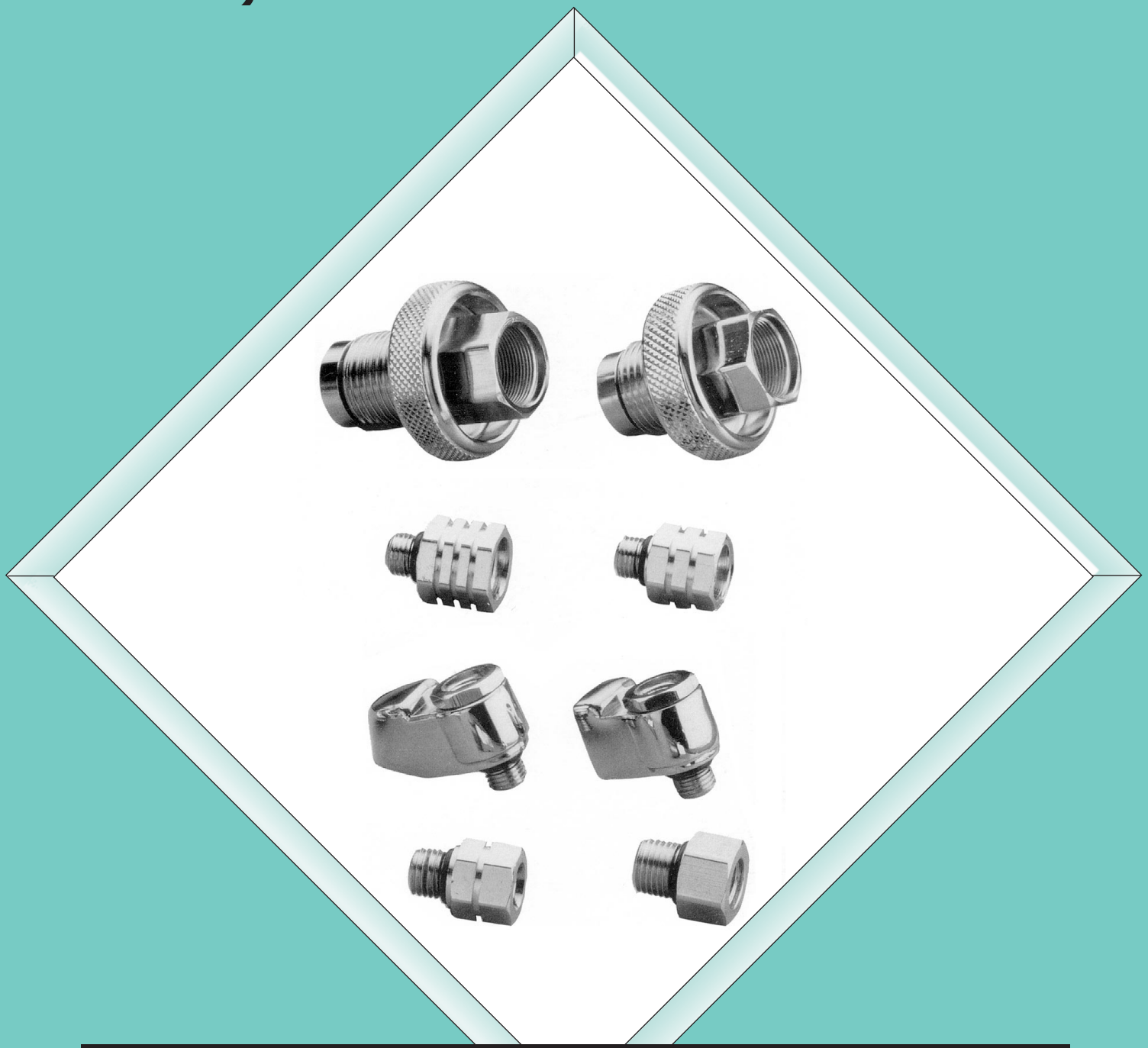
SHERWOOD SCUBA®

TOOLS, REPAIR KITS AND ACCESSORIES



Assembly & Maintenance Guide

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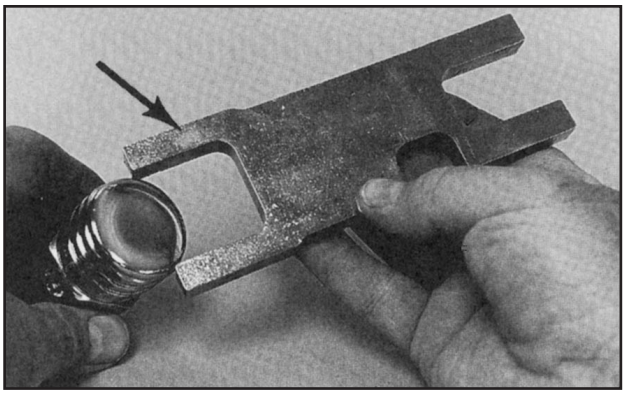
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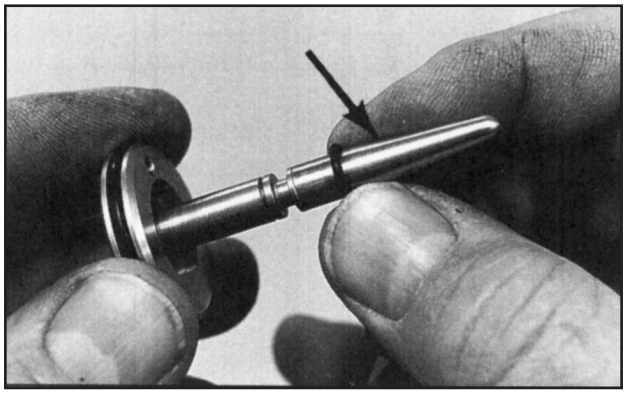
TOOLS

32-TL101 COMBINATION WRENCH:



This wrench is about 3" x 6" and has three different slots. Use this tool to remove and replace the cap, yoke nut, and DIN adaptors on all first stage bodies (current in 1993). With a pair of these wrenches the technician can open the piston module assembly of the SRB3601 externally adjustable first stage.

TL106 O-RING INSTALLATION CONE:



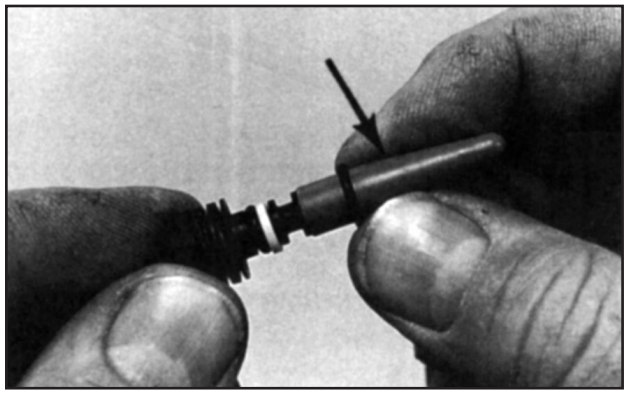
This O-ring installation cone is made of uncoated brass. It is used to install the small O-ring (GO07A) onto the piston tip of the first stage of the following Sherwood regulators:

SRB2100—Brut
SRB3200—Magnum Blizzard
SRB3300—Magnum II
SRB3400—Oasis
SRB3500—Oasis+
SRB3600—Maximus
SRB3700—Oasis 2
SRB3800—Ultima®
SRB3900—Blizzard
SRB0050—Classic

To use the TL106 installation cone, lubricate it lightly and place it on top of the piston tip.

Place a lubricated G007A O-ring over the cone. Slide the O-ring down until it snaps into the piston groove.

38-TL107 O-RING INSTALLATION CONE:



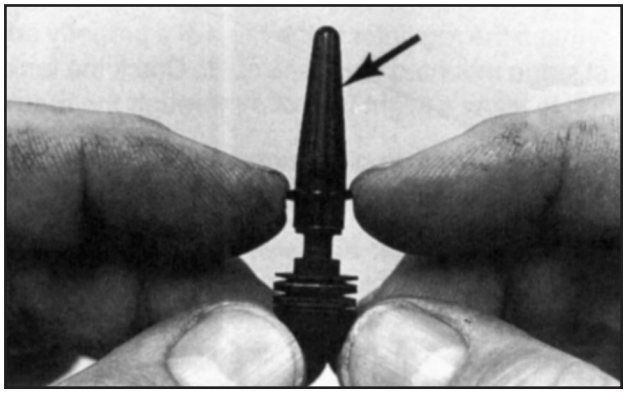
This O-ring installation cone is green. It is used to install the small O-ring (GO07A) onto the top groove of the moving orifice assembly of the first stage of the following Sherwood Scuba regulators:

SRB3200—MagnumBlizzard
SRB3300—Magnum II
SRB3400—Oasis
SRB3500—Oasis+
SRB3600—Maximus
SRB3700—Oasis 2
SRB3800—Ultima®
SRB3900—Blizzard
SRB0050—Classic

To use the 38-TL107 installation cone, lubricate it lightly and place it on top of the moving orifice.

Place a lubricated G007A O-ring over the cone. Slide the O-ring down until it snaps into the moving orifice top groove.

29-TL108 O-RING INSTALLATION CONE:



This O-ring installation cone is black. It is used to install the small O-ring (GO07A) onto the bottom groove of the moving orifice assembly of the first stage of the following Sherwood Scuba regulators:

SRB3200—Blizzard	SRB3300—Magnum II
SRB3400—Oasis	SRB3500—Oasis+
SRB3600—Maximus	SRB3700—Oasis 2
SRB3800—Ultima	SRB3900—Blizzard

To use the 29-TL1 08 installation cone, lubricate it lightly and place it on top of the moving orifice.

Place a lubricated G007A O-ring over the cone. Slide the O-ring down until it snaps into the moving orifice bottom groove Oust below the white Teflon® back-up washer).

TL110 50cc GRADUATED CYLINDER:



The 50 cc graduated cylinder is used to accurately measure the flow rate of the bubbles coming from the black one-way valve of the Dry Air Bleed System.

Immerse the regulator being tested under 6" of water with the black one-way bleed valve facing up.

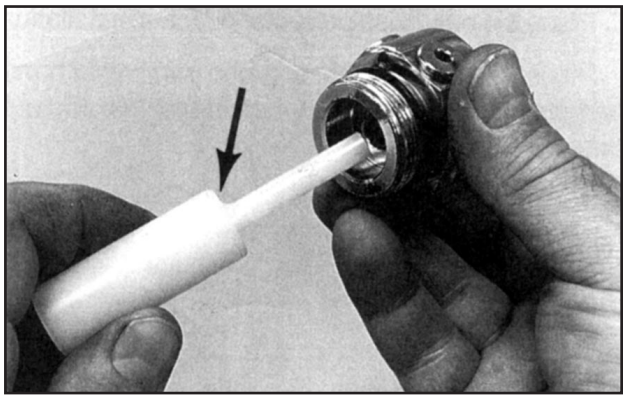
Fill the graduated cylinder with water and invert it over the bubble stream coming from the one-way valve.

After one minute, raise the graduated cylinder toward the surface so that the air/water dividing line inside the cylinder is even with the water surface.

Take a reading of the air/water contact point. This reading equals the flow rate from the Dry Air Bleed System in cubic centimeters per minute.

NOTE: The proper flow rate for all Sherwood Scuba regulators is between 13 and 27 cc per minute.

TL111 SOFT- NOSED ORIFICE REMOVAL TOOL:



This tool can be used on all Sherwood Scuba regulators to safely remove orifices from first and second stages.

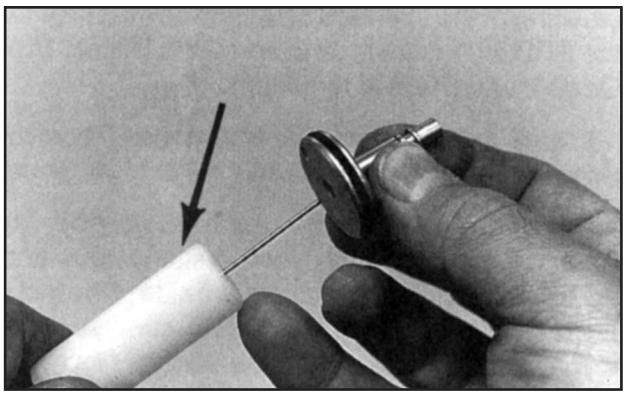
Loosen the orifice from its housing by either unscrewing it or by removing the filter and star washer.

Use the removal tool to push against the sealing part of the orifice to push it out. Using this tool helps to prevent damage to the orifice sealing surface.

TL112 PISTON SEAT REMOVAL TOOL:

The piston seat removal tool is used to remove the white Teflon seat from the first stage piston of all current Sherwood Scuba regulators.

Insert the small end of the tool into the stem of the piston from the wide end. Push the white seat out of the piston.



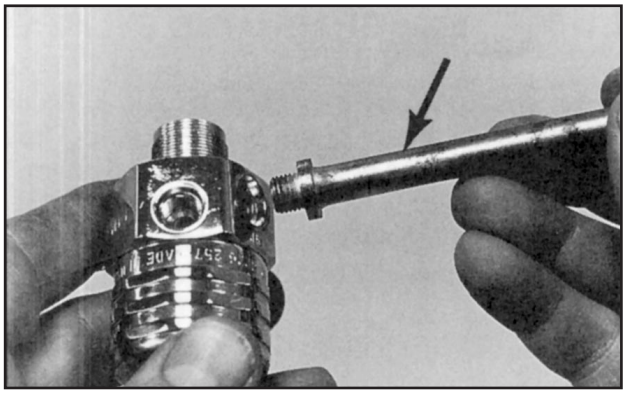
TL113 REGULATOR SUPPORT HANDLE:

The regulator support handle is used to support the first stage firmly without damaging the finish of the regulator.

Install the support handle in any low pressure port of the first stage.

Fasten the support handle in a vice, or grasp it with your hand.

The thread and shoulder of the support handle are specially designed so that the threads of the low pressure port are not strained or damaged. Damage could occur if a straight thread (such as a spent C02 cartridge) is used.

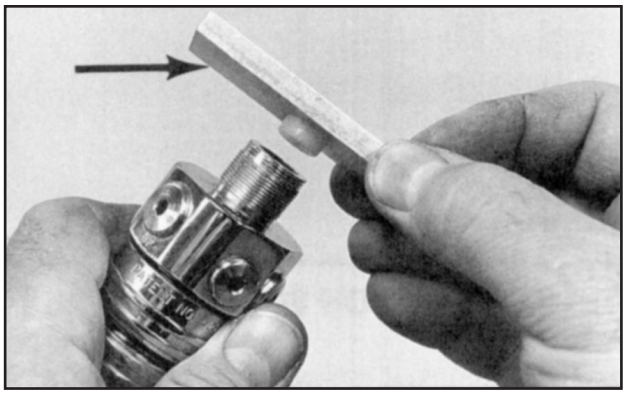


TL115 INLET FILTER & STAR WASHER INSTALLATION TOOL:

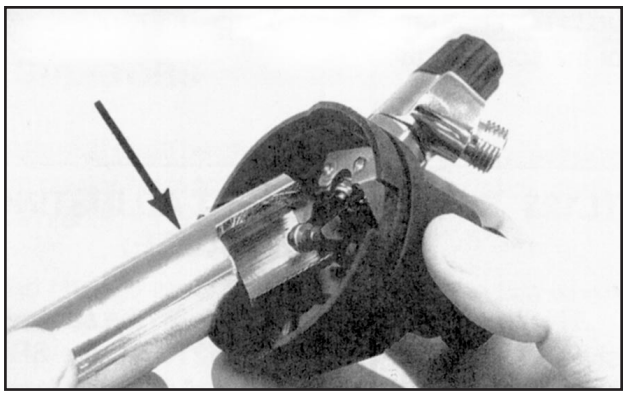
The star washer installation tool is used to insert and properly position the star washer that holds the inlet filter in place. The tool assures accurate alignment of the star washer. The tool is also especially helpful in preventing crushing of the stainless steel screen inlet filter found in the SRB3601 first stage used on the Ultima, Maximus, Oasis 2 and Blizzard regulators.

Install the filter into the first stage. Place the star washer over the filter and push it in lightly with your finger.

Place the nylon button of the TL115 inlet filter/star washer installation tool over the star washer and push the tool down firmly. The aluminum side of the tool should be resting on the O-ring sealing surface of the first stage. The star washer is now squarely located to the correct depth.



TL118 MODIFIED DEEP SOCKET FOR LEVER SUPPORT REMOVAL:



The modified deep socket for lever support removal has been slightly cut away to fit over the lever support of all Sherwood Scuba regulators. The modification is necessary for the Maximus, Oasis 2 and Blizzard second stages.

Other Sherwood Scuba lever supports can be loosened with either a standard 3/4" socket or a modified TL118 socket.

Before using the socket on the SRB3900 Blizzard regulator, remove the heat transfer fins attached to the lever support.

Install the modified 3/4" socket in a vise or on a socket wrench.

Place the modified 3/4" socket over the lever support, and apply another wrench to the orifice housing. A firm counter-clockwise turn will disengage the orifice housing from the lever support. The modified 3/4" socket can also be used to tighten the orifice housing and lever support.

NOTE: Failure to use a 3/4" socket on the lever support when loosening the orifice housing from the lever support may result in damage to the second stage plastic body.

TL123 LEVER DEMAND ADJUSTING TOOL AND GAUGE:

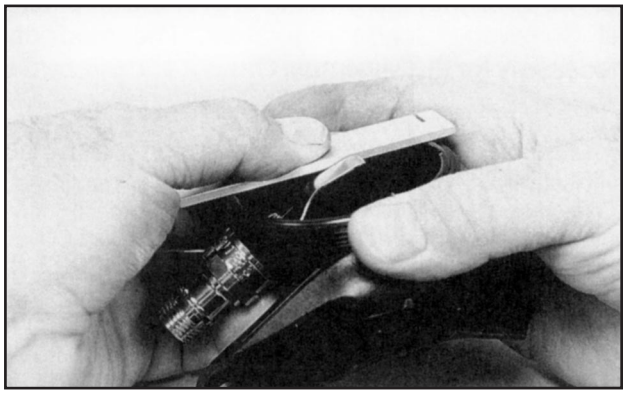


Photo A

This tool and gauge is for use with the second stage style used on Sherwood SRB2100 Brut, SRB3300 Magnum II, SR3208 Shadow®, and other similar models with screw-off front covers. It is used to determine the proper height of the end of the lever in the second stage in relation to the case.

To check for the proper lever height, lay the gauge across the case next to the tip of the lever (plain or roller tip). See Photo A. The tip of the lever should extend out from the case an amount equal to the thickness of the gauge.

Look across the case and gauge tool. The tip of the lever should be even with the top surface of the gauge. If you are reusing the same major parts of the regulator, this measurement will most likely be correct, and no adjustment will be needed.

If you have installed a new lever, and the lever tip is noticeably high, bend it lower by installing the lever in the slot of the tool as shown in Photo B.

Bend the lever carefully while holding the tool in one hand, with the tip of the lever toward the fingers. Do not hold on to the case when making this adjustment, as this can result in the lever bending at the wrong area (near the lever support instead of at the mid-point of the lever). If necessary, bend the lever upward using the same holding method.

After the regulator is assembled, turn on the air. If the regulator hisses slightly, but stops hissing when the diaphragm is removed, the lever is too high. Use the lever bending tool to bend the lever slightly downward.

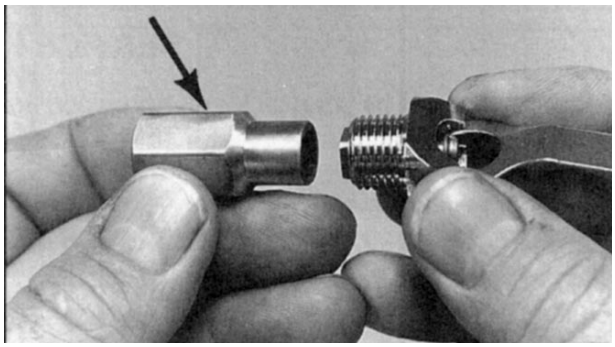


Photo B

TL124 POPPET SOCKET:

This tool is used to hold the square end of the second stage poppet while removing or replacing the screw that holds the lever assembly together.

The socket is mounted in a vise to use. Lower the lever assembly onto the tool so that the square end of the poppet rests firmly in the socket. Use a #1 Phillips screwdriver to tighten or loosen the screw in the end of the poppet that holds the lever in place.



SERVICE KITS FOR REGULATORS

The service kits for regulators contain the minimum group of parts that must be changed at every annual service interval **even if the regulator is not under warranty.** These kits do not have to be returned for warranty credit. Contact your authorized Sherwood Distributor for information on credits for warranty replacement.

You, the technician, must thoroughly inspect the regulator and change parts not included in these kits when necessary.

Kit # 4000-1
Annual Service Kit for the SRB2100 Brut
Mouthpiece tie 3786-9W
Poppet seat 978-9B
Piston seat 3801-5
Star washer 3504-6
Filter 1390-7
O-rings G007A & G022A

Kit # 4000-4
Annual Service Kit for the SRB3600 and SRB5600 Maximus
Mouthpiece tie 3786-9W
Poppet seat 978-9C
Piston seat 3801-5
Star washer 3504-6
O-rings G006B, G014C, G01 5C, G007A, & G022A

Kit # 4000-6 Annual Service Kit
for the SRB3800 Ultima
Mouthpiece tie 3786-9W
Piston seat 3801-5
Star washer 3504-6
O-rings G007A (3 ea.), & G022A

Kit # 4000-9 Annual Service Kit for all Octopus & Hookah Regulators
Mouthpiece tie 3786-9W
Poppet seat 978-9B

Kit # 4000-15 Annual Service Kit for the SRB3300 Magnum II, SRB5300 Magnum, SRB3400 Oasis, SRB3500 Oasis+ SRB3700 Oasis, SRB5700 Oasis, SRB3900 Blizzard and SRB 5900 Blizzard.
Mouthpiece tie 3786-9W
Poppet seat 978-9
Piston seat 3801-5
Star washer 3504-6
Filter 1390-7
O-rings G007A (3 ea.), & G022A

Kit # 4000-16 Annual Service Kit for the SRB0050 Classic
Mouthpiece tie 3786-9W
Poppet seat 978-9B
Piston seat 3801-5
Star washer 3504-6
O-rings G007A (3 ea.), & G022A

Kit # 4000-17 Annual Service Kit for the SRB3200 (pre-1992) Blizzard
Mouthpiece tie 3786-9W
Poppet seat 978-9B
Piston seat 3801-5
Star washer 3504-6
Star washer J26005-43B
Filter 18-3106-14
O-rings G007A (3 ea.), & G022A

SERVICE KITS FOR VALVES

Kit # 3506-20 Stem packing kit for all Sherwood yoke style valves. Kit has enough parts for 10 valves.
Teflon stem packing 3506-7
Stem packing 3506-18
Copper gasket 3506-10
Plug assembly 3506-9
Outlet O-ring G014L
Inlet O-ring G214A

Kit # 3506-30 Stem packing kit for Sherwood DIN valves. Kit has enough parts for 10 valves.
Teflon stem packing 3506-18
Stem O-ring G011L
Bonnet O-ring G1600-200A
Plug assembly 6000-40

Valve Burst Disc Kits:

Sherwood valves use two basic types of burst disc assemblies. All Sherwood valves manufactured since 1990 use the 1/2" hex one piece unit shown in Fig. 1. Older valves use the small 3/8" hex three piece assembly shown in Fig. 2. These older style units are installed into the valve cavity; nylon washer first, copper disc second, plug body third.

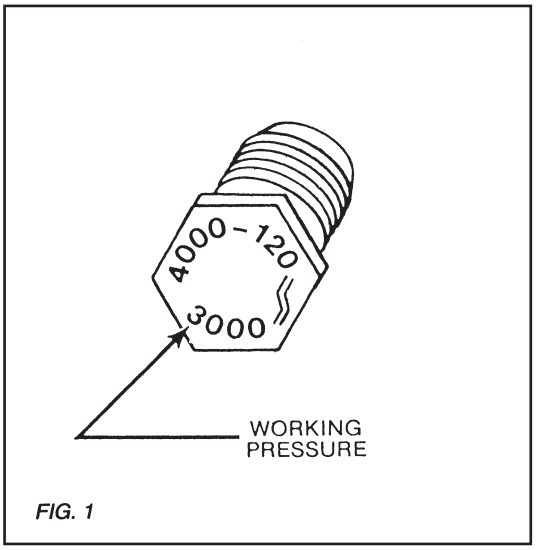
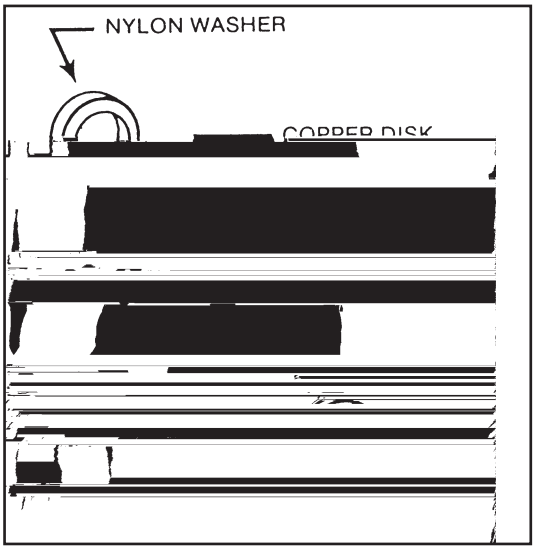


FIG. 1



Tighten both styles to 50-55 in. lbs. torque. Apply the torquing force rapidly and smoothly to avoid improper gasket deformation.

TANK WORKING PRESSURE	SERVICE KIT # FOR 1/2" ONE PIECE ASSEMBLY	SERVICE KIT # FOR 3/8" THREE PIECE ASSEMBLY
1800 psig	14120-28	4000-970
2015 psig	14120-32	4000-940
2250 psig	14120-35	4000-850
2400 psig	14120-38	4000-890
3000 psig	14120-48	4000-860
3300 psig	14120-50	
3500 psig (steel "Genesis")	14120-49	

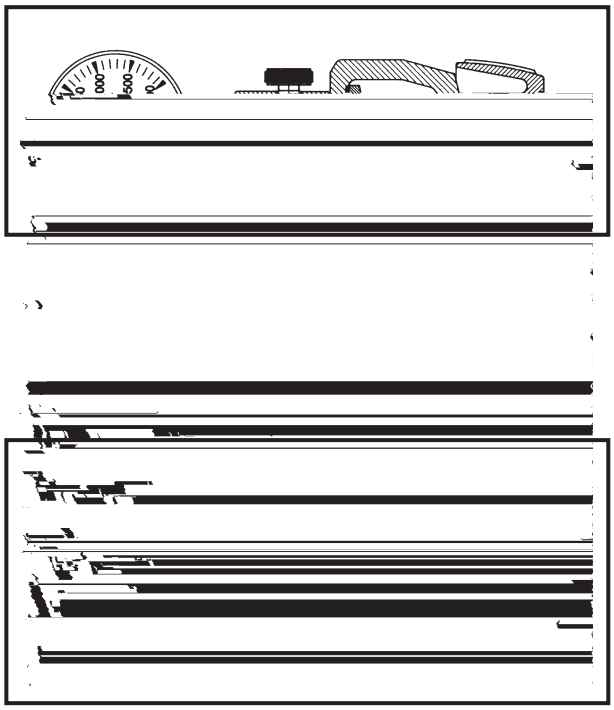
NOTE: Burst disc assemblies can stay in service for a maximum of 5 years. If you are not certain of the age of the burst disc assembly, replace it.

CAUTION:

Never reuse any parts of the burst disc assembly. Used parts may not function properly at correct pressures.

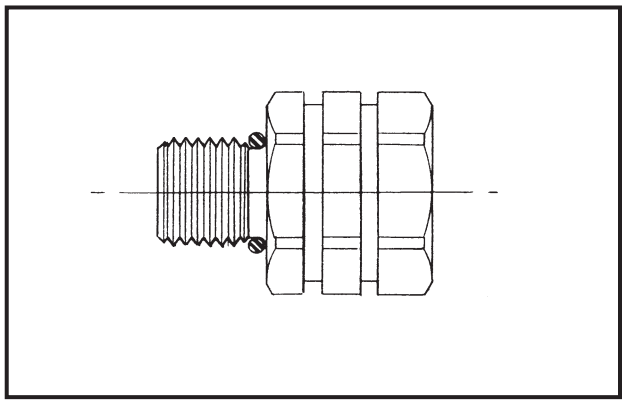
ACCESSORIES:

SA4303 - Tank Pressure Gauge: This gauge attaches to any scuba yoke valve. It allows the user to quickly check tank pressures above the surface. Using the SA4303 tank pressure gauge is more convenient than attaching an entire scuba regulator and submersible pressure gauge. It also vents much less air after use than the regulator assembly does, thus conserving the tank's air supply.

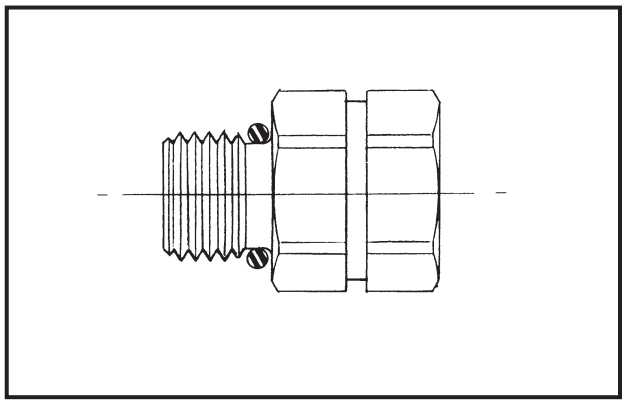


SA4302 - CGA850 Yoke to 1/4" NPT Connector: This connector is the same as the SA4303 above, except that it does not come with a gauge. It can be used to attach other accessories to a CGA850 yoke connection via the 1/4" NPT port.

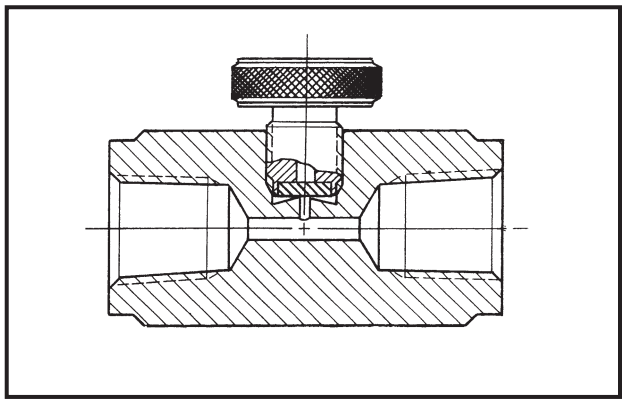
SA4304 - Hose Adaptor: A 3/8" regulator port to 7/16" hose fitting. This adaptor allows a new submersible pressure gauge with a 7/16" fitting to be screwed into an older regulator that has a smaller 3/8" HP port



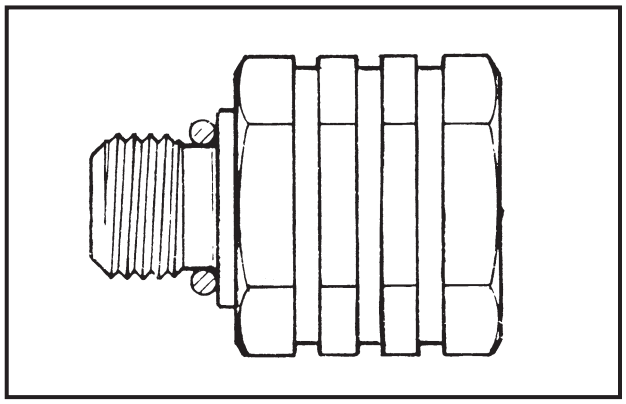
SA4305 - Hose Adaptor: A 7/16" regulator port to 3/8" hose fitting. This adaptor allows an older submersible pressure gauge with a 3/8" hose fitting to be screwed into a new regulator's 7/16" HP port.



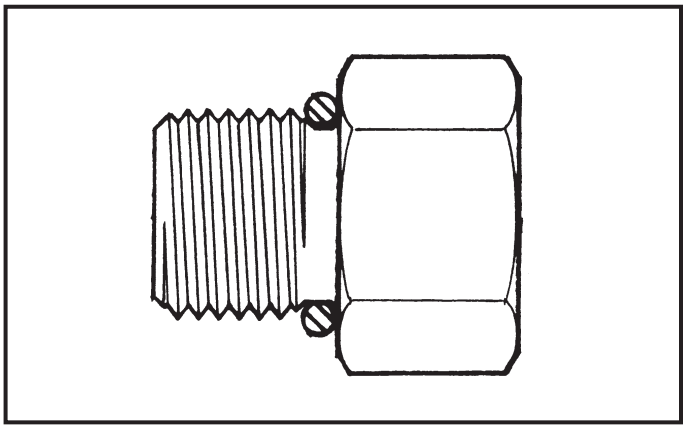
SA4306 - Scuba Charging Adaptor: A brass connector with two female 1/4" NPT ports, and a bleed screw. This adaptor is used in filling stations to bleed down pressure in various areas.



SA4308 -Hose Adaptor: A 3/8" regulator port to 1/2" hose fitting. This adaptor allows another manufacturer's LP hoses with larger 1/2" fittings to be screwed into a Sherwood first stage.



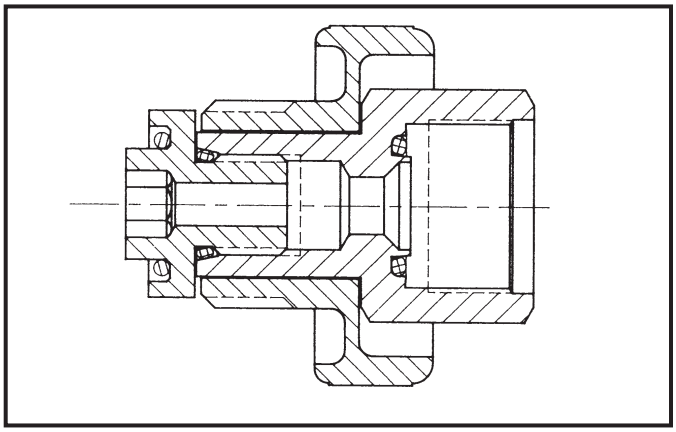
SA4309 - Hose Adaptor: A 1/2" regulator port to 3/8" hose fitting. This adaptor allows a Sherwood high flow 3/8" hose to be screwed into another manufacturer's first stage regulator with 1/2" LP ports.



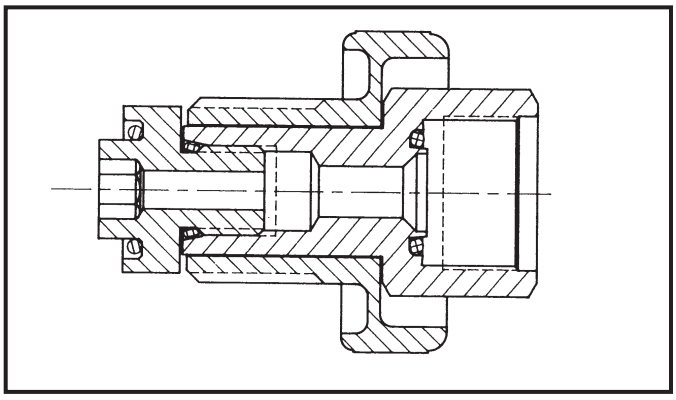
SA5301 - 300 BAR DIN to CGA850 Yoke Adaptor: This adaptor is for filling a DIN valve cylinder at a filling station equipped only with yoke-type filling whips. It is intended to be an accessory for the diver who owns a DIN valve cylinder. It allow sthe diver to fill a DIN valve cylinder at any dive store. Because using this adaptor still involves a CGA850 yoke on the end of the filling whip, the pressure limitations of the CGA850 specifications must be observed. Pressures must not exceed those normally encountered while filling a cylinder rated at 3000 psig working pressure.



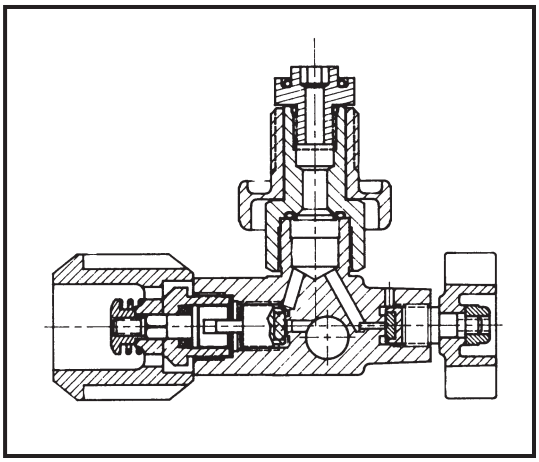
SAA5200 - DIN Adaptor: This adaptor can be installed in place of the standard yoke and nut assembly on all current Sherwood regulators. It converts a standard Sherwood yoke regulator to 200 Bar DIN use.



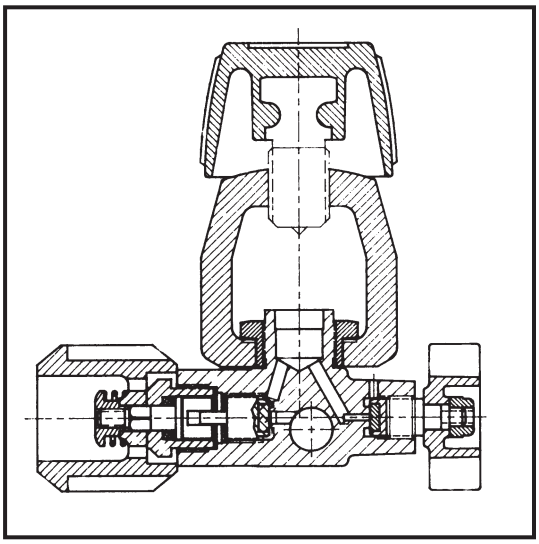
SAA5300 - DIN Adaptor: This adaptor can be installed in place of the standard yoke and nut assembly on all current Sherwood regulators. It converts a standard Sherwood yoke regulator to 300 Bar DIN use.



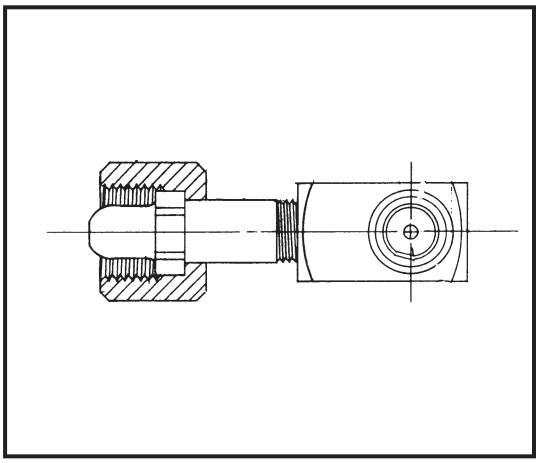
SVA3010D - 300 Bar DIN & Valve: This is the proper filling whip end for filling DIN valve cylinders. It allows the dive store to properly fill DIN valve cylinders to their full rated pressure. It can be used to fill 200 and 300 BAR DIN connections. It has a built in valve to allow the user to shut the air flow off , and vent the air from between the cylinder valve and the filling whip. It uses the same internal valve parts as Sherwood Scuba yoke valves.



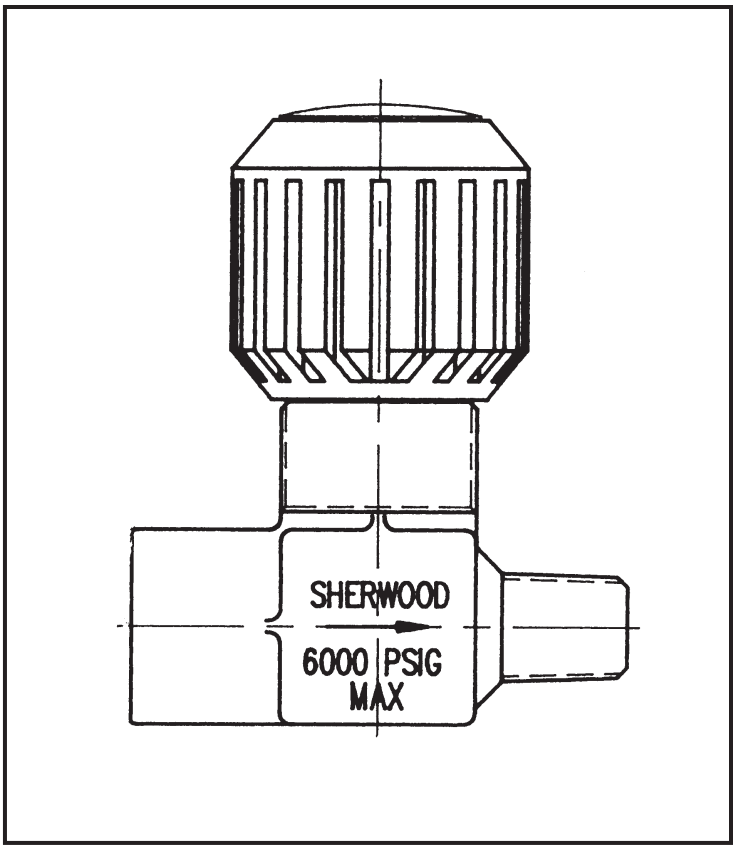
SVA3010 - CGA850 Yoke & Valve: This is the proper filling whip end for filling CGA850 valve cylinders. It has a built in valve to allow the user to shut the air flow off, and vent the air from between the cylinder valve and the filling whip. It uses the same internal valve parts as Sherwood Scuba yoke valves.



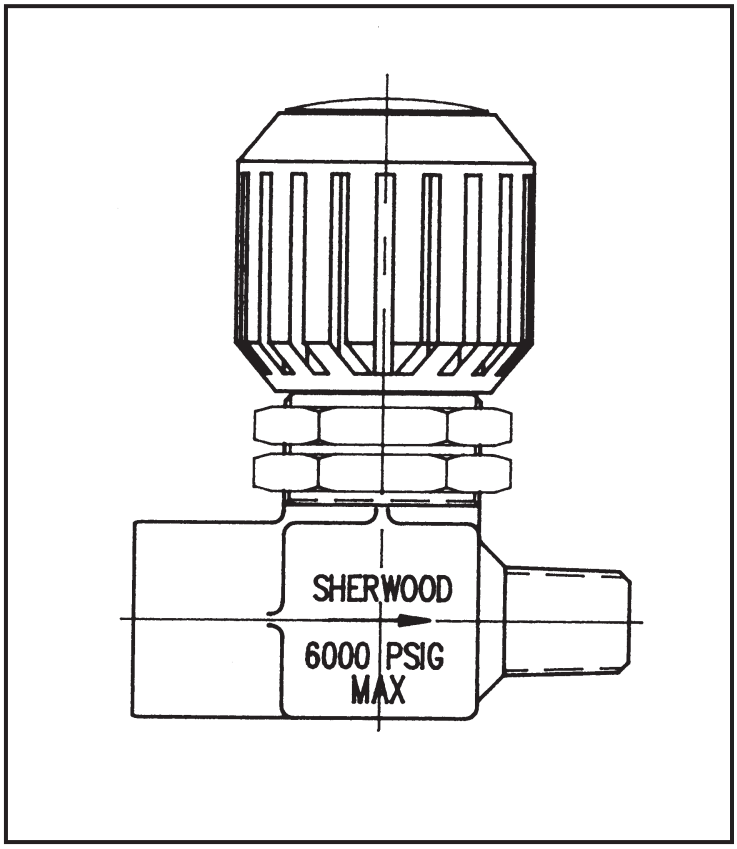
SYH3030 - CGA850 to CGA346 Adaptor: This adaptor allows the user to fill a fire rescue cylinder (with a CGA346 outlet) using a scuba filling whip. It can also be used to fill larger air storage cylinders.



YVA3010 - Line Valve: This valve is rated at 6000 psig working pressure. It is intended for controlling air flow in compressor or filling systems. The valve has 1/4" NPT female inlet and 1/4" NPT male outlet. It uses the same internal valve parts as Sherwood Scuba yoke valves.



YVA3010A - Line Valve: This valve is rated at 6000 psig working pressure. It is the same as the YVA3010 valve above, except that it has a threaded area on the body area beneath the handwheel. This threaded area contains two large nuts. These threads and nuts allow the YVA3010A to be panel mounted.



Notes



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