



# Kirby Morgan Dive Systems, Inc.®

1430 Jason Way Santa Maria, California 93455

Phone: 805/928-7772 Fax: 805/928-0342

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## Part #525-764

### REX® Whisker Wing Exhaust Kit

#### Tools Required:

CUTTING TOOL  
PHILLIPS HEAD SCREWDRIVER  
BACKUP WRENCH - Use Tool Kit P/N 525-768  
REGULATOR COVER SPANNER WRENCH - Use Tool Kit P/N 525-768  
CHRISTO LUBE P/N 520-007

#### Parts Required:

Part Number	Description	Qty.
510-776	Exhaust Valve	2
510-783	Whisker Main Body, REX	1
510-784	Starboard Whisker Wing, REX	1
510-785	Port Whisker Wing, REX	1
520-038	Tie Wrap	2
520-042	11" Tie Wrap	2
520-200	Valve Seat	2

#### Instructions:

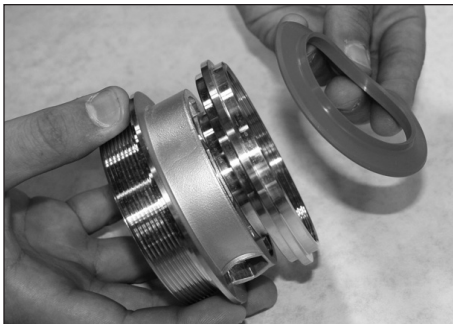


Figure 1

1. Carefully stretch the Exhaust Valve P/N 310-065 over the top of the Regulator Body P/N 560-514 and fit it into its positioning groove. Work the Exhaust Valve so it is properly seated on the Regulator Body. Make sure the Valve is installed correctly. The flap of the valve should seal against the surface with large cut-outs, and the rib along the inner diameter of the valve should be facing up towards the Diaphragm P/N 510-553. Visually inspect to insure exhaust valve will not invert. The valve should snap closed without hesitation. See figure 1.



Figure 2a



Figure 2b

2. Install Whisker Main Body P/N 510-783 onto Regulator Body P/N 560-514. Be sure the proper holes are aligned. The side of the Regulator Body with the hex opening should be aligned with the hole opposite of where the Sleeve P/N 350-035 is installed. Make sure the grooves inside the Whisker Main Body and Regulator Body are matched and in place. After installation make sure the holes are aligned. If they are not aligned, the Main Tube P/N 350-032 will not fit through properly. See figure 2a and 2b.

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**Figure 3a**



**Figure 3b**

3. Install Sleeve P/N 350-035 into the Whisker Main Body P/N 510-783. Push in until the rubber snaps into the groove on the Sleeve. When properly positioned the outer end of the spacer will be slightly inboard of the outer surface of the Whisker Main Body. *See figure 3a and 3b.*

4. Lightly lubricate O-rings P/N 310-013 with Christo Lube®. Install both O-rings P/N 310-013 on the Main Tube P/N 350-032 from the threaded end. Be extra careful due to sharp edges that can cut the O-rings, and cause a leak. *See figure 4.*



**Figure 4**

5. Inspect the Main Tube P/N 350-032 for debris. Install into Whisker Main Body P/N 510-783 and Regulator Body P/N 560-514 until Roller Lever Arm P/N 545-038 and Horseshoe P/N 340-004 install area is in the center of regulator opening. *See figure 5.*



**Figure 5**

6. Just slightly compress the ends of the Horseshoe P/N 340-004. This will make the Horseshoe fit tightly onto the Main Tube P/N 350-032.

7. Install Horseshoe P/N 340-004 on the flat area of the Main Tube P/N 350-032. Push it as far as it can go. Rotate the Main Tube 180° until the small air balance hole is facing up towards the Diaphragm P/N 510-553 area. Now push Main Tube all in until the O-ring P/N 310-013 on the Main Tube just fits into the hole on the Regulator Body P/N 560-514. *See figure 6.*



**Figure 6**

8. Lubricate O-ring P/N 310-006 and the Tip of the Inlet Valve Assembly P/N 305-057 with Christo Lube®, make certain that no Christo Lube® does not enter the small air hole. Install into the hex side of the Main Tube P/N 350-032. *See figure 7.*



**Figure 7**

9. With the legs of the Roller Lever Arm P/N 545-038 over the slots in the Main Tube, and the Roller Pointed towards the center of the Regulator, slip the Roller Lever Arm P/N 545-038 into the slot and slide it towards center. The Lever Arm should move up and down without binding. If it does bind then either the legs on the Lever Arm are



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**Figure 8**

too wide or the slots in the Main Tube are too narrow. The Regulator will not work properly this happens. *See figure 8.*

10. Push the Main Tube P/N 350-032 the rest of the way into the Regulator.

11. Lubricate Spacers P/N 350-065 lightly with Christo Lube®. Place both Spacers on each end of the Spring P/N 535-910.

12. Install Spring P/N 535-910 and Spacers P/N 350-065 into Main Tube P/N 350-032 against the Inlet

Valve P/N 305-057. Be sure the Spacer is at the outer end. Push it far enough into the Main Tube so the end of the Spacer is even with the outer end of the Main Tube.

13. Lubricate the threads on the Adjustment Knob Assembly P/N 305-045 with Christo Lube®, and thread it onto the Main Tube P/N 350-032, Sleeve P/N 350-035 end *See figure 9.* Once the threads on the shaft are into the Main Tube the Packing Nut P/N 350-025 can be threaded onto the Main Tube *See figure 10.* Using a 1<sup>3</sup>/<sub>16</sub>" wrench tighten Adjustment Knob P/N 320-035.



**Figure 9**

**Be sure you turn the Adjustment knob on the Regulator as you tighten the Packing Nut. Failure to do this can result in the Packing Nut being too loose, damaging the O-ring under the Packing Nut or both!!! Tighten it until it is snug. Do not over tighten as this could result in damage to the Regulator Body.**



**Figure 10**

14. Lubricate O-ring P/N 310-007 with Christo Lube®.

15. Turn The Adjustment Knob P/N 320-035 on the Reg Adjustment Assembly P/N 305-045 all the way in until it stops, at this time, insert the Nipple Tube P/N 550-542 and turn it in far enough to make the Lever Arm P/N 545-038 just begin to drop down. This will put pressure on the Inlet Valve's P/N 305-057 rubber

seat to cause the Nipple Tube to make an indentation into it. Using both Back-up Wrenches snug both Adjustment Lock Nut P/N 550-560 and Nipple Tube together to prevent any movement of the Nipple Tube until final adjustment. Set the Regulator aside, covered from dust for at least eight hours. They can be installed into the Helmet but must not be setup with air pressure for at least eight hours. *See figure 10.*



**Figure 11**

16. Turn the Adjustment knob out 3 1/2 turns.

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**Figure 12**

17. Lightly lubricate the stem of the Whisker Exhaust Valve P/N 510-776 with Christo Lube® then insert into the Whisker Exhaust Valve Insert P/N 520-200. The Whisker Exhaust Valve inserts into the recessed (flat) side of the Whisker Exhaust Valve Insert. Using a cutting device, trim the excess material on the stem of the Whisker Exhaust Valve. *See figure 11.*

18. Insert the Whisker Exhaust Valve Insert P/N 520-200 into the Whisker Main Body P/N 510-783, with the Whisker Exhaust Valve facing the outside.

19. Secure the Main Tube P/N 350-032 and Sleeve P/N 350-035 area with Tie Wraps P/N 520-038, tighten with a pliers then cut excess material with a cutting device.

20. Install Starboard Whisker Wing, REX P/N 510-784 onto the Whisker Main Body P/N 510-783. Make certain the Starboard Whisker is seated properly onto the Whisker Main Body. Put P/N 520-042 Tie Wrap around the Starboard Whisker and tighten. Make sure that it is fully tightened and then cut off the excess Tie Wrap. *See figure 12.*

21. Install Port Whisker Wing, REX P/N 510-785 onto the Whisker Main Body P/N 510-783, Make certain that the Port Whisker is seated properly onto the Whisker Body. Put P/N 520-042 Tie Wrap around the Port Whisker and tighten. Make sure that it is fully tightened and then cut off the excess Tie Wrap..

22. Seat Diaphragm P/N 510-553 into the front opening of the Regulator Assembly. Make certain that the Diaphragm is properly seated, or the Regulator will not properly seal. *See figure 13.*

23. Install Washer P/N 320-030 on top of the Diaphragm P/N 510-553. Using the Valve Installation Tool work the Washer so it is even all the way around.



**Figure 14**



**Figure 13**

24. Install Cover P/N 510-006 on top of the Washer P/N 320-030 followed by the Cover Retainer Ring P/N 550-042. Using the Regulator Cover Spanner Wrench tighten Cover Retainer Ring until snug. Using the Valve Installation Tool to help align the Logo on the Cover and the holes on the Cover Retainer Ring with the Regulator Adjustment Assembly and Nipple Tube tighten Cover Retainer Ring. *See figure 14.*