



Super Flow 455 Stainless Regulator





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Super Flow 455 Stainless Balanced Regulator



- Super Flow 455 is a high performance regulator from Kirby Morgan
- Cast stainless steel regulator body, stainless steel internal parts



- For adjustment and proper function of regulator, supply pressure of 135 to 150 psi should be used



Super Flow 455



- SF 455 is the next step in the evolution of the SF 450 (better performance)
- SF 455 is CE certified

2014



- Super Flow 450
First cast Stainless Steel regulator

- SF 450 is NOT CE certified

2005





Super Flow 455 Stainless Balanced Regulator



WILL FIT ON: SL 17C, K, 27, 37, 37SS,
57,MK 21,KMB 18, KMB 28

Standard on KM 97





Super Flow 455



KMB 18 & 28

- Will fit KMB 18s manufactured after Jan 1999
- Will fit KMB 28s manufactured after June 2004
- Masks switched from a small tube to a large tube regulator (SF350) after the above dates





Super Flow 455



Superlite 27

- SL 27s
manufactured
before Oct 2015
will require
modification
around the nose
area of the
helmet shell in
order for a
proper fit





Super Flow 455 / Disassembly



- ✓ Loosen screws on regulator cover, do not remove screws from cover



- ✓ Remove cover and diaphragm, inspect diaphragm for holes or tears

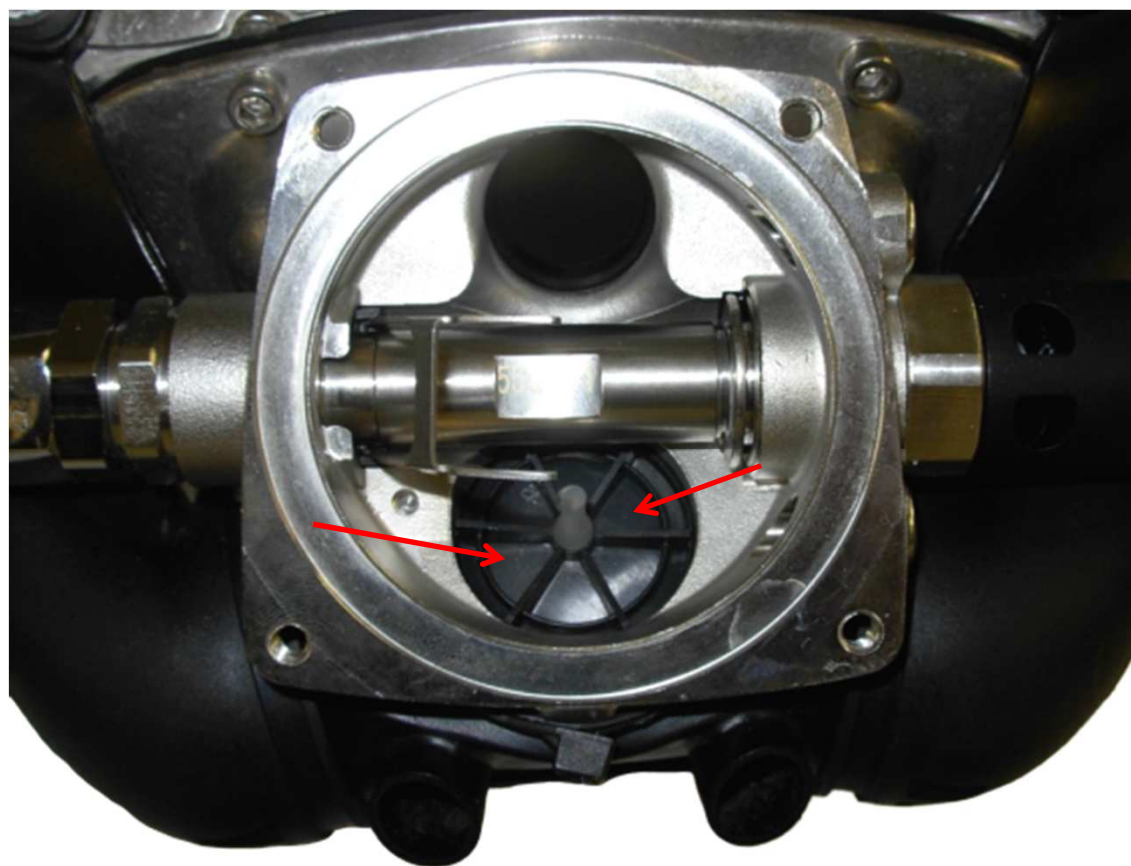




Super Flow 455



- Inspect interior of regulator for foreign matter and remove if necessary
- Check regulator exhaust valve for warping, distortion, stiffness, and or damage
- Check exhaust valve seat spokes for damage
- If any damage present replace components





Super Flow 455 Adjustments



- Reinstall the diaphragm and cover assembly
- Tighten screws 15 to 18 inch pounds

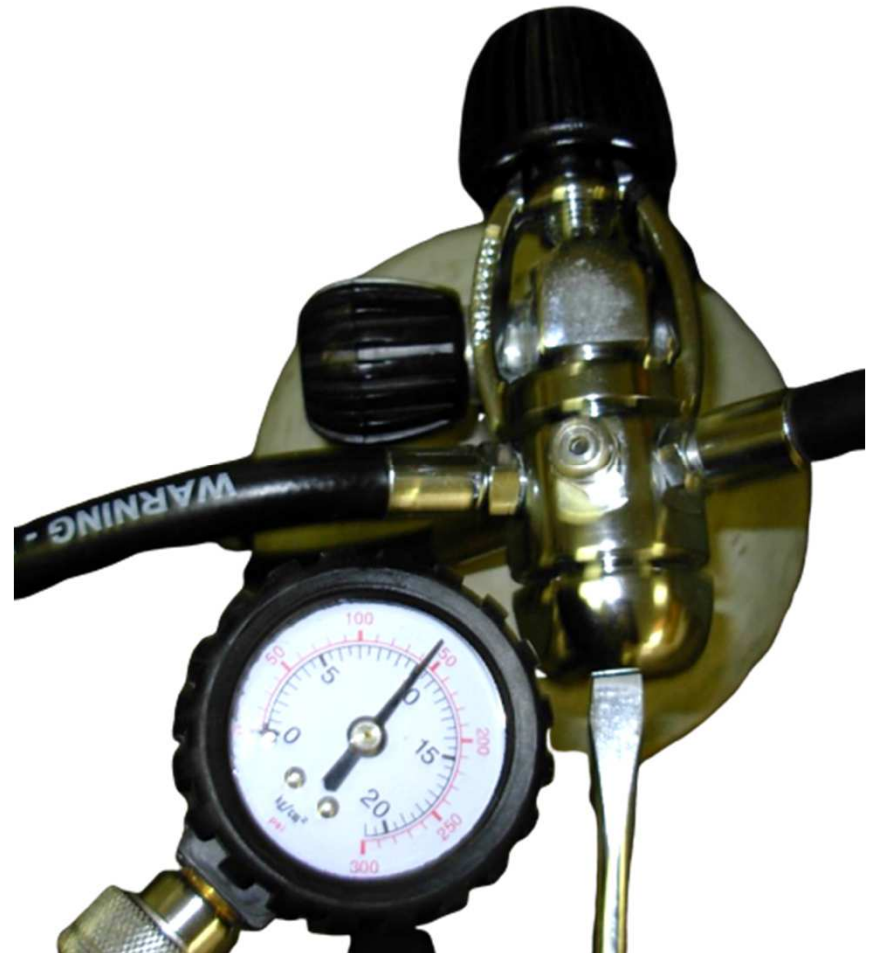




Super Flow 455



- Check regulator for adjustment and proper function with the assembly complete, and supplied with a breathing gas supply pressure of between 135 to 150 psig





Super Flow 455



- Rotate flex knob in, clockwise towards the regulator body, until a clicking can be heard with each full turn of the knob
- This is an audible indication the tension of the bias adjustment spring is as tight as it will get
- The adjustment knob will never bottom out or stop turning in this direction and no damage to the mechanism will occur
- The clicking is an audible indication the adjustment knob is fully positioned in



Super Flow 455



- You have the option of connecting gas supply two different ways





Super Flow 455



Connect gas supply two different ways

Option #1

- ✓ EGS valve or umbilical connection
- ✓ Connect gas supply through side block One Way Valve





Super Flow 455



Connect gas supply two different ways

Option #2

- ✓ Connect gas supply using a 9/16 scuba fitting
- ✓ Bail-out set used quite often for this





Super Flow 455



- Turn on gas supply
- Rotate the Flex Knob out counterclockwise slowly, three full turns
- Lightly depress the regulator purge cover several times and ensure the gas flow is stable

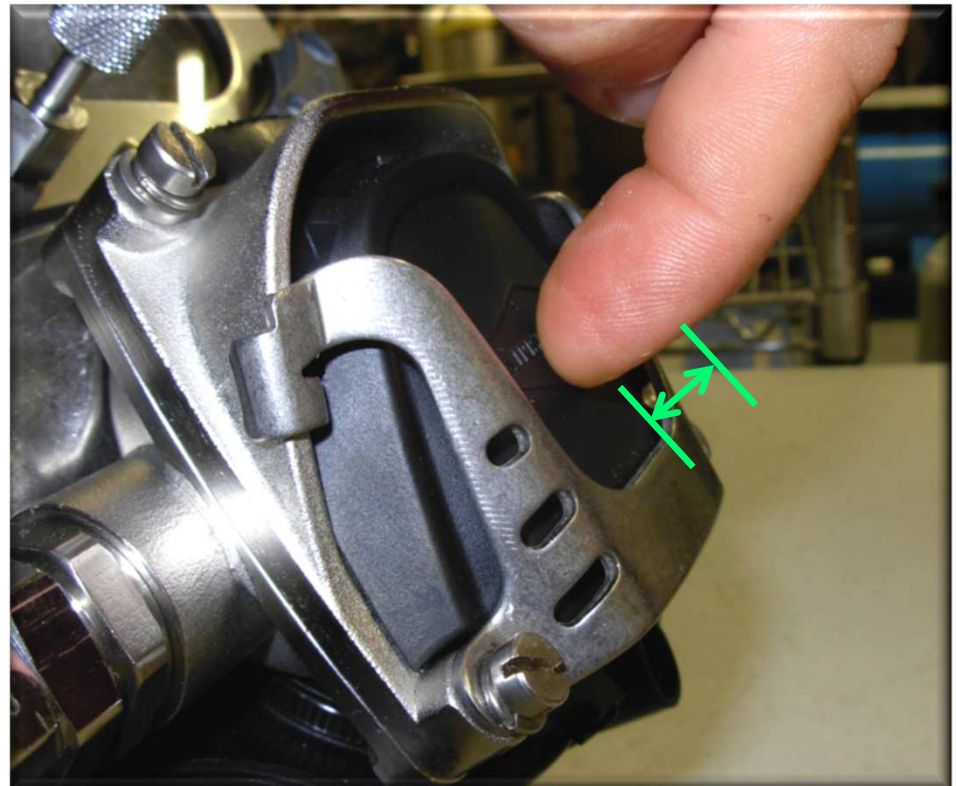




Super Flow 455



- Push in gently on the cover of the regulator
- There should be 1/4" free travel in the cover before gas flow starts
- When the cover is fully depressed, a strong surge of gas must be heard

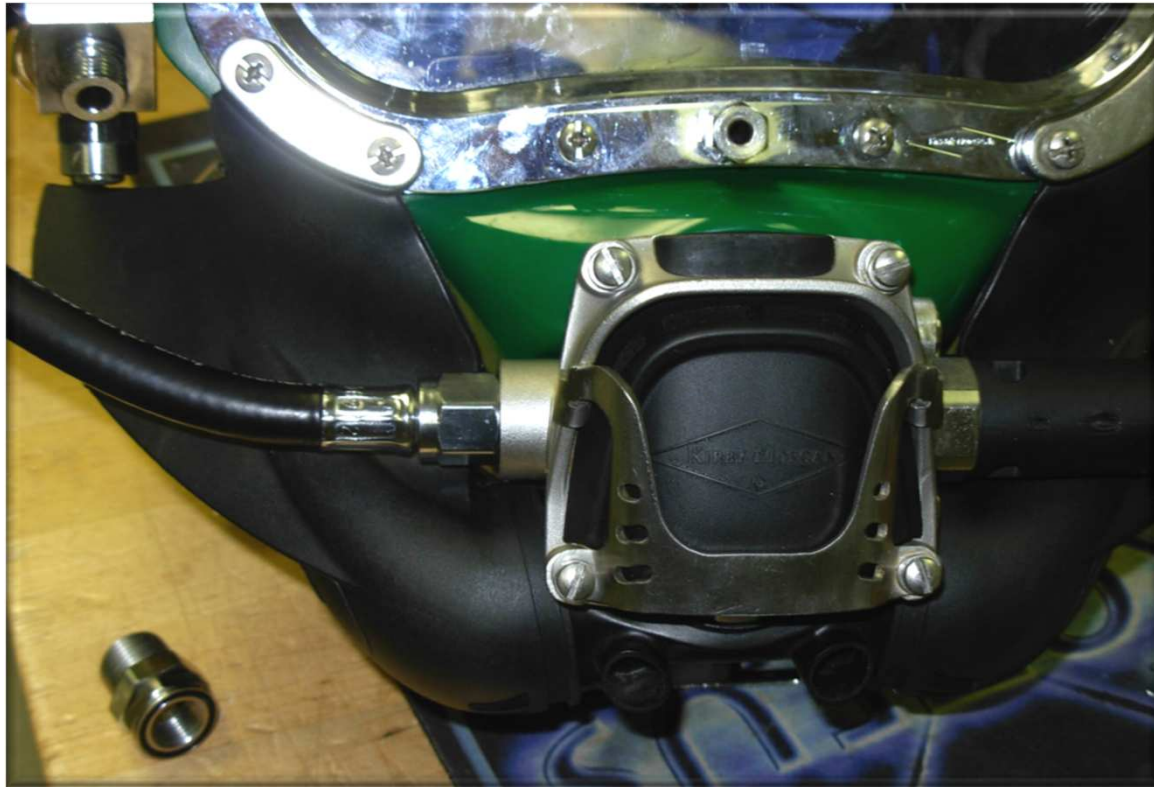




Super Flow 455



- If the purge cover has NO play, or play is greater than 1/4" before GAS flow is heard, the demand regulator requires internal adjustment

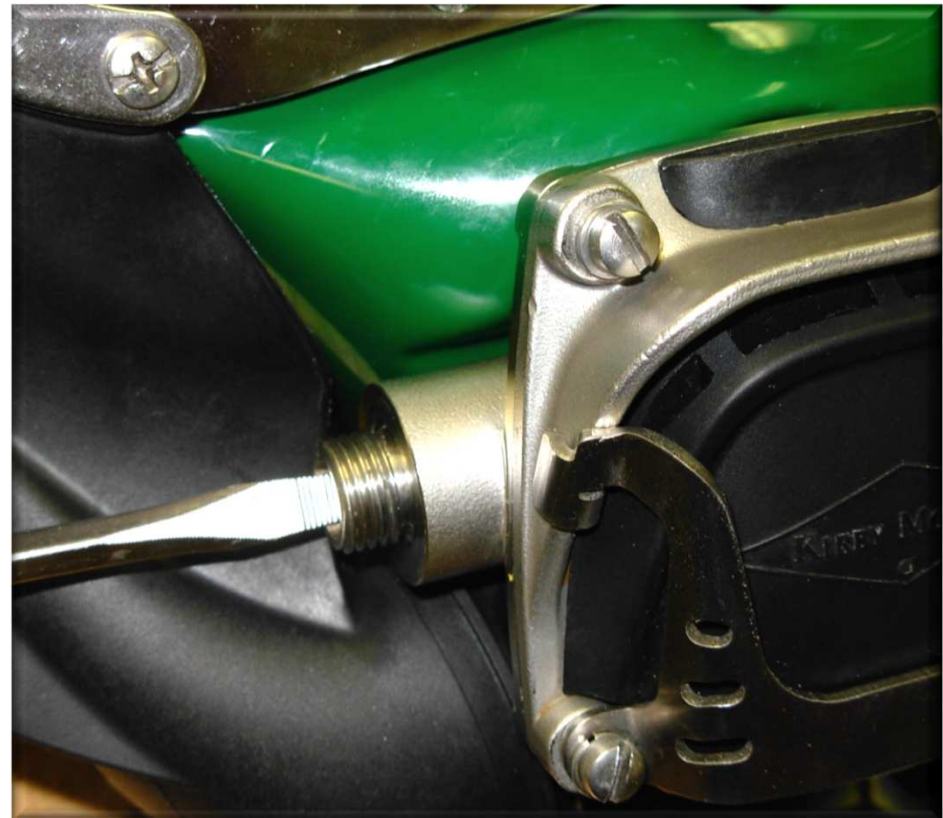




Super Flow 455



- Turn off the air supply and bleed off the pressure and remove the supply hose to expose the adjustment nipple
- Insert a flat head screwdriver into slot in the end of the adjustment nipple to make adjustments as may be necessary





Super Flow 455



- If there is too much play in the lever, the adjustable nipple will need to be turned out (counter clockwise)
- Too little play, the nipple will need to be turned in
- Whatever direction is needed, make the adjustment in very small increments and re-check
- Usually 1/16 turn at a time or less of a turn will suffice



Super Flow 455



- Re-connect air supply and re-check, (repeat as necessary) until required play is obtained
- Adjustments are complete, reconnect bent tube adapter and bent tube





Super Flow 455



- ✓ Regulator is adjusted and ready for use





Super Flow 455



There is a second option for adjusting the 455
This procedure is not covered in the KM manuals

- ✓ Adjustments can be made using
In-Line Adjusting Tool





Super Flow 455



Adjusting the 455 using a In-Line Adjusting Tool

Not all in-line tools will work on a 455 regulator

- This particular model will
- XS Scuba part # TL121
- Greatly simplifies the adjusting process
- In-Line adjusting type tool has been around in the scuba industry for more than 30 years





Super Flow 455



Enables you to adjust regulator while under pressure

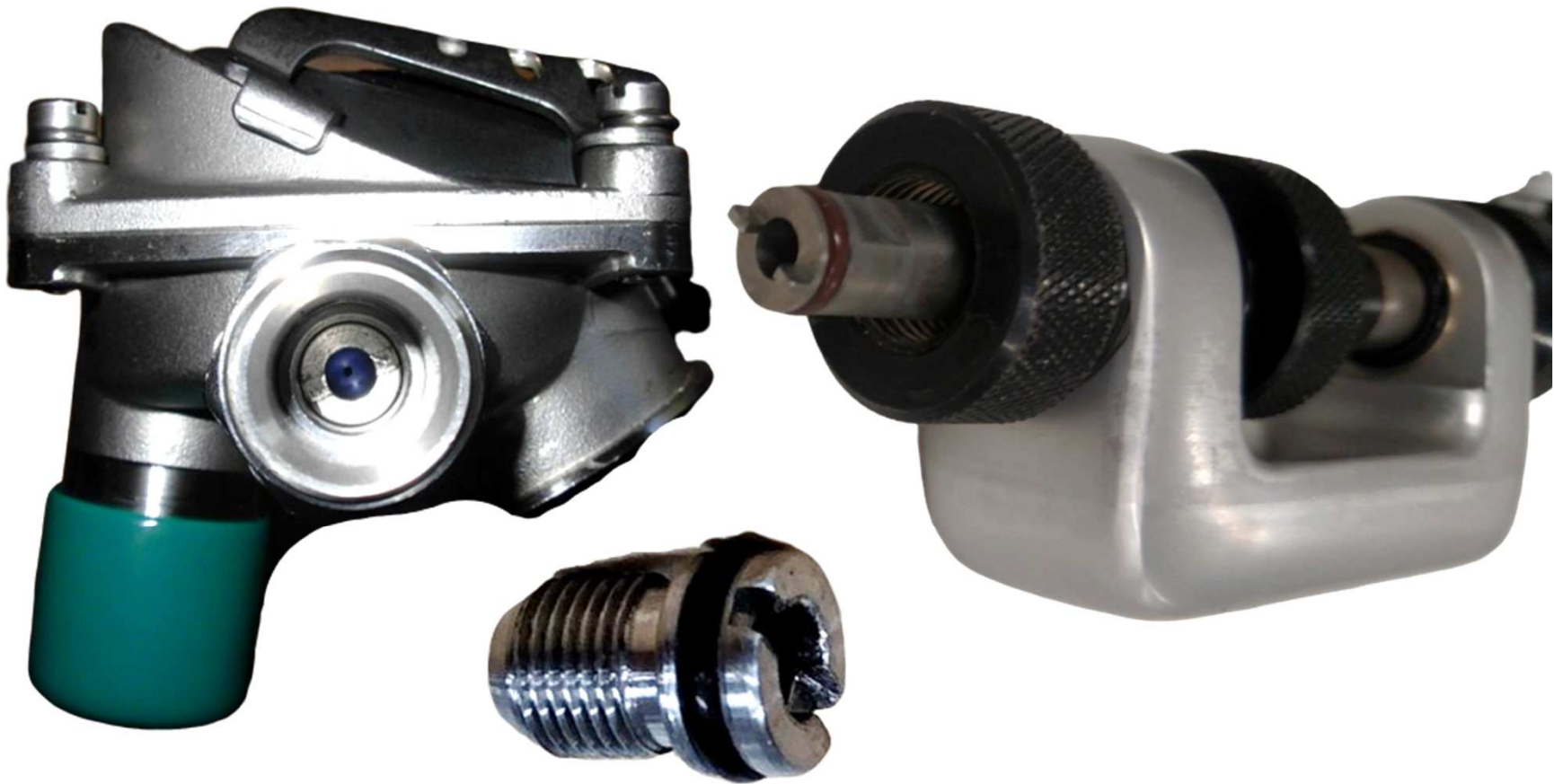




Super Flow 455



Tool has a flat blade type screw driver that engages the slot on the inlet nipple allowing for adjustments to be carried out

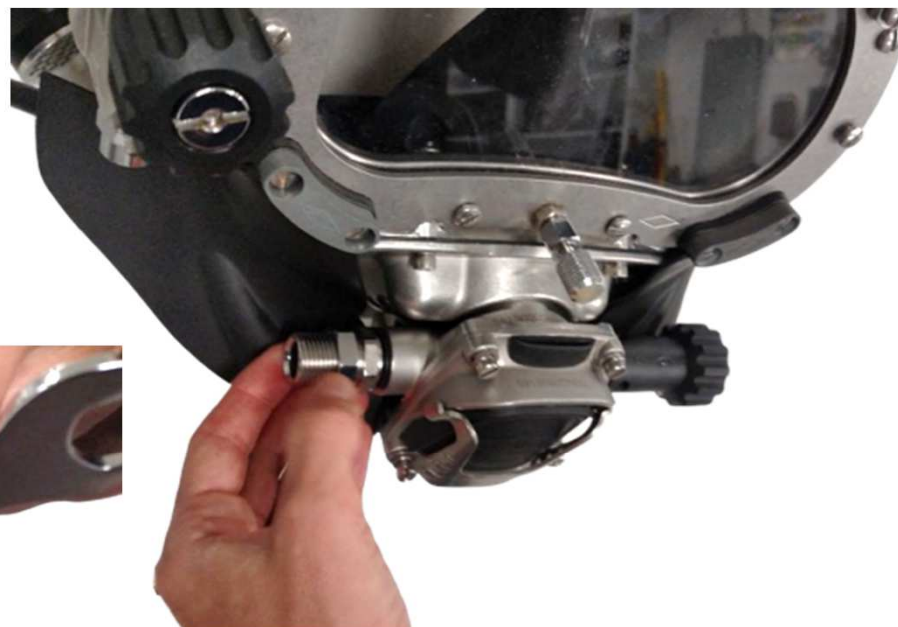




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- ✓ Remove bent tube and bent tube adapter





Super Flow 455



- ✓ Connect tool to air source, 135 to 150 PSI (9.3 to 10.3 Bar)

- ✓ Connect tool to regulator



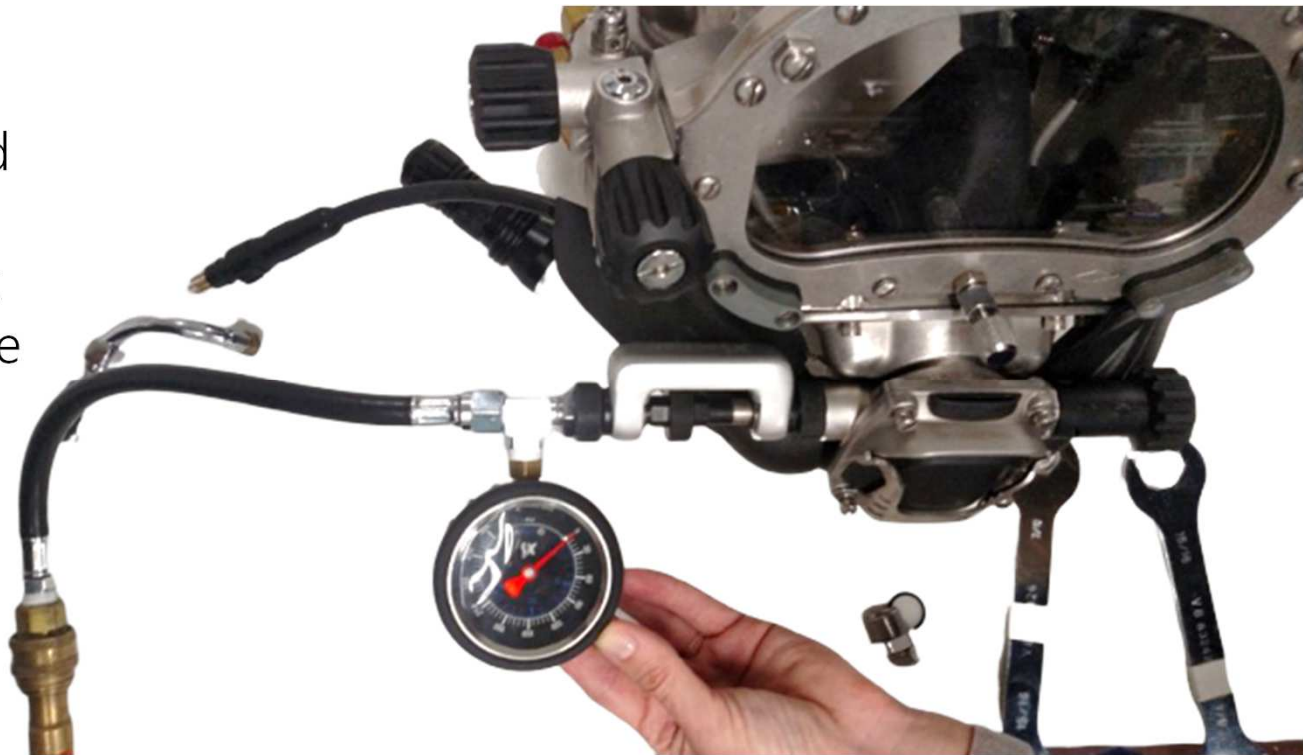


Super Flow 455



Set dial-a-breath on regulator

- ✓ Turn in until clicking is heard
- ✓ Then back out three complete turns
- ✓ Regulator is ready for checks/adjustments

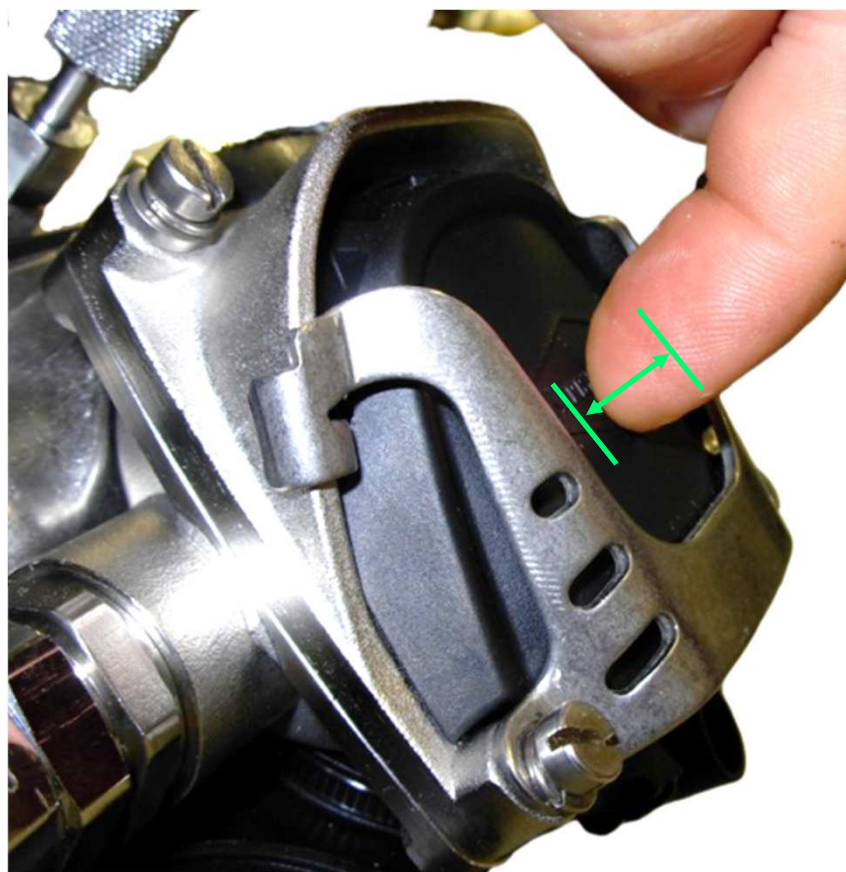




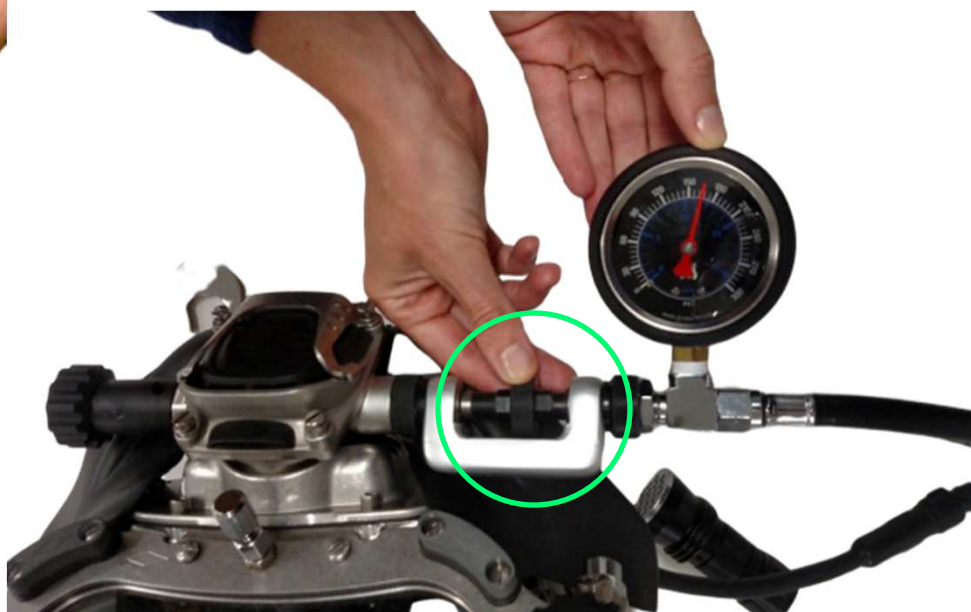
Super Flow 455



- ✓ Turn on air source
- ✓ Check depth of purge, should be $\frac{1}{4}$ " (6mm)



If adjustment is required, slide thumb wheel toward regulator until screw driver blade engages inlet nipple, turn in or out to make adjustments





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- ✓ Every time an adjustment is made check depth of purge, continue this process until correct depth of purge is attained





Super Flow 455



Go No-Go Gauge

- Under development
- Takes the guess work out of the depth of purge check





Super Flow 455

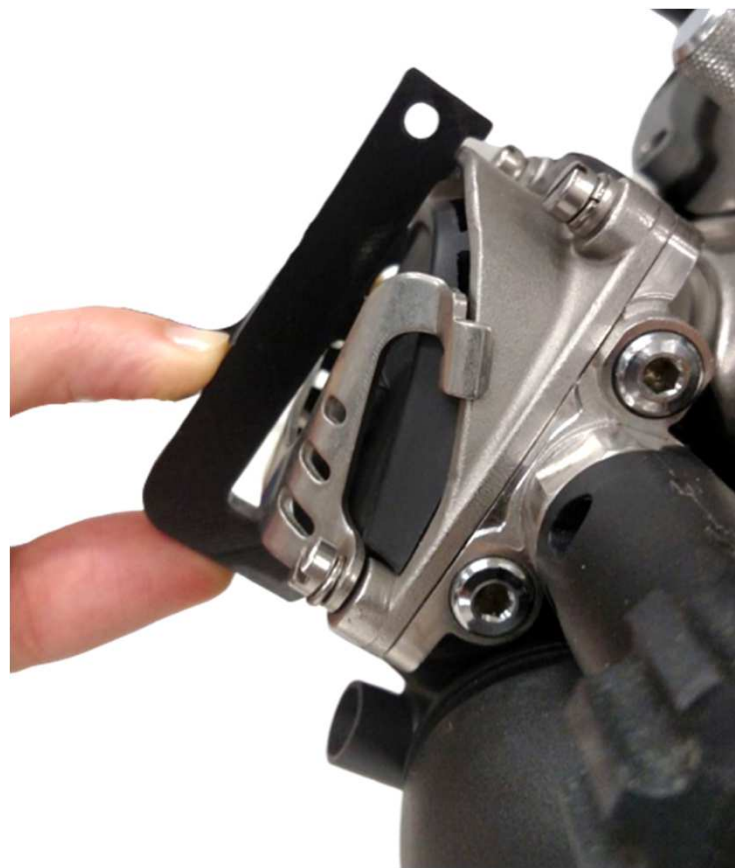
Go No-Go Gauge



- ✓ Adjust the inlet nipple until a slight hiss is heard with the go no-go gauge installed



- ✓ Hold tool in place while adjusting inlet nipple





Super Flow 455



- ✓ Adjustments are complete, reconnect bent tube adapter and bent tube





Summary



Always refer to Operations & Maintenance Manual for adjustment procedures

- Helmet Models
- Inspection
- Adjustments



