

Figure 1. Major pieces of exploded air pressurized (SCUBA) cylinder E6498-2216. Caret marks indicate clearly defined chevron patterns that point to the fracture origins.

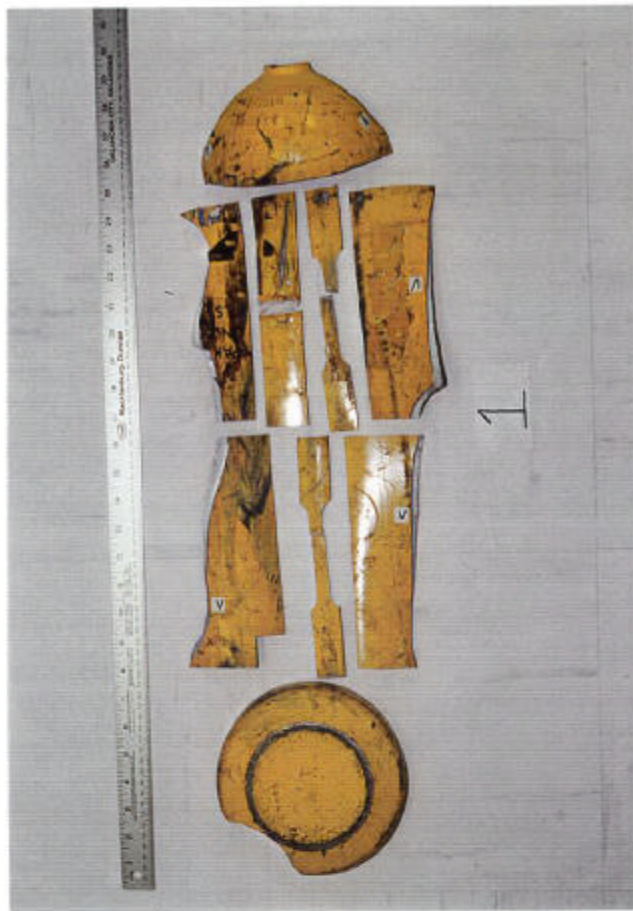


Figure 2. Arrangement of test coupons, from a previous examination, which constitutes one continuous failure section.

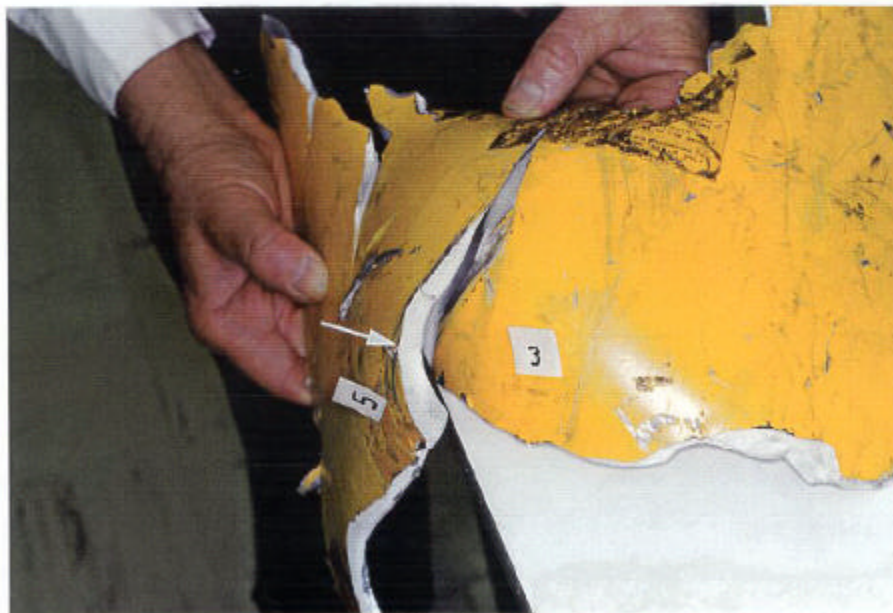


Figure 3. Matching (without touching) fracture profile of fracture piece #3 with #5. Arrow locates the only flat, 90° fracture area (approx. 1 inch long) within the cylindrical wall area.



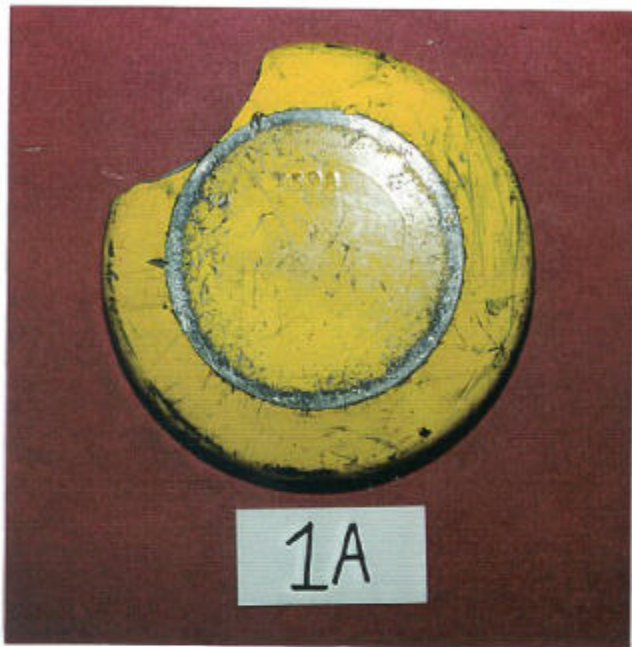


Figure 4. Bottom section (1A) and adjacent lower left side wall fracture edge section (1B) shown in Figure 2.



Figure 5. Tested longitudinal tensile coupon (1C) from lower center section having a 47.7 ksi 0.2% yield strength, 51.7 ksi ultimate tensile strength and 15.5% elongation in 2 in. and remaining lower right fracture edge section (1D) shown in Figure 2.





Figure 6. Upper left fracture edge section (1E) and adjacent failed bend test coupon (1F) shown in Figure 2.



Figure 7. Tested longitudinal tensile coupon (1G) having a 48.0 ksi 0.2% yield strength, 51.5 ksi ultimate tensile strength, and 19.3% elongation in 2.0 in. and remaining upper fracture edge section of (1H) of the cylindrical wall shown in Figure 2.





Figure 8. Top section (1I), with fracture faces roughly  $120^\circ$  apart, shown in Figure 2.

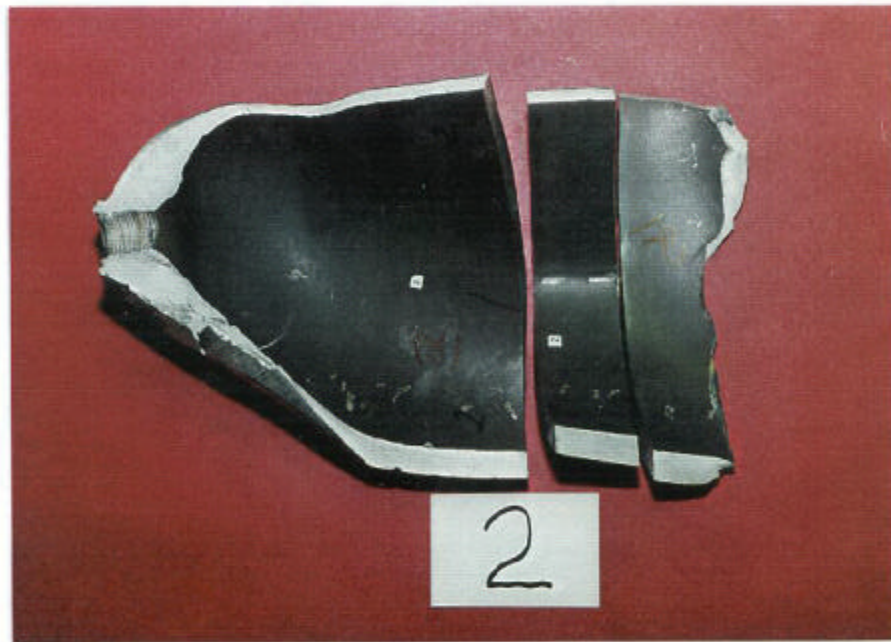
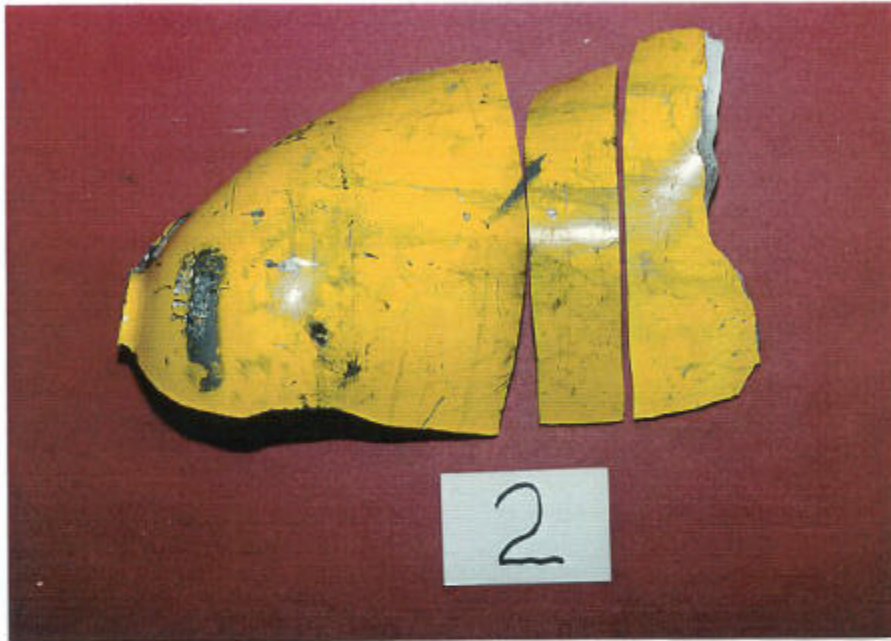


Figure 9. Fracture piece (2), with transverse section previously tested as a bend test coupon that failed during testing, shown in Figure 1.





Figure 10. Fracture piece (3), adjacent to bottom of cylinder, shown in Figure 1.

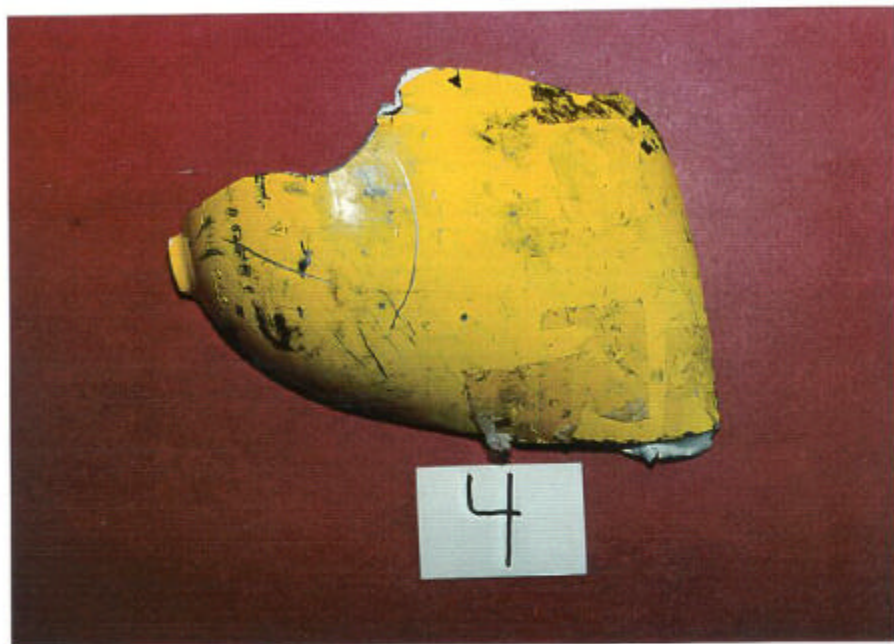


Figure 11.

Fracture piece (4), from top of cylinder shown in Figure 1.





Figure 12.

Fracture piece (5) from lower half of cylinder shown in Figure 1.