and to make certain the water is shut off. Collect a bucket of water at this time to help with the cleaning process.
4. Return the hydrant to the closed position.
5. Remove the two (2) housing bolts & nuts #16 holding the weather cover #7-7 in place and set aside for re-use.
6. Remove the weather cover #7-7.
7. Remove the four (4) housing cover cap screws #11-2.
8. Remove the housing cover #9 and cover gasket #13 and set aside for re-use.
9. Unscrew the operating nut #1.
10. Turn the operating nut upside down and fill the internal cavity approximately ¼ to ½ full of environmentally friendly solvent cleaner such as Simple Green® or other appropriate commercial solvent base de-greaser.
11. Covering the operating nut opening, shake several times to loosen and dissolve grease and any loose debris.
12. Using the bottle brush provided, with a twisting motion, insert the brush into the threaded hole in the operating nut.
13. Remove the bottle brush and drain the solvent from the operating nut. Clean the bottle brush periodically with water to remove solvent and grease. Repeat this cleaning procedure a second time to remove all existing grease. Rinse internal cavity with water to remove all traces of solvent. Set the operating nut aside for re-use.

    NOTE: Properly dispose of the solvent in accordance with local and/or state requirements.

14. Using the upper end of the hydrant seat wrench, remove the travel stop nut #30-06.
15. Clean the travel stop nut to remove all existing grease including the internal threads. Clean the bottle brush periodically with water to remove solvent and grease. Rinse the stop nut with water to remove all traces of solvent. Set the stop nut aside for re-use.
16. Remove the remaining housing bolts & nuts #16 and set aside for re-use. Carefully lift and remove the housing #15. If the housing gasket #14 was removed with the housing, clean it for re-use. If it was left on the hydrant barrel, remove and set aside for re-use.

17. Using a wooden paddle supplied, remove all existing grease from the internal cavity of the housing #15.

18. Spray some environmentally friendly solvent cleaner or other appropriate commercial solvent base de-greaser into the recess of the housing. Using the bottle brush provided, scrub the internal cavity of the housing to remove all existing grease. Clean the bottle brush periodically with water to remove solvent and grease. Repeat this cleaning procedure a second time to remove all existing grease. Rinse the internal cavity with water to remove all traces of solvent.

Remove the upper rod #30-11 from the hydrant by using one of the following two methods. **METHOD A** is the preferred method, but occasionally **METHOD B** must be used.

METHOD A

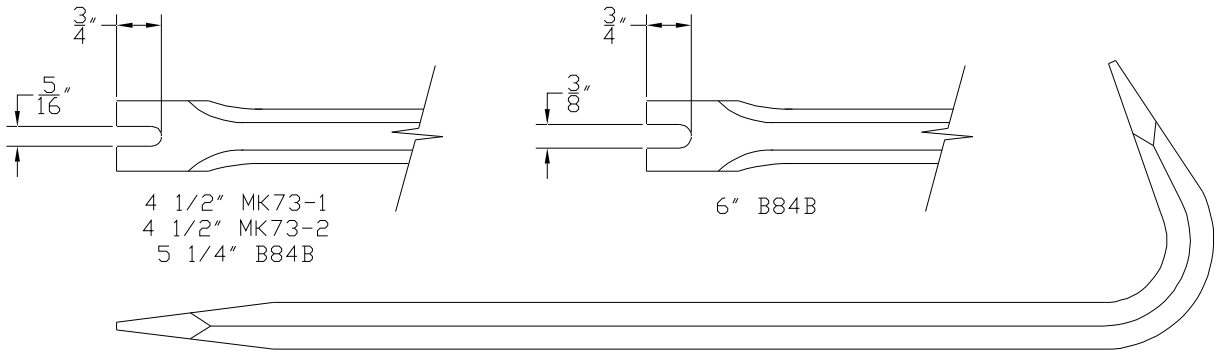
A1. Reach into the top of the upper barrel and remove the rod cotter pin and coupling pin #29-31. A modified wrecking bar (see drawing below) may be used to facilitate the removal of the rod coupling pin. If the rod coupling pin and/or cotter pin are dropped into the hydrant, they must be flushed out during the operational test at the end of this procedure. If the rod coupling pin and cotter pin cannot be removed from the top of the upper barrel, the rod and seat assembly will need to be removed using **METHOD B**.

A2. While using hand protection, lift the upper rod #30-11 from the hydrant.

A3. Install a new upper rod supplied with the kit, making sure the half hole in the upper rod lines up with the hole in the rod coupling.

A4. Re-install the rod coupling pin and cotter pin removed earlier. If the pin was damaged, replace it with a new pin and cotter pin.

A5. After the pin is installed, pull on the upper rod to make sure it is locked to the rod coupling.



Modified Wrecking Bar Tool

METHOD B

B1. Using a hydrant seat wrench, slide the square socket portion of the wrench over the upper hydrant rod engaging the square portion of the upper rod.

B2. Turn the seat wrench counter-clockwise approximately ten (10) turns.

B3. Remove the seat wrench.

B4. While using hand protection, lift the rod and attached internal parts from the hydrant.

B5. Remove the upper rod cotter pin and coupling pin #29-31.

B6. Remove the upper rod #30-11 from the rod coupling #29-30 and replace with a new upper rod supplied with the kit, making sure the half hole in the upper rod lines up with the hole in the rod coupling.

B7. Re-install the rod coupling pin and cotter pin removed earlier. If the pin was damaged, replace it with a new pin and cotter pin. After the pin is installed, pull on the upper rod to make sure it is locked to the rod coupling.

B8. Check the two seat O-rings #36-1 to be sure they are in place and undamaged.

B9. Replace the seat O-rings if needed with the O-rings supplied in the kit.

B10. Using the paint brush, grease the hydrant seat threads and seat O-rings with a liberal amount of the Mystic Food Grade grease supplied in the kit to hold the O-rings in place.

B11. Carefully lift the hydrant rod assembly and slowly lower it into the hydrant barrel until it stops, pushing down on the upper rod to insure the hydrant seat is in the proper position.

B12. Put the hydrant seat wrench over the upper rod and slowly turn the hydrant rod assembly counter-clockwise up to one full turn. This will align the start of the threads and prevent cross-threading.

B13. Turn the hydrant rod assembly clockwise for seven (7) to eight (8) turns until it tightens.

19. Replace the two housing O-rings #2-2 with the O-rings supplied in the kit. Lubricate the two O-rings with the Mystic Food Grade grease.

20. Lower the housing over the upper rod, using caution to protect the housing o-rings, and align the bolt holes on the housing and upper barrel, making sure the housing gasket #14 is in place on the upper barrel or on the housing.

21. Re-install all housing bolts and nuts #16 except the two (2) for the weather cover.

22. With the housing centered, tighten the bolts and nuts to 80 foot-pounds.

23. Using a grease gun, apply an approximately 2” deep layer of Mystik Food Grade grease into the bottom of the top housing cavity and thread the travel stop nut on the upper rod.

24. Using a grease gun, apply the Mystic Food Grade grease around the upper rod and into the housing cavity. Grease should be applied to fill the entire cavity of the top housing.

25. Using the paint brush, apply the Mystic Food Grade grease to the threads of the upper rod.

26. Hand tighten the travel stop nut until it stops at the bronze rod sleeve #145. **DO NOT OVER TIGHTEN.**

27. Using a grease gun, fill the internal cavity of the operating nut #1 approximately ½ full of Mystic Food Grade grease. Ensure grease is present on the threaded portion of the operating nut.

28. Thread the operating nut on the upper rod, making sure the thrust washer #4-4 is in place on top of the operating nut collar and lubricate with a small amount of the Mystic Food Grade grease.

29. Hand tighten the operating nut to close the hydrant. **DO NOT OVER TIGHTEN.**

30. Install the cover gasket #13. If damaged, replace with new cover gasket supplied with repair kit.

31. Clean the housing cover #9 previously removed and re-install with the four (4) housing cover cap screws #11-2.

32. Tighten the cap screws with 30 foot-pounds of torque and turn the operating nut to assure free rotation.

33. Install the weather cover #7-7 and REPAIR TAG with the remaining two (2) housing bolts and nuts. The REPAIR TAG should be positioned on top of the weather cover. Place a washer on top of the REPAIR TAG before inserting the housing bolt to minimize the tendency of the repair tag to rotate during tightening. [See diagram included in REPAIR TAG bag.] The REPAIR TAG will identify the hydrant as having been repaired. Tighten the bolts to 80 foot-pounds.

34. Make sure the hydrant is closed; then open the water control valve.

35. With a nozzle cap removed, slowly open the hydrant to check for proper operation and joint tightness. If the rod coupling pin, cotter pin, and/or any other items were dropped into the hydrant during the repair procedure, they must be flushed out during the operational test.

36. Close the hydrant after the operational test.

37. Ensure all nuts, bolts, and the pipe plug are securely tightened.

Please contact American Flow Control at 800-326-7082 if you have any questions regarding this procedure, or if additional parts are needed.