

Bent Tube

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1.1 Bent Tube Assembly

1.1.1 General

The bent tube assembly provides breathing gas flow from the side block assembly to the regulator assembly. Both ends of the bent tube assembly disconnect for complete removal. The O-ring and the Teflon® O-ring should be replaced during normal overhauls or any time these components are deemed unusable.

These components should not require field replacement, provided a careful visual inspection does not reveal wear or damage. All soft goods should be carefully cleaned in accordance with KMDSI procedures prior to inspection for reuse.

1.1.2 Removal of the Bent Tube Assembly

Tools Required:

- 1½ inch open end wrench
- 2 ea. ⅞ inch wrenches

1) Always start removal at the side block end. Loosen the tube with the 1½ inch wrench. The free swiveling mount nut on this end of the bent tube can be unthreaded completely and can slide down the tube.

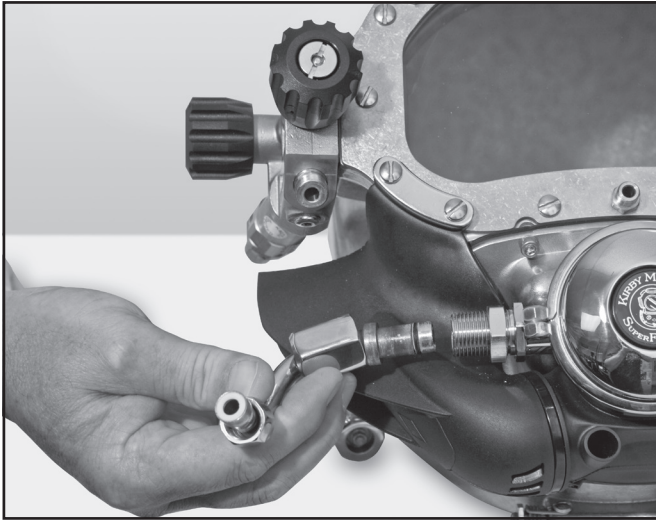


Always start removal at the side block end.

2) Loosen the lower bent tube nut by using the two ⅞ inch wrenches. Place one wrench on the bent tube mount nut and the second on the regulator inlet jam nut. Only turn the outer nut on the bent tube to loosen the bent tube.

The bent tube mount nut can then be rotated until free of the regulator inlet nipple tube threads.

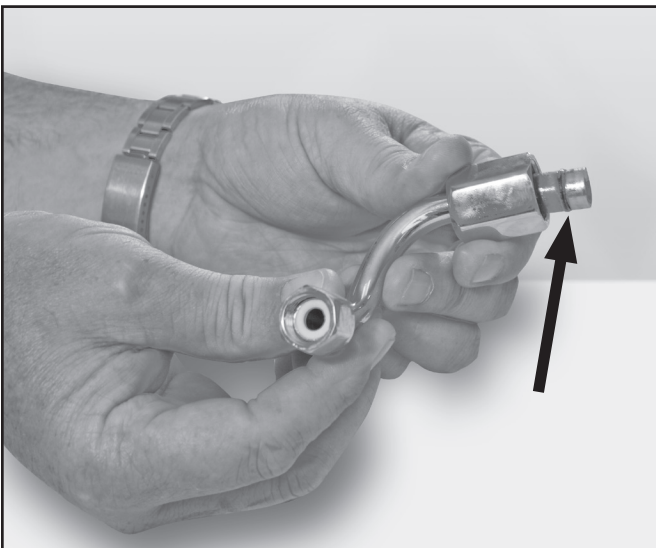
3) With the two mount nuts free; the bent tube assembly can be pulled straight out of the regulator inlet nipple. The bent tube assembly can be rotated back and forth to aid removal, if necessary.



Removing the bent tube.

1.1.3 Inspection of Bent Tube Assembly

Clean the bent tube in accordance with the cleaning procedures in “1.3 General Cleaning & Inspection Procedures” on page FRNT-40. The O-ring at the regulator end should be cleaned and inspected whenever the bent tube is removed.



Replace the O-ring on the bent tube if it is worn or damaged.

Replace the bent tube if it is excessively scratched dented or compressed deeper than $\frac{1}{8}$ inch. If the helmet has been used for burning jobs, carefully check for erosion of the metal or severe corrosion. Replace if any erosion is present or integrity is in question. Keep in mind the bent tube is a critical component that routes breathing gas to the regulator system.

1.1.4 Reinstallation of the Bent Tube Assembly

Tools Required:

$\frac{1}{16}$ inch Open-end Torque Wrench Attachment
Torque wrench

SuperFlow® Regulators: 2 ea. $\frac{7}{8}$ inch regulator adjustment wrenches

REX® Regulators: 2 ea. $\frac{13}{16}$ inch regulator adjustment wrenches

⚠ CAUTION

The bent tube assembly for the KM 47 and 77 is a unique design and is not interchangeable with the bent tube assembly used on other Kirby Morgan masks and helmets.

Normal minimum replacement parts during overhaul: O-ring, Teflon®

If a new bent tube is being installed or the side block has been removed, for brass side block refer to “1.1.6 Side Block Assembly Replacement” on page SB-7 and for the stainless steel side block refer to “1.1.2 Side Block Assembly Replacement” on page SSB-3 for installation instructions.

1) Lightly lubricate the bent tube O-ring and install into the O-ring groove at the regulator end of the bent tube, then install a new Teflon® O-ring at the side block end.

2) Push the O-ring end of the bent tube assembly into the regulator nipple tube. Slide it in until the side block end is aligned with the threads for the mount nut.

3) Be sure the new Teflon® O-ring is in place on the side block end of the bent tube, then engage the threads to the side block and hand tighten.

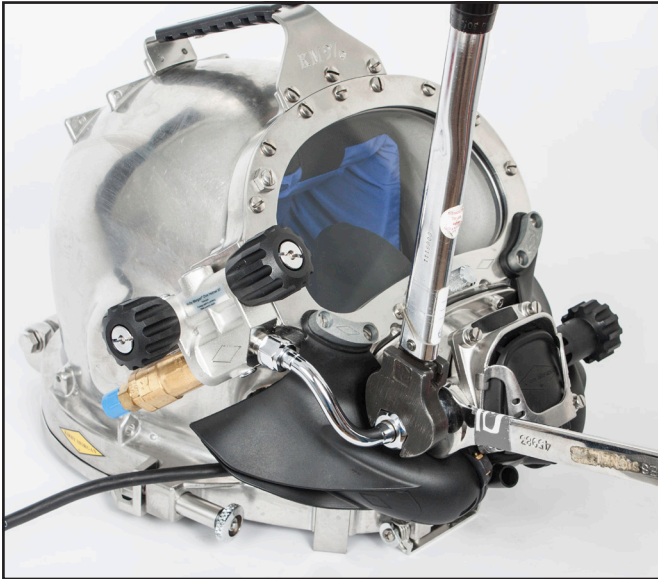
4) Start the “regulator to bent tube” mount nut onto the nipple tube of the demand regulator and run it up by hand as far as it will go.

NOTE: Run the mount nut up on the inlet nipple hand tight only.

5) Using a torque wrench, tighten the bent tube assembly nut onto the side block to 100 inch lbs.

If you are servicing a model with the REX regulator skip to step (8).

6) Make certain the regulator end of the bent tube is threaded onto the regulator (nipple tube), by lightly applying torque to the hex nut on that end. When a small amount of resistance is felt, lock it into place with the jam nut.



Tighten the bent tube to the proper torque value.

7) Hold the hex on the bent tube with a wrench and tighten the jam nut against it with a torque wrench. See “Torque Specs” on page APNDX-19 for correct torque.

For helmets with the **REX** regulator (KM 47, 77):

8) Hold the hex on the nipple tube with a wrench to prevent it from threading inward. Using a torque wrench, tighten the bent tube nut against the nipple tube hex. See “Torque Specs” on page APNDX-19 for correct torque.



If REX regulator, tighten the bent tube nut against the nipple tube hex. See “Torque Specs” on page APNDX-19 for correct torque.