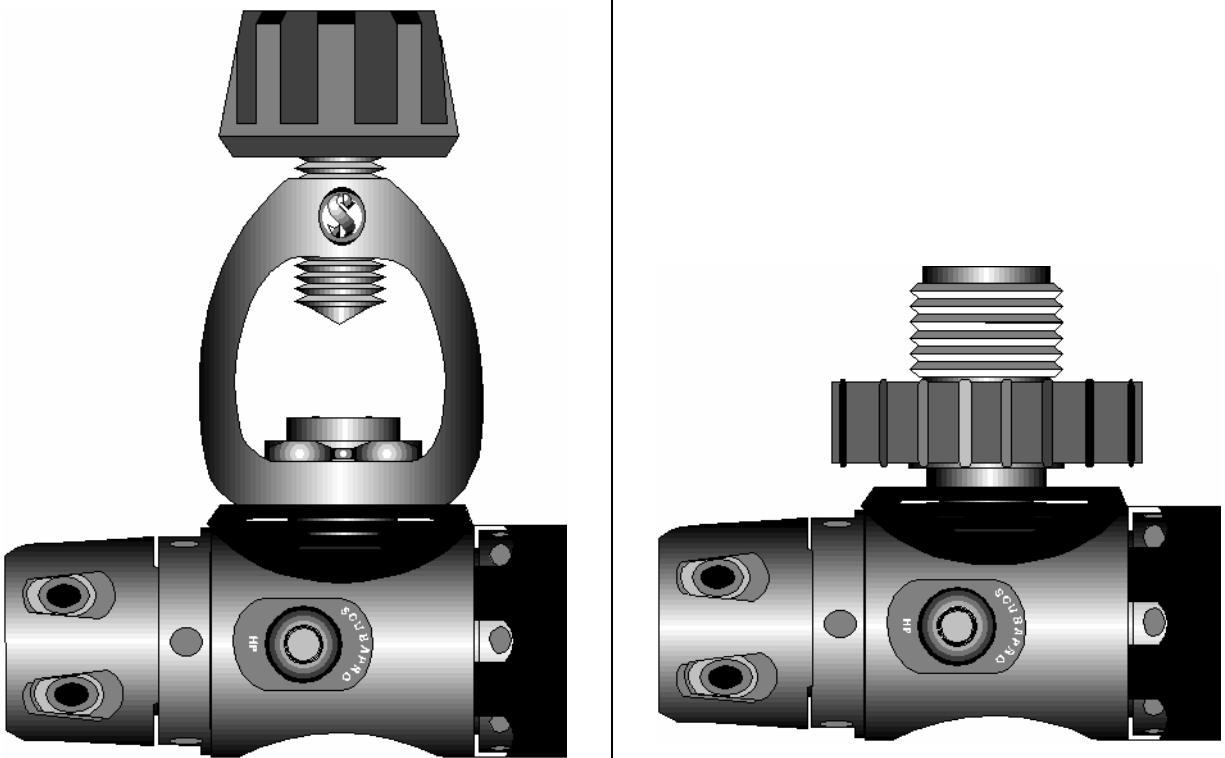


# SCUBAPRO

## Repair Guide

### MK 18 First Stage



**USE THIS GUIDE AS A REFERENCE WHEN SERVICING  
THE MK 18 FIRST STAGE**

**TOOLS NEEDED FOR REPAIR OF MK 18**





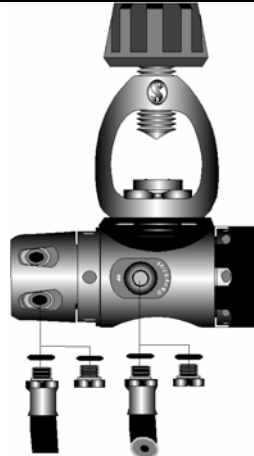






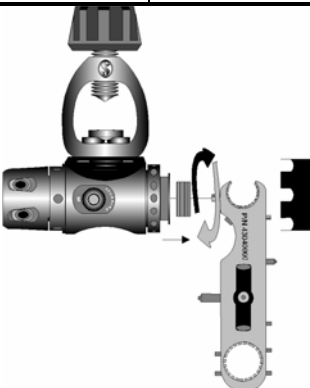
Quantity	Part Number	Description	
1		Socket Wrench with 3/8" drive and 3" extension	
1	20-155-500 (Peter Built)	1" Yoke Nut Socket	
	20.270-100 (Peter Built)	Balance Chamber Tool	
1 set	10.102.100 (Peter Built)	Brass o'ring picks	
1 tube	41.047.000	Christo-Lube	
1	47.010.000	Counter Mat	
1	41.496.101	Lubricant syringe	
1	43.040.000	Universal Tool	
1	20-115-100 (Peter Built)	First Stage Handle	
2		Torque Wrench with 3/8" drive - 100 in-lb range and 600 in-lb range	
1		Hex Key Set: 7/32" and 6mm	
1		Crescent wrench	
1	20.500.200 (Peter Built)	Pneumatic Adjusting tool	
1	18.300.500 (Peter Built)	Blow Gun/Air Nozzle	

**ICON LEGEND**



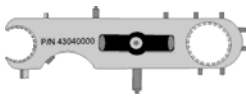

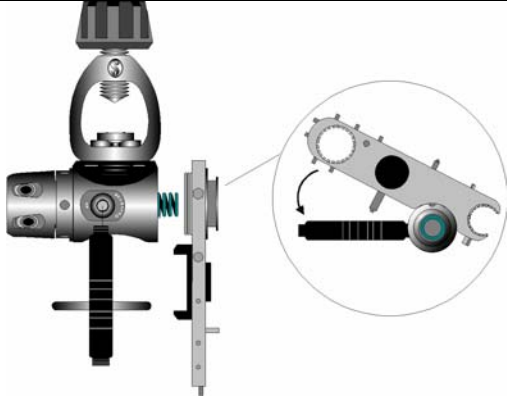
	Inspect carefully, replace if needed
	Lubricate properly
	Replace annually
	Dynamic o'ring, lubricate properly
	No tools needed for this step
	Indicates the regulators affected by this step




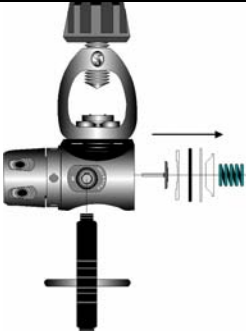
**SCUBAPRO MK 18 First Stage**




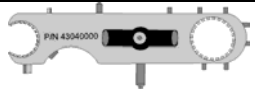
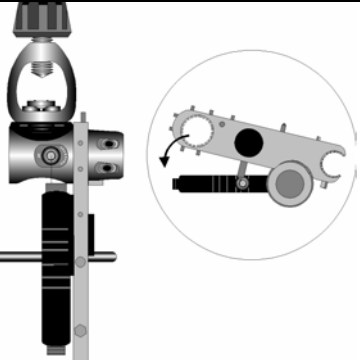
		 5/32"	
<p>Remove hoses from the first stage by using an adjustable wrench or 5/8" open-end wrench.</p> <p>Remove plugs using a 5/32" hex wrench.</p>			

		 6 mm	
<p>Remove the plastic boot. Using a 6 mm hex wrench or the Universal Tool, thread out the intermediate pressure adjustment screw.</p>			




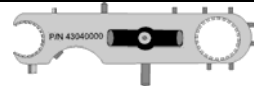
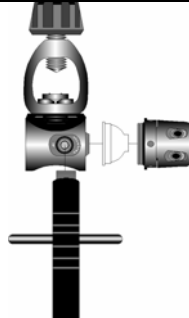
## SCUBAPRO MK 18 First Stage





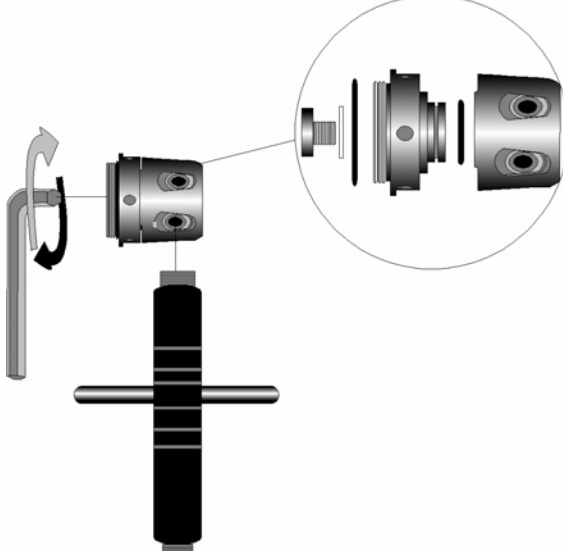
			
<p>Use the Universal Tool to remove the end cap from the main regulator body. The spring and spring pad can now be removed.</p>			

			
<p>Remove the friction washer and diaphragm carefully.</p> <p>Remove the HP module button and pin. Remove the pin carefully to ensure it is not lost.</p> <p>Remove the spring.</p>			

			
<p>Using the Universal tool and Field Handle, loosen the swivel assembly.</p>			

**SCUBAPRO MK 18 First Stage**

			
<p>Remove the swivel assembly.</p> <p>Remove the Hemispherical Chamber.</p>			





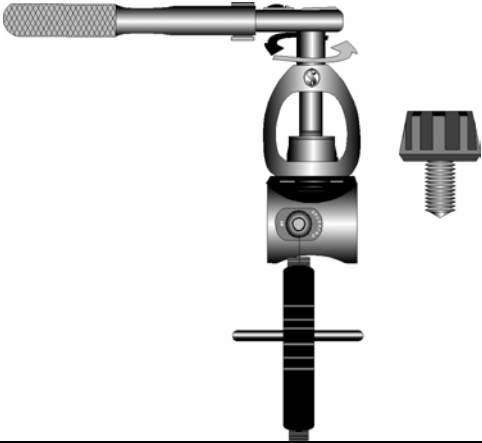
			 7/32"
<p>Use the Field Handle and 7/32" hex wrench to disassemble the swivel as shown.</p>			




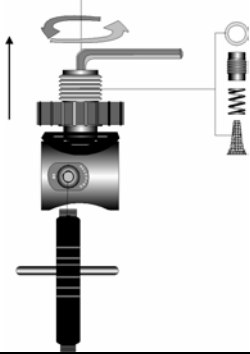
**SCUBAPRO MK 18 First Stage**

<p>Using the Balance Chamber Tool, remove the balance chamber by threading out the unit in a counter clockwise direction. Turn the unit as shown to prevent loss of the HP seat and spring assembly.</p> <p>Remove the spring assembly.</p>			




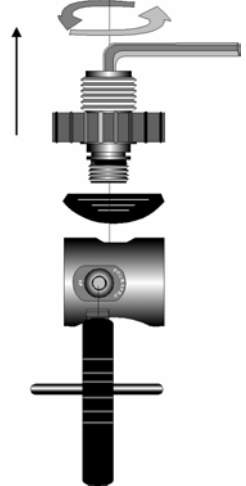




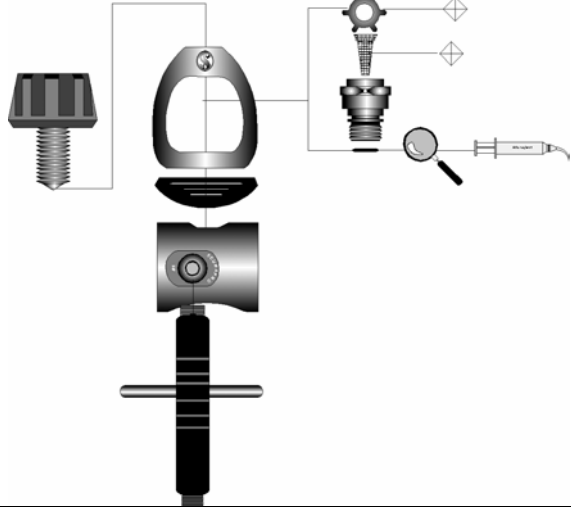
<p>Remove the HP seat using the brass picks. The HP seat will be replaced. Use caution to prevent damaging the regulator body.</p> <p>Alternatively, use the air gun and Balance Chamber tool to remove the HP seat.</p>			

**SCUBAPRO MK 18 First Stage**

				
<p>Remove the Yoke Nut, Yoke and Saddle from the regulator body.</p>				






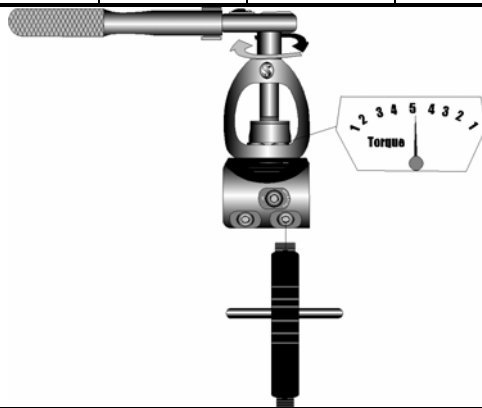
		 <p>5/32"</p>	
<p>Remove the Filter retainer, filter, spring, and o'ring from the DIN Fitting using a 5/32" hex wrench.</p>		<p>For DIN Regulators</p> 	




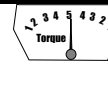

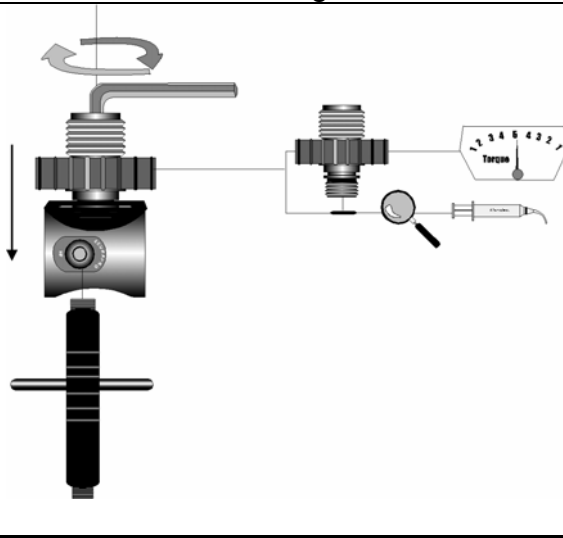
**SCUBAPRO MK 18 First Stage**

		 6 mm		
<p>Remove the DIN Fitting from the regulator body.</p>		<p>For DIN Regulators</p> 		
				
<p>Using a brass o’ring pick, remove the star retainer and filter.</p> <p>Clean and inspect all regulator parts.</p> <p>Replace the conical filter. Inspect and lubricate the static yoke nut o’ring. Replace the o’ring if needed.</p>				



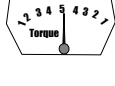

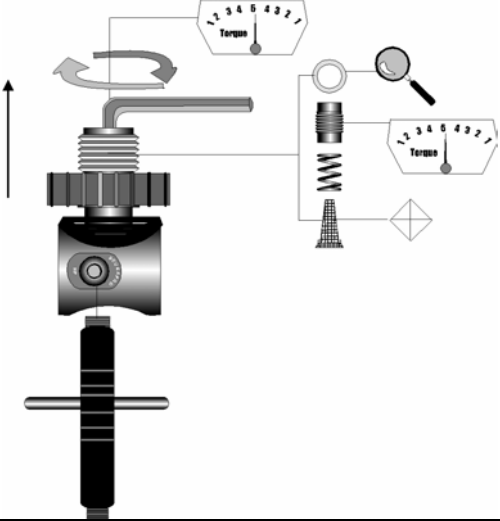




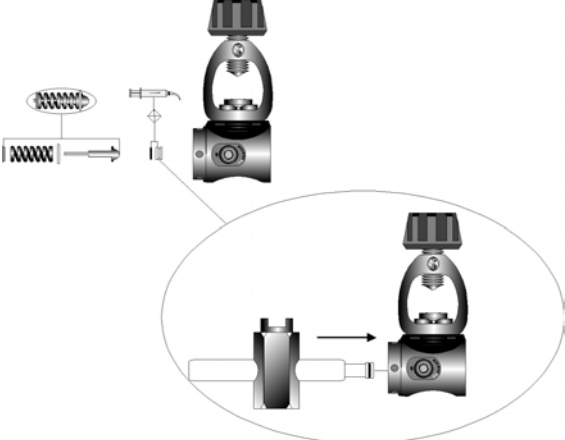
**SCUBAPRO MK 18 First Stage**

					
<p>Torque the yoke nut to 266 in-lbs or 30 Newton-meters.</p>					



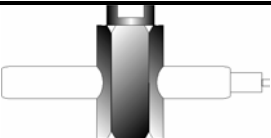
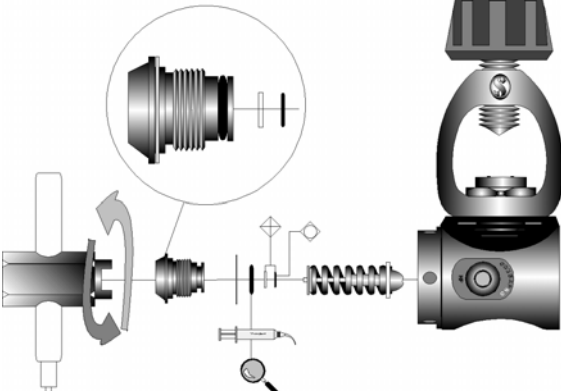
		 <p>6 mm</p>			
<p>Replace the DIN Fitting into the regulator body after inspection and lubrication of the fitting-to-body o’ring.</p> <p>Torque to 266 in-lbs or 30 Newton-meters.</p>		<p style="text-align: center;">For DIN Regulators</p> 			




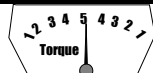

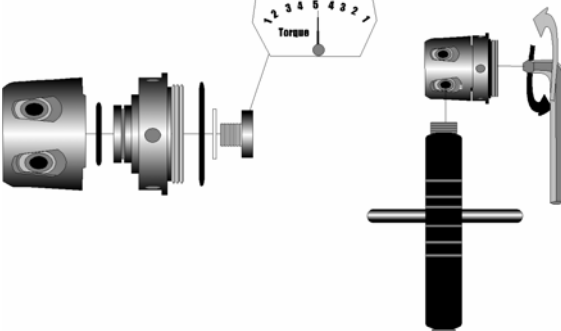
**SCUBAPRO MK 18 First Stage**

		 5/32"	 Torque	
For DIN Regulators				
<p>Replace the spring, filter, o'ring, and filter retainer. Torque to 35 in-lbs or 4 Newton-meters.</p>				

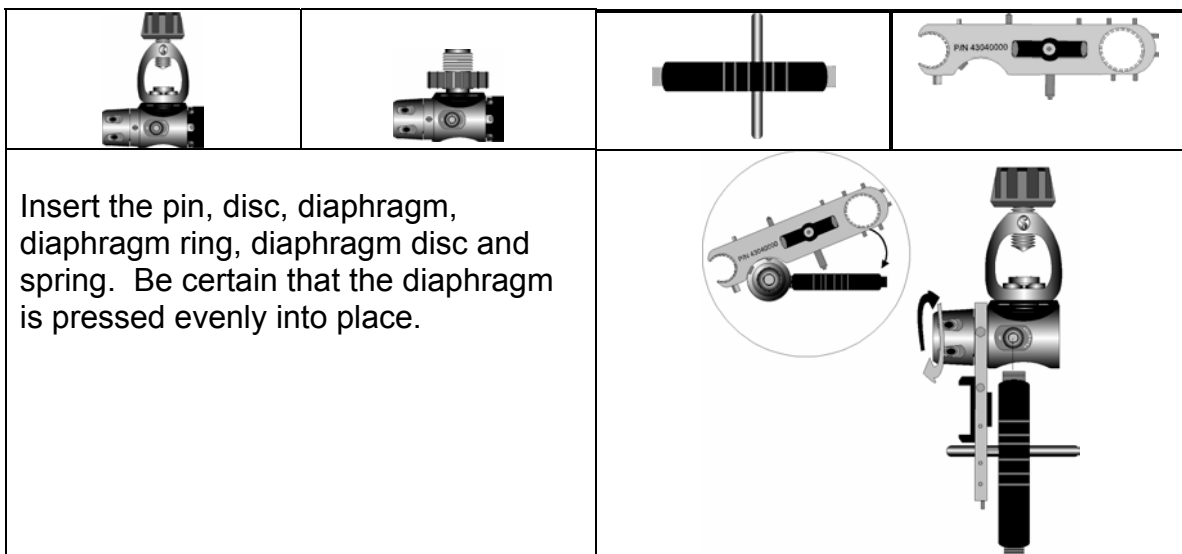
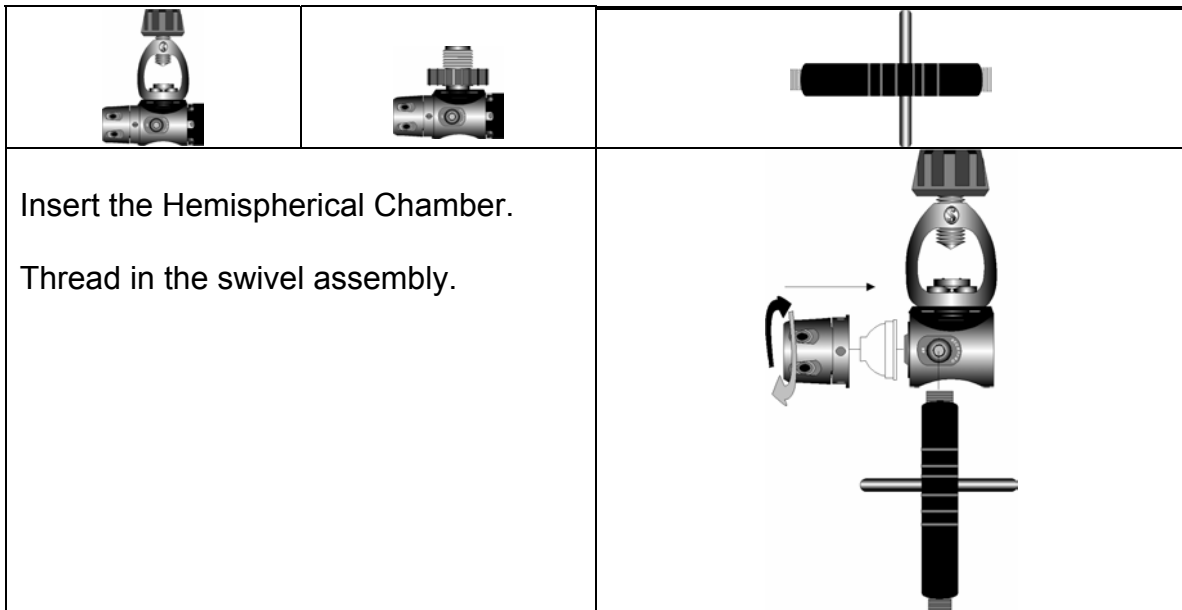
		No tools needed for this step		
<p>Using the balance chamber (MK 16) tool, insert a new HP seat assembly into the regulator body after lubricating the HP seat o'ring properly.</p> <p>Assemble the HP poppet, spring and washers.</p>				

**SCUBAPRO MK 18 First Stage**




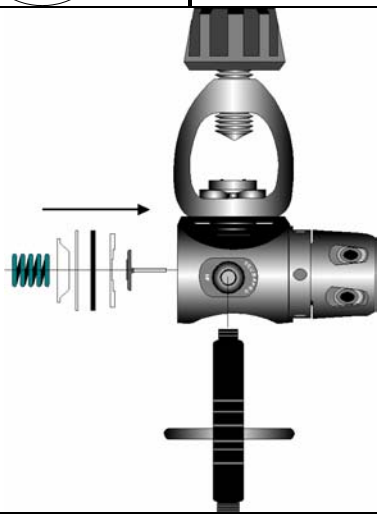
		
<p>Assemble the o’ring, (2) washers in the HP seat retainer.</p> <p>Insert the poppet assembly. Insert the HP seat retainer and tighten using the MK 16 tool.</p>		



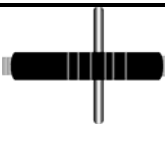
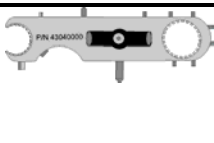
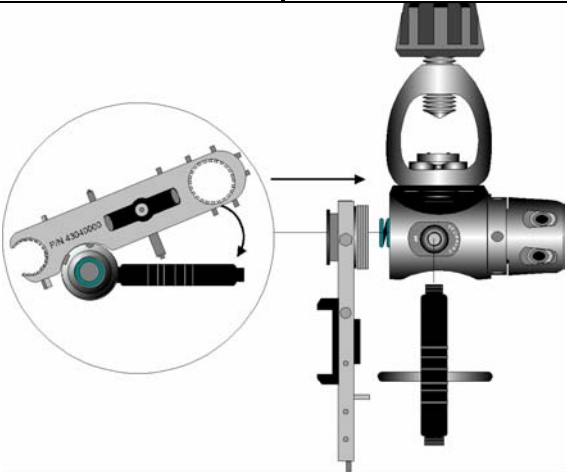
		 <p>7/32"</p>	 <p>Torque</p>	
<p>Reassemble the swivel retainer to the regulator cap using a 7/32" hex and torque wrench. Apply 70 in-lbs/8 Newton-meters.</p>				

## SCUBAPRO MK 18 First Stage




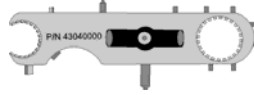
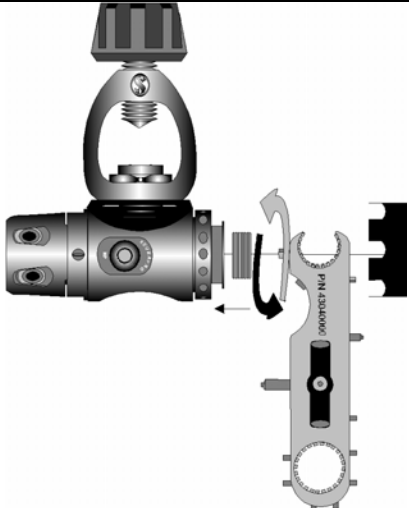







**SCUBAPRO MK 18 First Stage**

			<p>No tools needed for this step</p>
<p>Insert the pin, disc, diaphragm, diaphragm ring, diaphragm disc and spring. Be certain that the diaphragm is pressed evenly into place.</p>			

			
<p>Thread and tighten the diaphragm holder using the universal tool and first stage handle.</p>			

## SCUBAPRO MK 18 First Stage

		 6mm	
<p>Thread in the spring screw (adjustment cap) and tighten flush with the 6 mm hex wrench or with the Universal tool.</p> <p>The cap will be adjusted to set the intermediate pressure in a subsequent step.</p> <p>Replace the plastic cap. It is possible to make intermediate pressure adjustments with the plastic cap in place.</p>			

			 6mm	
<p>Attach the second stage regulator through the pneumatic adjusting tool. Do an air-on test to determine the intermediate pressure.</p> <p>Adjust the intermediate pressure using the 6mm hex wrench or Universal tool. Increase intermediate pressure by turning clockwise.</p> <p>Intermediate pressure should be between 125 and 145 psi at 3000 psi and 300 psi.</p>		