(References to parts of release mechanism in the following refer to parts shown on yellow sheet 1)

A timer fires the 16 ft release MDF, which forces the 16 ft release spider back against the plate holding the 30 inch drogue pack. This action allows the 16 ft flip pins to rotate, releasing the 16 ft chute lines in 8 places.

A loop on the 16 ft lines is attached to the 64 ft pack, so that when the 16 ft chute is released, the 64 ft parachute is deployed with the 16 ft acting as an extraction chute.

When the 30 inch drogue chute option is desired, the 16 ft and 64 ft release MDF are both fired. The 16 ft then pulls out the 64 ft, still in the packed configuration. One of the 64 ft lines is attached to the 30 inch pack which is then deployed. This 30 inch chute

are fairly shock sensitive, as can be seen by the requirement that the 16 ft release MDF must fire and the 64 ft MDF (which is very close by) must <u>not</u> fire during the normal system operation.

3. It is hard for anyone here to explain how the rivets on the aft ring forging sheared before the counter bores around the 1/4" bolts sheared. The counter bores are a design weak point that does fail in normal operation. A check for any signs of a load applied directly to the ring forging may be in order. A piece of shrapnel may have pierced the skin and hit the ring forging itself.

This bag (the 30 inch chute bag) is attached to the plate shown on yellow sheet 1 in four places. A riser is attached to one line of the 64 ft parachute.

The 16 ft, 64 ft package is designated as the MC-1150.

The 30 inch pack is designated the MC 1475.

(Correction to above write up - the 30 inch description and pack is included with the T.O. - is near the end, identified as TO 14D1.-4-101C)

Note: Personnel chutes are red (or orange) and white. The chutes described above are all white.

40 FT/SEC CROSSWIND
54 FT/SEC HEADWIND

$\frac{W}{C_D A} = K_1 V = 11.5 \times 10^{-4} V$

$\frac{W}{C_D A} = (K_1)_{AVE} V_{AVE}^2 = 6.15 \times 10^{-4} V^2$

RATIO 1.37

COMPARISON OF $W/C_D A$ FOR DIFFERENT SYSTEMS

WT = 2248# W (#4 TAIL PLATE) = 45#

1. 16' CHUTE WITH #4, $W/C_D A = 21$, 186.1 SECONDS V = 135
2. 64' CHUTE STREAMING WITH #4, $W/C_D A = 18.8$, 196.5 SECONDS V = 128
3. STABLE FREE FALL WITH #4, $W/C_D A = 1102$, 49.2 SECONDS V = 979
4. 15° CONING, FREE FALL WITH #4, $W/C_D A = 1095$, 49.7 SECONDS V = 976
5. 30° CONING, " " " ", $W/C_D A = 728$, 53.5 SECONDS V = 797
6. 45° CONING, " " " " $W/C_D A = 445$, 59.28 SECONDS V = 622
7. #4 TAIL PLATE, TUMBLING (INFLATED AREA/4 = C_D), $W/C_D A = 21.5$, 163 SEC. V = 137 (18 AVG)
   " " SAILING ($C_D = 1$, FRONTAL AREA), $W/C_D A = 66.7$, 72.5 SEC V = 241 (32 AVG)
   SC USED 13.8 FT²
8. TUMBLING BAMB ($C_D S = 20$), $W/C_D S = 112.4$, 72.7 SEC. V = 306 (42
9. STREAMING 16' CHUTE ($C_D S = 12$), $W/C_D S = 187$ 55.2 SEC. V = 403 (55
   ($C_D S = 24$), $W/C_D S = 93$ 78.3 " V = 285 (39
10. 64' CHUTE $C_D S = 1600$, W = 500, $W/C_D S = 3.13$ V = 16.5 (22
    W = 1500, $W/C_D S = 9.39$ V = 28.3 (38
    W = 2248, $W/C_D S = 14$ V = 35 (48)
11. #3 TAIL PLATE (15#) TUMBLING, $W/C_D S = 7$ (100)

$\frac{30500'}{21} = 1450$ SEC. (68) = 98,500' = 18.6 MI.