

NIRA SERVICE PROCEDURES:

Tools Required:

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| 1. 19mm spanner | cod. 9782 |
| 2. 17mm spanner | cod. 9783 |
| 3. Small screwdriver line | cod. 9784 |
| 4. Screwdriver crosses | cod. 9790 |
| 5. O'ring pick | cod. 33407 |
| 6. NIRA nozzle tool | cod. 33404 |
| 7. NIRA ad.tool w/pres. gauge | cod. 9754 |
| 8. Silicone grease | cod. 33410 |

DISASSEMBLY:

- Step 1** Remove intermediate pressure hose from the NIRA using two wrenches, 19MM Spanner & 17MM Spanner.
- Step 2** Remove **cover lock (35)**. Remove **Cover (1)** unscrewing it by hand from the Housing. Remove the **inhalation diaphragm washer (5)** and gently remove the **inhalation diaphragm (6)** if the diaphragm is stuck to the housing carefully peel back the outer edge to avoid tearing it.
- Step 3** If required remove the **purge button (2)** and the **purge spring (3)** by pressing the four tabs on the underside, inward.
- Step 4** Loosen the **hex nut (13)** with a crescent wrench and remove it along with the **valve body washer (14)**. Remove the valve body assembly from the housing, by sliding the **valve body (15)** out so the **lever (19)** is fully exposed. Remove the lever and slid the entire assembly out of the housing.
- Step 5** Remove the **adjustment screw (26)** from the **valve body (15)**. Remove the **wedge (20)** and unscrew the adjustment screw until it is free of the valve body. It may be necessary to turn the adj. screw clockwise to release and remove the wedge before unscrewing the adj. screw counter-clockwise.
- Step 6** Gently tapping on the open end of the valve body will cause the **poppet (21)**, **poppet chamber (24)**, and the **poppet spring (23)** to drop out. *NOTE: TO ASSURE BEST PERFORMANCE, THE POPPET SEAT SHOULD BE REPLACED WITH A NEW POPPET SEAT ANY TIME IT IS REMOVED FROM THE VALVE BODY.*
- Step 7** Unscrew the **nozzle (18)** with the flat blade screwdriver. Due to friction of the **O-ring (17)** the nozzle will tend to stay in the valve body. It may be carefully pushed out with the eraser end of a pencil or with the ¼" dowel. Care must be taken not to scratch or nick the end of the Cone shaped surface.

INSPECTION, REASSEMBLY AND ADJUSTMENT:

- Step 1** Inspect all O-rings and sealing surfaces to ensure that they are clean and free of any debris. If necessary, clean with a mild acid solution (Vinegar and water). Replace any parts that appear worn especially O-rings. **Replacement of the poppet seat should be standard part of any servicing.** Lightly lubricate all O-rings with silicone grease and re-install. Inspect inhalation diaphragm for cuts or nicks. Inspect nozzle blade, replace nozzle o-ring.
- Step 2** Install the **nozzle (18)** with a flat blade screwdriver. To position the nozzle, continue screwing it in until the cone end reaches the far side of the slot in the valve body.
- Step 3** Assemble the **poppet (21)**; **poppet seat (22)**; **poppet spring (23)** and the **poppet chamber (24)**. Insert the entire assemble into the **valve body (15)**.
- Step 4** Assemble the **adjustment screw (26)** into the end of the **valve body (15)**.Screw into valve body until you can see slot then insert #20 wedge then unscrew till it lock
- Step 5** Slide the valve body assembly partially into the housing. Position the slot for the **lever (19)** up. Slip the ends of the lever into the slot, the lever should fall easily into place, if it does not, screw the nozzle further into the body. Push the valve body all the way into the housing, aligning the locking flats in the housing with the flats on the valve body. Add the washer and hand tighten the hex nut onto the threaded end of the valve body. With a crescent wrench, tighten the hex nut snugly (Approx. 30 inch pounds torque).
- Step 6** The position of the nozzle affects the operating position of the lever. To precisely position the nozzle, adjust the position of the nozzle until there is only about 1/32" free-play at the end of the lever.
- Step 7** Replace the **inhalation diaphragm (6)**, **Inhalation diaphragm washer (5)** and **cover assembly (1)**.
- Step 8** Screw the **Inline adjustment tool** onto the threaded end of the valve body. Hand screw a regulator with a second stage hose onto the tool.
- Step 9** For the final adjustment to the NIRA; connect the regulator to an air supply With the air pressure ON, back OUT the nozzle with the inline tool until the NIRA leaks air. Now screw the nozzle back IN until the leak stops. Operate the purge button a few times to confirm there is not a leak. If necessary, readjust the nozzle. (In the field or when no inline adjustment tool is available the same adjustment procedure may be made with the **trim screw (28)** by removing the elastomeric **adjustment knob (29)** and turning the trim screw OUT till the NIRA leaks air and then turn IN until the leak stops, operate the purge a few times to confirm there is not a leak, readjust the trim if necessary.) (*NOTE: THE ORIGINAL ADJUSTMENT FOR ACCEPTANCE AT THE FACTORY REQUIRES THAT The VALVE BEGINS TO FLOW WHEN THE PRESSURE AT THE MOUTHPIECE IS MINUS 1.3 + 0.2 - 0.1 INCH OF WATER.*) .
- Step 10** The aspiration control device may be removed by holding one **aspiration knob (30 or 34)** fixed and unscrewing the other aspiration knob free of the **stud (32)**. When free the knobs can be pulled out of the housing, the **tab (33)** will fall free and the stud will remain in one of the knobs.