

# Russia's First Spacecraft: **VOSTOK**

**Revell**  
**MONOGRAM**

KIT 1844

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## **EARTHMAN INTO SPACE!**

It was on the morning of April 12, 1961 that an earthman first journeyed into the unknown void of space. Twenty-seven year old Flight Major Yuri Gagarin, USSR, rode into orbit on the fiery blast of a huge two-stage rocket and blazed his name in the pages of daring adventure.

Major Gagarin's historic flight was the first of six successful space ventures with the *Vostok* spacecraft. (*Vostok* is Russian for East.) *Vostok 1* was launched from the secret Russian space center at Baikonur, Russia, and made one orbit of the earth before landing near Smelovaka. The complete flight lasted 108 minutes. On this first *Vostok* flight, the cosmonaut returned to earth inside the circular reentry capsule. In *Vostok 2*, Cosmonaut Major Gherman Titov completed 17 orbits and then used the secondary landing system, ejecting from the capsule to make a separate descent by parachute.

## **TWINS INTO SPACE!**

With the success of *Vostok 2*, Russian space scientists decided to go ahead with a more ambitious experiment. On August 11, 1962, *Vostok 3* roared into space, to be followed the next day by *Vostok 4*. As *Vostok 3* soared overhead, *Vostok 4* rose up to pass within four miles of its twin. No provision was made for matching orbits, and the two spacecraft soon drifted away on their separate courses. At the conclusion of 64 orbits, *Vostok 3* descended into the earth's atmosphere, followed by *Vostok 4* after its 48th orbit. *Vostok 3*, piloted by Major Andrian Nikolayov, and *Vostok 4*, piloted by Lt. Col. Pavel Popovich, ejected to safe landings.

## **EARTHWOMAN INTO SPACE!**

A second 'dual' launching of *Vostok* spacecraft took place on June 14, 1963, when *Vostok 5* carried Lt. Col. Valery Bykovsky into orbit to be followed on June 16 by Miss Valentina Tereshkova in *Vostok 6*. Thus was added a new element to space flight... a woman cosmonaut! Miss Tereshkova completed 48 orbits before re-entering to a successful landing using the ejection method. Col. Bykovsky landed shortly afterward, following his 81st earth orbit, and concluded the *Vostok* series of spaceflights.

The Russian *Vostok* manned space vehicle is 23 feet long including its final rocket stage. The spherical shaped re-entry capsule is 7 feet 6 inches in diameter. It carries the cosmonaut in his ejection-seat-couch. When launched, the entire capsule was enclosed in a cone-shaped protective covering. This covering was shed before the spacecraft entered orbit and the final rocket stage was jettisoned.

The capsule was attached to an equipment module containing the retrorocket motor. After firing the retrorocket, the equipment module was jettisoned by releasing four steel bands and allowed to drop into the atmosphere. Unlike the American spacecraft, *Vostok* had no attitude control system which would assist in placing the capsule forward to withstand the searing heat of re-entry, the sphere was designed with the weight off center. As the air pressure built up, the heavier part would slowly swing forward into the correct attitude. When re-entry speed was reduced to 493 mph at an altitude of 22,900 feet, the hatch cover was blown off by explosive bolts. The cosmonaut ejected at 21,400 feet. Meanwhile the capsule continued to 13,000 feet where its landing parachute was opened by an automatic control. The cosmonaut himself landed as a conventional parachutist.

★ ★ ★ BEFORE YOU BEGIN ★ ★ ★

GET YOUR TOOLS READY:



**KNIFE**  
TO DETACH  
AND TRIM  
PARTS  
**FILE**  
TO REMOVE  
EXCESS  
PLASTIC



**TWEEZERS**  
TO PICK UP  
AND HOLD  
SMALL  
PARTS



**PAINT BRUSH**  
**TOOTH PICK**  
USE  
**TOOTH PICK**  
**PAINT BRUSH**  
OR **PIN**  
TO  
APPLY IT



**TAPE AND CLOTHES PINS**  
TO CLAMP  
AND HOLD  
PARTS  
UNTIL THEY  
ARE DRY



**DO NOT DETACH PARTS UNTIL YOU ARE READY TO USE THEM!** PARTS ARE NUMBERED TO HELP YOU FIND THEM. LOOK FOR THE NUMBER ON TAB NEXT TO PART OR ON PART ITSELF.

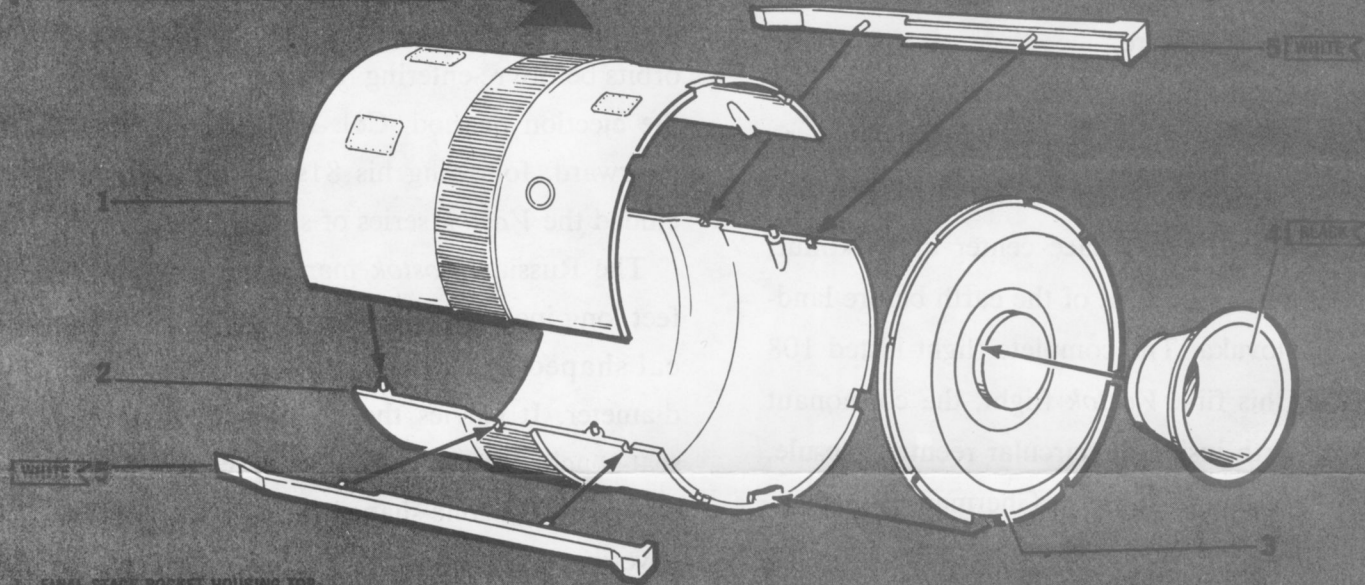
FIRST, FIT PARTS TOGETHER and TRIM EXCESS PLASTIC. Use a toothpick, pin or small paint brush to apply cement. APPLY CEMENT SPARINGLY. Too much cement will damage your model.

NOTE: In the illustrations some of the details on the parts have been OMITTED FOR CLARITY.

IF YOU WISH TO PAINT YOUR MODEL — See PAINTING on pages 2 through 6 for color suggestions.

Paint small parts **before** detaching from runner. Start with the lighter colors. Scrape off paint where cement is to be applied. Cement will not work on paint.

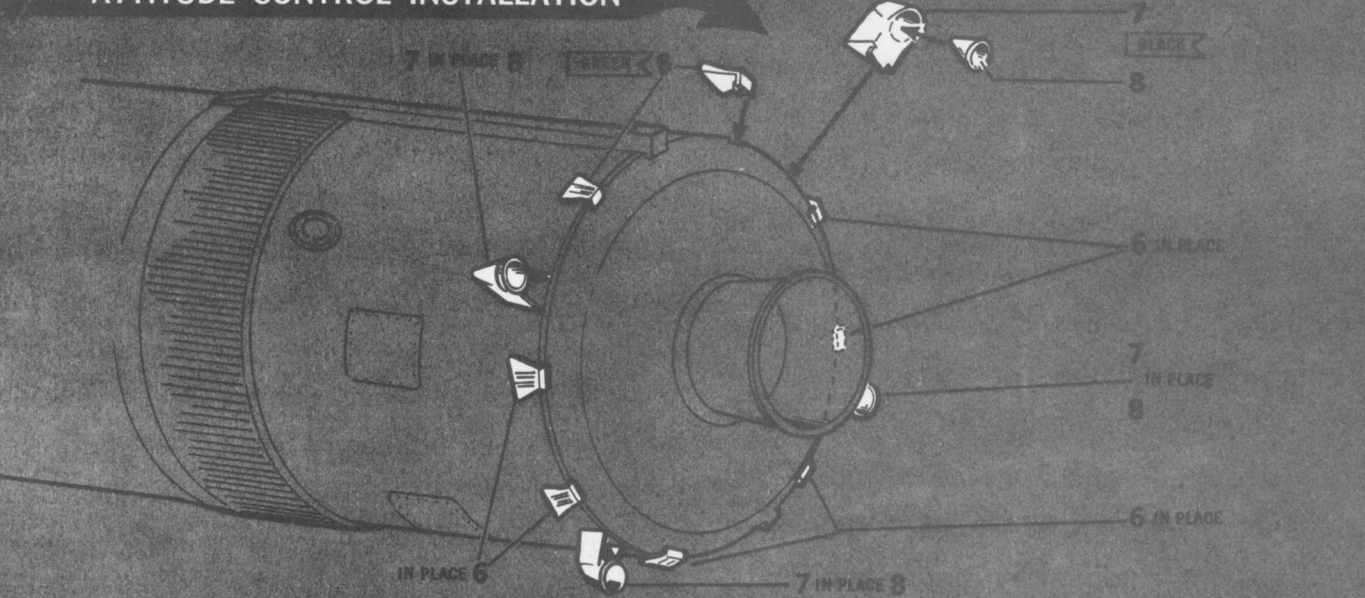
1 FINAL STAGE ROCKET



- 1 FINAL STAGE ROCKET HOUSING TOP
- 2 FINAL STAGE ROCKET HOUSING BOTTOM
- 3 HEAT SHIELD
- 4 ENGINE EXHAUST NOZZLE
- 5 TUNNEL FAIRING (2 Parts)

1. Cement the ROCKET HOUSING TOP Part (1) to the ROCKET HOUSING BOTTOM (2).
2. Cement the HEAT SHIELD (3) and ENGINE EXHAUST NOZZLE (4) to BOTTOM of ROCKET HOUSING.
3. Cement two TUNNEL FAIRINGS (5) to the sides of ROCKET HOUSING.

2 ATTITUDE CONTROL INSTALLATION

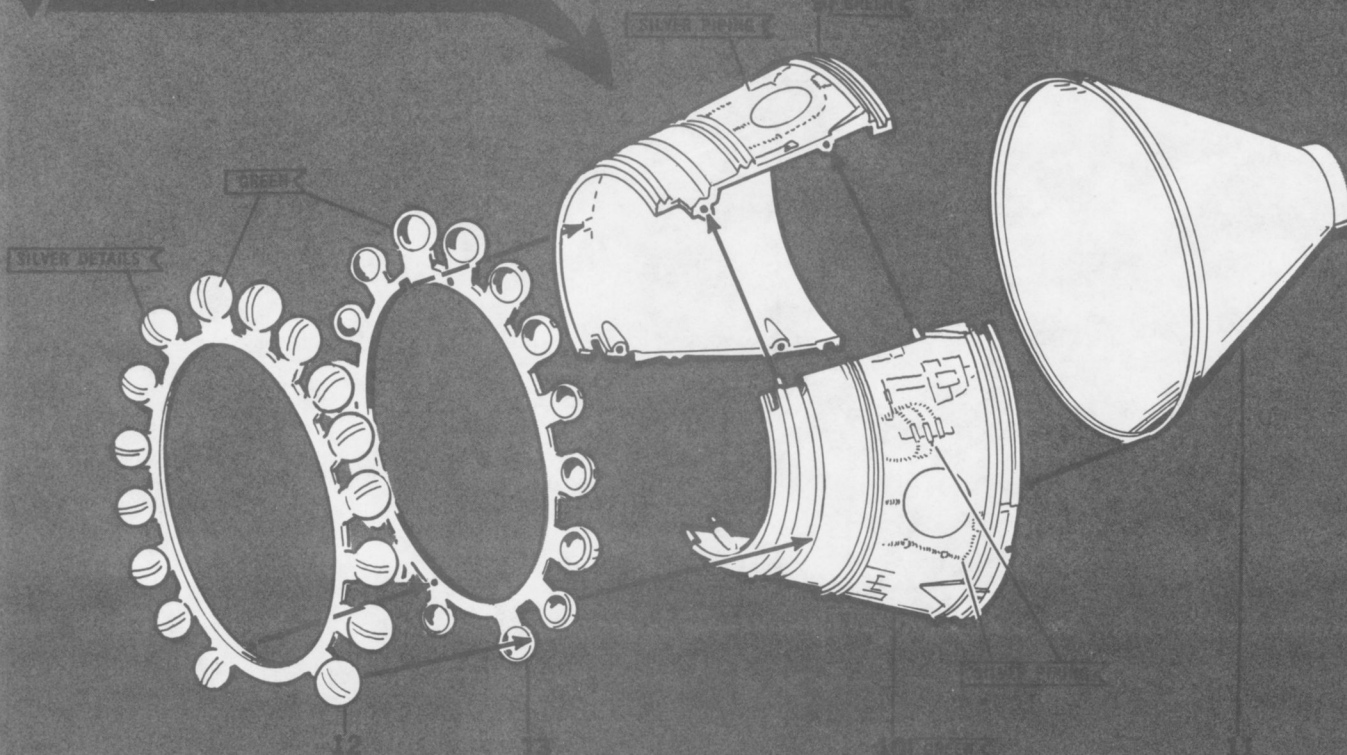


- 6 INTERSTAGE LATCH (8 Parts)
- 7 ATTITUDE CONTROL MOTOR (4 Parts)
- 8 ATTITUDE CONTROL MOTOR NOZZLES (4 Parts)

1. Cement eight INTERSTAGE LATCHES (6) around base of ROCKET HOUSING.
2. Cement four ATTITUDE CONTROL MOTORS (7) to HOUSING.
3. Cement four ATTITUDE CONTROL MOTOR NOZZLES (8) to the MOTOR HOUSING.

3

EQUIPMENT MODULE

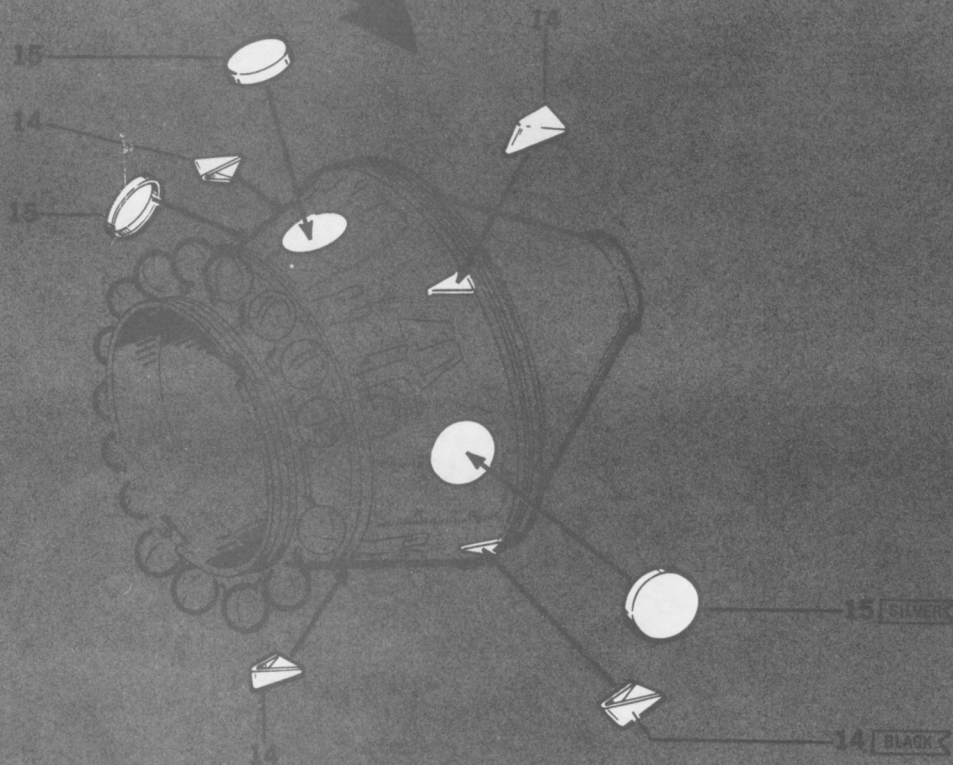


- 9 EQUIPMENT MODULE AND RETRO ROCKET STRUCTURE
- 10 EQUIPMENT MODULE AND RETRO ROCKET STRUCTURE
- 11 RETRO ROCKET NOZZLE
- 12 SPHERICAL OXYGEN — NITROGEN BOTTLES TOP
- 13 SPHERICAL OXYGEN — NITROGEN BOTTLES BOTTOM

1. Cement the EQUIPMENT MODULE SECTIONS (9) and (10) together.
2. Cement the RETRO ROCKET NOZZLE (11) to MODULE.
3. Cement the two halves of the OXYGEN NITROGEN BOTTLES (12) and (13) together. Cement to the EQUIPMENT MODULE.

4

FINAL EQUIPMENT MODULE

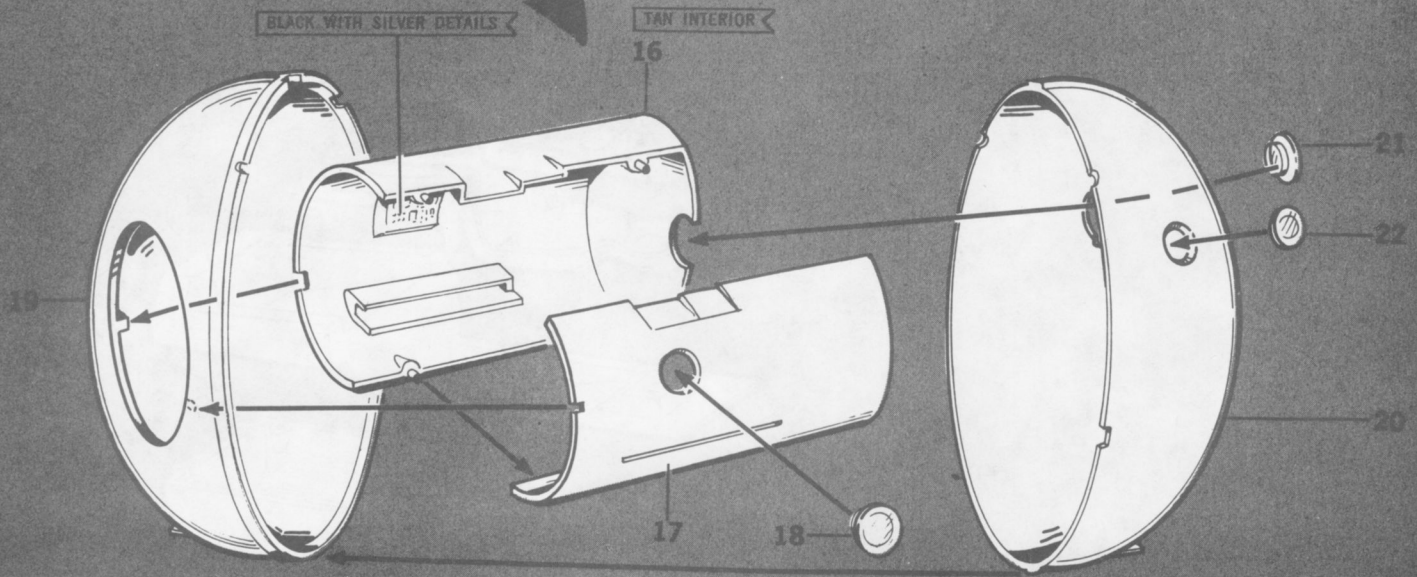


- 14 LATCH COVER (4 Parts)
- 15 EQUIPMENT ACCESS HATCH (3 Parts)

1. Cement four LATCH COVERS (14) to base of MODULE SECTIONS.
2. Cement three EQUIPMENT ACCESS HATCH COVERS (15) to sides of structure.

5

## CAPSULE ASSEMBLY

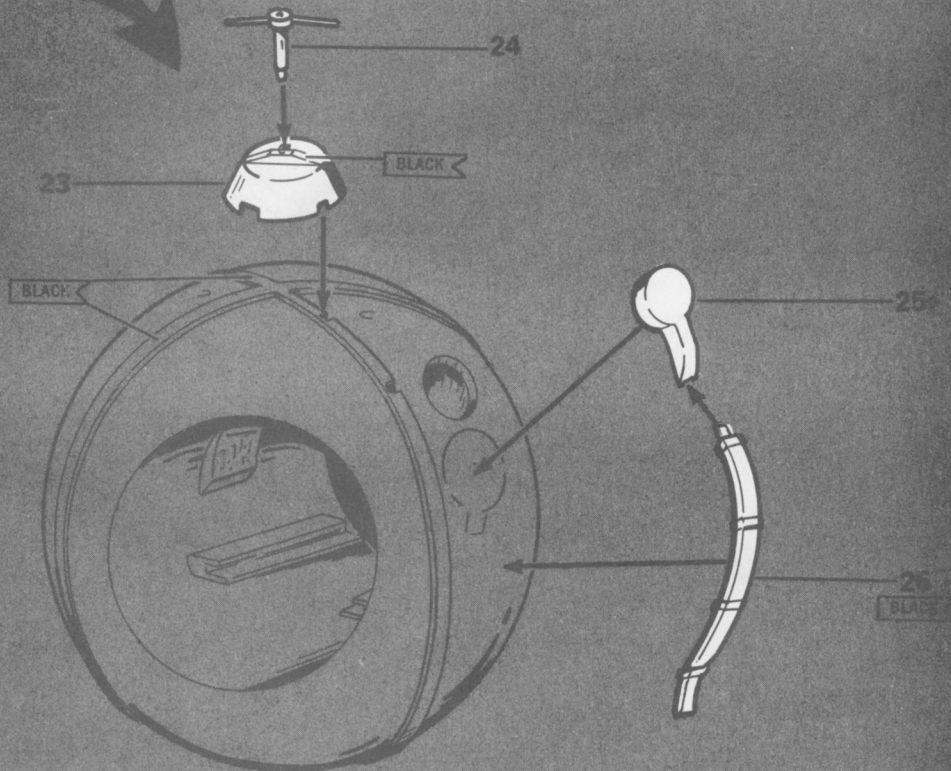


- 16 COSMONAUT'S COMPARTMENT LEFT HALF
- 17 COSMONAUT'S COMPARTMENT RIGHT HALF
- 18 COMPARTMENT SIDE WINDOW
- 19 CAPSULE REAR
- 20 CAPSULE FRONT
- 21 COMPARTMENT END WINDOW
- 22 CAPSULE SIDE WINDOW

1. Cement the LEFT (16) and RIGHT (17) sides of the COSMONAUTS COMPARTMENT together.
2. CEMENT the COMPARTMENT side WINDOW (18) to the COMPARTMENT.
3. Carefully cement the COMPARTMENT to the rear section of the CAPSULE (19). Be sure inside edge of the COMPARTMENT aligns with edge of opening.
4. Cement CAPSULE FRONT (20) to REAR (19).
5. Cement the COMPARTMENT END WINDOW (21) and CAPSULE SIDE WINDOW (22) to assembly.

6

## CAPSULE ASSEMBLY

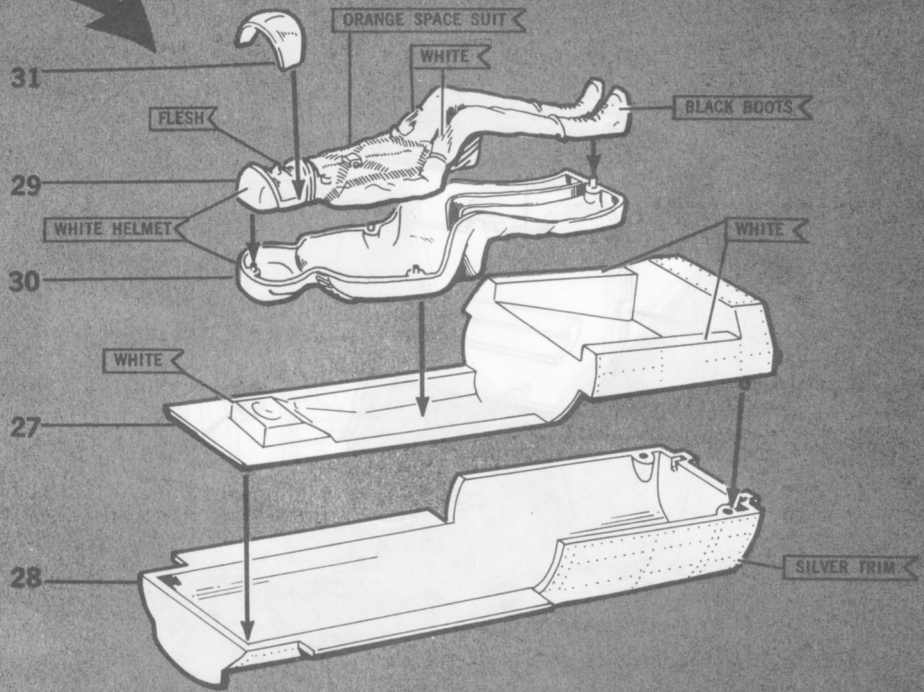


- 23 ELECTRONICS PACKAGE
- 24 ANTENNA
- 25 MULTIPLEX PACKAGE
- 26 MULTIPLEX CONNECTOR

1. Cement the ELECTRONICS PACKAGE (23) and ANTENNA (24) to top of CAPSULE.
2. Cement MULTIPLEX PACKAGE (25) and MULTIPLEX CONNECTOR (26) to side of capsule.

7

## COSMONAUT AND SEAT

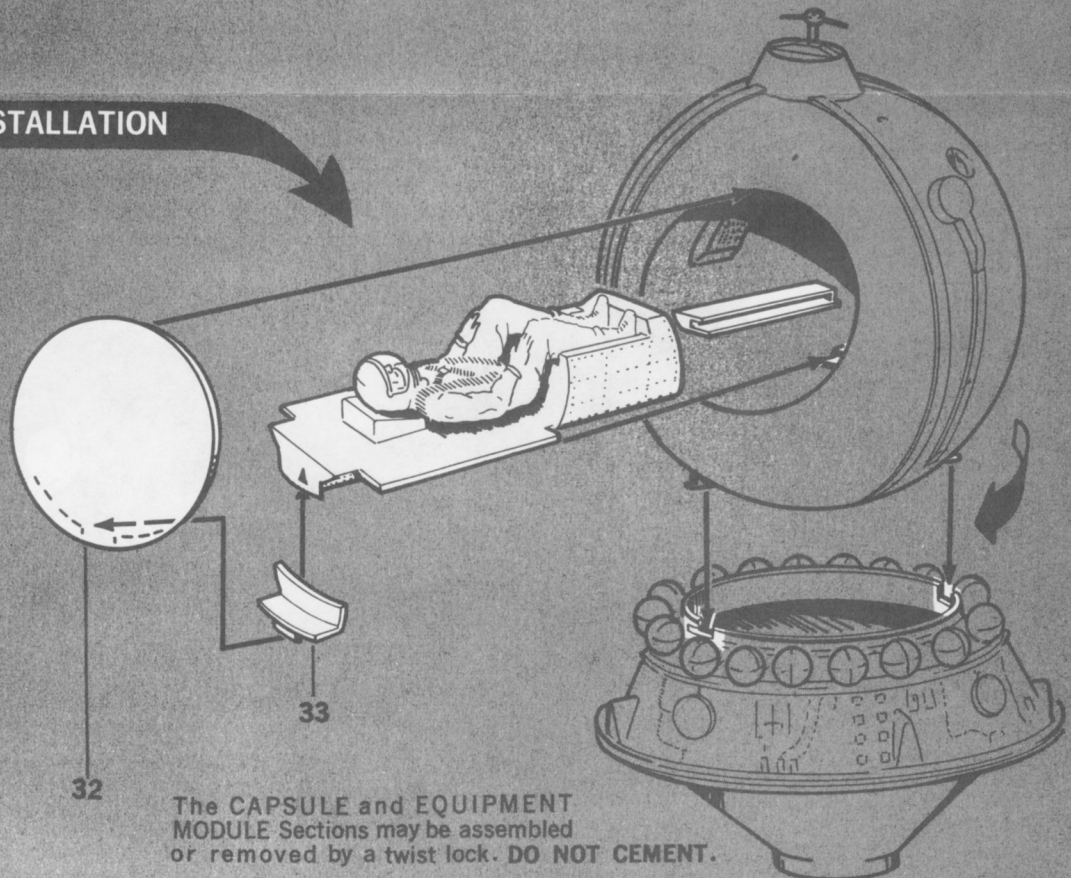


- 27 SEAT TOP
- 28 SEAT BOTTOM
- 29 COSMONAUT FRONT
- 30 COSMONAUT BACK
- 31 FACE MASK CLEAR

1. Cement the SEAT TOP (27) to the SEAT BOTTOM (28).
2. Cement the FRONT (29) and BACK (30) of the COSMONAUT together.
3. Carefully cement the CLEAR FACE MASK (31) in place.

8

## SEAT INSTALLATION



The CAPSULE and EQUIPMENT MODULE Sections may be assembled or removed by a twist lock. DO NOT CEMENT.

- 32 EJECTION DOOR
- 33 EJECTION LATCH

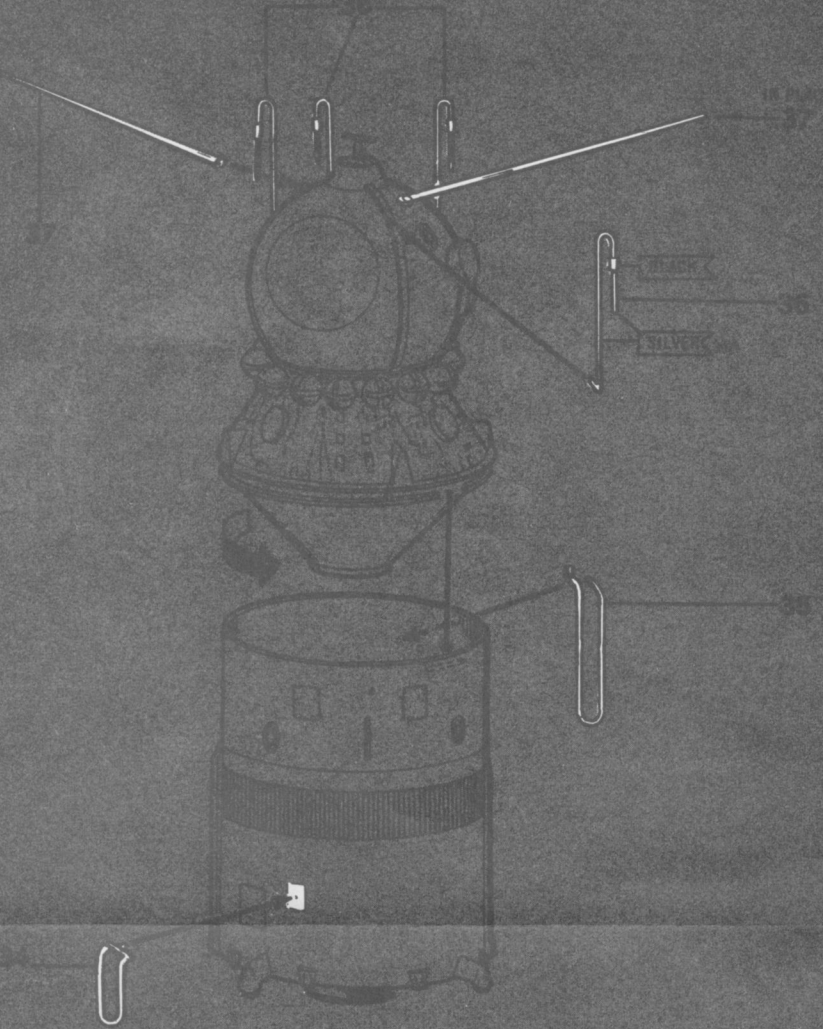
1. PLACE, DO NOT CEMENT the COSMONAUT on SEAT Assembly and slide into CAPSULE COMPARTMENT.
2. Cement the EJECTION DOOR (32) to the EJECTION LATCH (33).
3. Place the flange of the EJECTION LATCH under edge of seat, carefully position DOOR to CAPSULE opening and press in place. COSMONAUT, SEAT and DOOR may be removed for display.

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## FINAL ASSEMBLY

- 34 V.H.F. ANTENNA
- 35 PAPER CLIP ANTENNA
- 36 CONTROL COMMAND ANTENNAS (4 Parts)
- 37 WHIP ANTENNA (2 Parts)

1. The CAPSULE and EQUIPMENT MODULE Sections can be assembled to or removed from the FINAL ROCKET HOUSING by key locks.
2. Locate EQUIPMENT MODULE LOCATORS to FINAL STAGE ROCKET HOUSING and twist to lock in place.
3. Locate SPACECRAFT CAPSULE to EQUIPMENT MODULE and twist to lock in place.
4. Cement the V.H.F. ANTENNA (34) and the PAPER CLIP ANTENNA (35) to the FINAL STAGE ROCKET HOUSING.
5. Cement four CONTROL COMMAND ANTENNAS (36) to top of CAPSULE.
6. Cement two WHIP ANTENNA (37) to CAPSULE.



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## SUPPORT BASE

- 38 SPACECRAFT SUPPORT
- 39 SUPPORT BASE

1. Cement the SPACECRAFT SUPPORT (38) to the SUPPORT BASE (39).
2. Cement the assembled SPACECRAFT to the BASE.

