

A. DISASSEMBLY

Step No.	Key No.	Description	Procedure
1.		Hose	Unscrew from cap (1) with 9/16" wrench.
2.	1	Cap	Unscrew from body (16) with 9/16" wrench.
3.	5	Piston Assembly	Carefully pull back. Remove spring (6). With small tool, slip under back-up ring (3), and lift up. Roll O'ring (2) over end of piston (5). Handle piston (5) carefully, especially small end.
4.	10	Bushing Assembly	Unscrew with 9/16" socket wrench. With small hook tool, remove back-up ring (7) and O'ring (8) from inside of hex end of bushing (9). Remove O'ring (11).
5.	14	Seat Assembly	Place air hose nozzle (low pressure) on surface of seat, and apply air pressure. Seat should pop loose. Remove O'ring (12). There should be no need to disassemble metal tube insert.
6.	15	O'Ring	Remove from body (16).
7.	26	Nut	Unscrew from stem (18). Remove spring (25), lever (24), and washer (23).
8.	22	Bonnet	Unscrew with 13/16" wrench. Remove poppet assembly (17) from body (16). Remove O'ring (21) and gasket (20).
9.	18	Stem	With small hook tool, carefully pry O'ring (19) off stem (18).
10.	34	Plug	Unscrew from body (16) with 1/2" wrench. Remove O'ring (33).
11.	29	Yoke Screw Assembly	Unscrew by hand, and with small tool placed under ring (27), pry up to remove.
12.	36	Cap Assembly	Untie line from body (16). Remove O'ring (32).
13.	30	Retainer Ring	Remove from body with circlip pliers (Ref TOOLS). Remove filter (31) and O'ring (32) from body (16).

B. INSPECTION AND REPAIR PROCEDURE

1.		All O'rings, back-up rings, gaskets, etc.	Check for nicks, wear, deterioration, etc. Replace if necessary.
2.	4	Piston	Check for nicks, dents, etc. on seat face, stem diameter and O'ring groove. Replace if necessary.
3.	9	Bushing	Check for nicks, wear, etc. on inside diameter. Replace if necessary.
4.	13	Seat	This seat is reversible. Check both ends for nicks, wear, etc. If one end is good, see Step No. 17 in Assembly section. If not, replace.
5.	18	Stem	Check for excessive wear. Replace if necessary.
6.	17	Poppet Assembly	Check for excessive wear. Replace if necessary.
7.	31	Filter	Check for excessive foreign matter, dirt or verdigris. Replace if necessary.

C. CLEANING PROCEDURE

1.	All plastic and rubber parts. (Note: poppet assembly (17) and filter (31) should be cleaned at this step and not in acid.	Clean in warm, soapy water. Rinse thoroughly and dry with air hose or cloth. Apply very thin coat of silicone grease to all surfaces except filter. Wipe with clean cloth to remove excess silicone or loose dirt.
2.	All metal parts except as previously noted. (Note: Remove all rubber and plastic parts first.)	Clean in mixture of 15-20% nitric acid solution and rinse thoroughly with fast running fresh water. Dry with air hose or cloth.

NOTE: Additional cleaning might be necessary due to extra thick foreign matter. Use extra fine wire brush or equivalent.

D. ASSEMBLY PROCEDURE

Step No.	Key No.	Description	Procedure (Ref exploded view)
1.	27	Ring	Place on yoke screw (28).
2.	32	O'Ring	Place in protection cap (36), and tie it to yoke of body (16).
3.	33	O'Ring	Place on plug (34), and screw into body (16).
4.	32	O'Ring	Place inside body (16).
5.	31	Filter	Place on top of O'ring (32).
6.	30	Retainer Ring	With circlip pliers (Ref TOOLS), place in groove of body (16).
7.	29	Yoke Screw	Screw into body (16).
8.	21	O'Ring	Place on bonnet (22).
9.	20	Gasket	Place inside bonnet (22).
10.	19	O'Ring	Place on stem (18).
11.	17	Poppet Assembly	Place in square area of body (16).
12.	18	Stem	Place slot over cam of poppet assembly (17).
13.	22	Bonnet	Screw into place in body (16).
14.	23	Washer	Place over hex surface of bonnet (22).
15.	24	Lever	Place over stem (18). Check for proper location of reserve by blowing air through opposite end of body (16). If air comes through filter (31) when lever (24) is in "reserve" position, place spring (25) into lever, and secure assembly with nut (26). If air does not come out, remove lever (24) and turn stem (18) into its next position, and check again. Rotate lever (24) and check for proper location with respect to arrow found on body (16).
16.	15	O'Ring	Place on body (16).
17.	12	O'Ring	Place on seat (13). Check for good end. Push other end all the way into body (16).
18.	11	O'Ring	Place on bushing (9). Insert small O'ring (8) on inside followed by back-up ring (7). Do not reverse order. Screw assembly into body (16).
19.	3	Back-up Ring	Place on piston (4). Add O'ring (2). Locate O'ring (2) so that it is at extreme end of piston (4). Do not reverse.
20.	6	Spring	Place into body (16).
21.	5	Piston Assembly	Wipe thin coat of silicone grease over seat (13) face, stem (18), O'ring (2) and back-up ring (3). Insert through bushing (9). Note: When seat face touches O'ring on inside of bushing, proceed very carefully due to possibility of face cutting O'ring.
22.	1	Cap	Place body (16) in a soft jaw vise. Clamp on flat edges of yoke of body (16). Place cap (1) squarely on spring (6), and compress so that cap threads engage body threads; tighten.
23.		Hose	Screw into cap (1).

ADJUSTMENT PROCEDURE

This unit has been designed for a breathing resistance which is agreeable to the majority of users. You may, however, wish to increase the intermediate pressure for easier breathing. To do this, add washer No. 8210-17 to the 1st stage body (16), directly under spring (6).

Standard intermediate pressure is approximately 128 psig at 2000 psig supply. One washer will add approximately 10 psig. This pressure is checked by screwing a test gauge (Ref 1116-00, TOOLS) in place of 2nd stage. Note: Before supply pressure is turned on, first open bleed screw on test gauge. After flow begins, close bleed off slowly. Test gauge needle should stop within specified range. If, however, it continue to climb, close supply; 1st stage might have high pressure leak.

Step No.	Key No.	Description	Procedure (Ref exploded view)
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Proper ease of breathing can be checked by placing 2nd stage (connected to 1st stage) in a pan of water so that rim of mouthpiece is facing up and slightly above the surface of the water. At this point, a small amount of air should pass through the 2nd stage.

TROUBLE SHOOTING CHART

NOTE: Trouble shooting should be done as a complete unit (1st and 2nd stages together).

COMPLAINT	ORIGIN	KEY NO.	CAUSE*	REMEDY (Ref exploded view)
Air leak from 3 drain ports	O'Rings or Bushing	2, 8, 11 10	Bushing not tight or O'rings damaged.	Tighten or replace O'rings as necessary.
Air leak from cap	O'Ring or Cap	15 1	Cap not tight or O'ring damaged.	Tighten cap or replace O'ring as necessary.
H.P. air leak to 2nd stage	Piston O'Ring Seat	5 12 13	Piston seat, O'ring or seat damaged.	Reverse seat (See Inspection Step No. 4.) or replace parts as necessary.
Air leak from reserve lever	O'Rings or Bonnet	19, 21 22	Bonnet not tight or O'rings damaged.	Tighten or replace O'rings as necessary.
Reserve operation	Poppet	17	Foreign matter or damage.	Check operation. With supply pressure between 300 and 400 psig, noticeable restriction with average inhalation should be felt. If not, clean and/or replace.

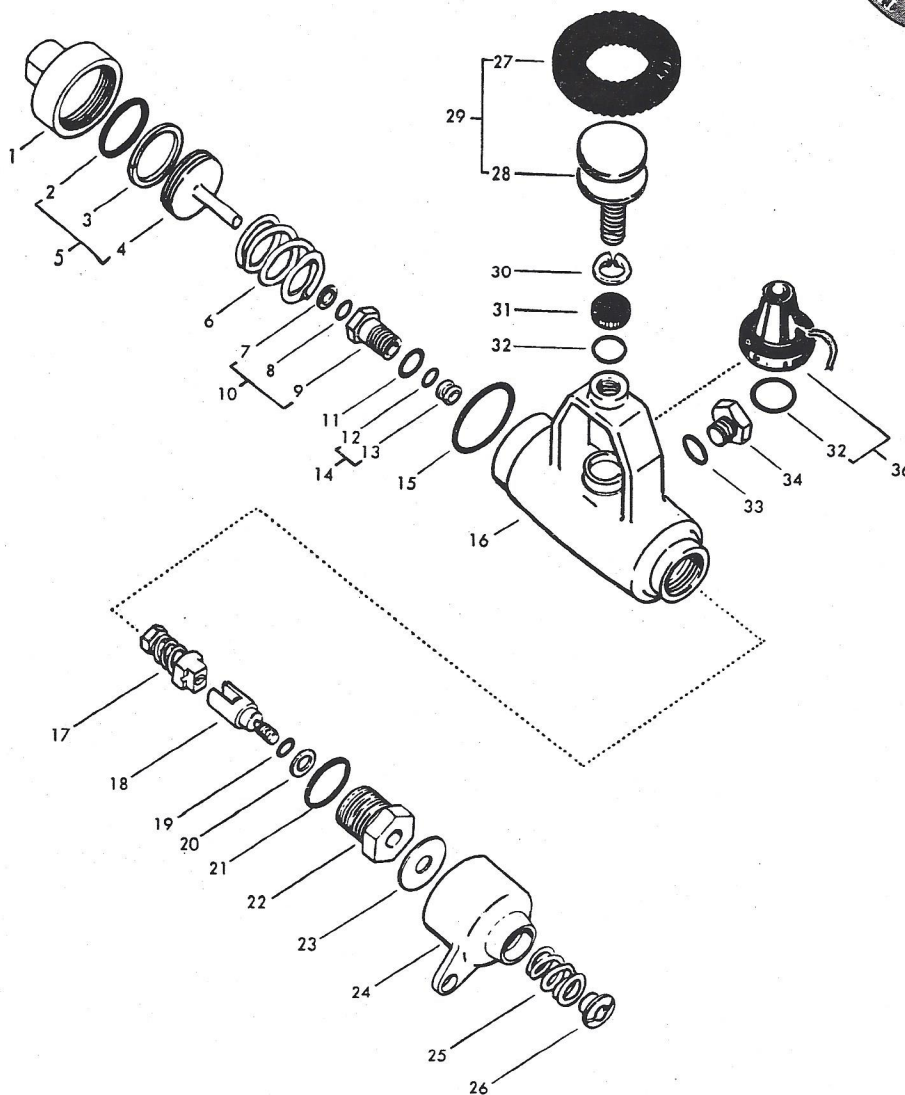
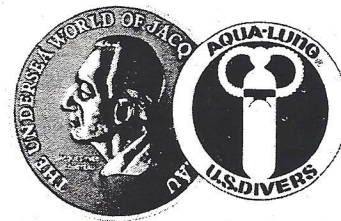
NOTES:

- *Cause could be due to dirt, sand, wear or verdigris in addition to items already listed.
- See "Adjustment Procedure" in this and also 2nd stage (1048-00, 1050-00, 1052-00 and 1056-00) section for breathing characteristics.

PARTS LIST

1051 CALYPSO J (1st Stage)

FIRST STAGE FOR 1048-00 CALYPSO J REGULATOR



Key Order Part	Description	Key Order Part	Description
1 - 1051-07	Cap	20 - 1051-26	Gasket
2 - 8200-20	O'Ring	21 - 8201-13	O'Ring
3 - 8280-20	Back-up Ring	22 - 1051-27	Bonnett
4 - 1051-10	Piston	23 - 8450-32	Washer
5 - 1051-09	Piston Assembly	24 - 1051-23	Lever
6 - 1051-11	Spring (H.P.)	25 - 0527-15	Spring
7 - 8280-08	Back-up Ring	26 - 0527-16	Nut
8 - 8200-08	O'Ring	27 - 1051-05	Yoke Ring
9 - 1051-12	Piston, Bushing	28 - 1051-04	Yoke Screw
10 - 1051-29	Piston, Bushing Assy	29 - 1051-03	Yoke Screw Assembly
11 - 8200-12	O'Ring	30 - 8630-51	Retainer Ring
12 - 8241-08	O'Ring	31 - 1051-06	Filter
13 - 1051-15	Seat	32 - 8200-12	O'Ring
14 - 1051-13	Piston, Seat Assembly	33 - 8200-11	O'Ring
15 - 8200-24	O'Ring	34 - 9109-12	Plug
16 - 1051-01	Body, 1st Stage	36 - 1010-12	Cap Assembly
17 - 1051-17	Poppet Assy		
18 - 1051-25	Reserve Lever Stem	- 1051-00	1st Stage
19 - 8200-10	O'Ring	- 1048-50	2nd Stage