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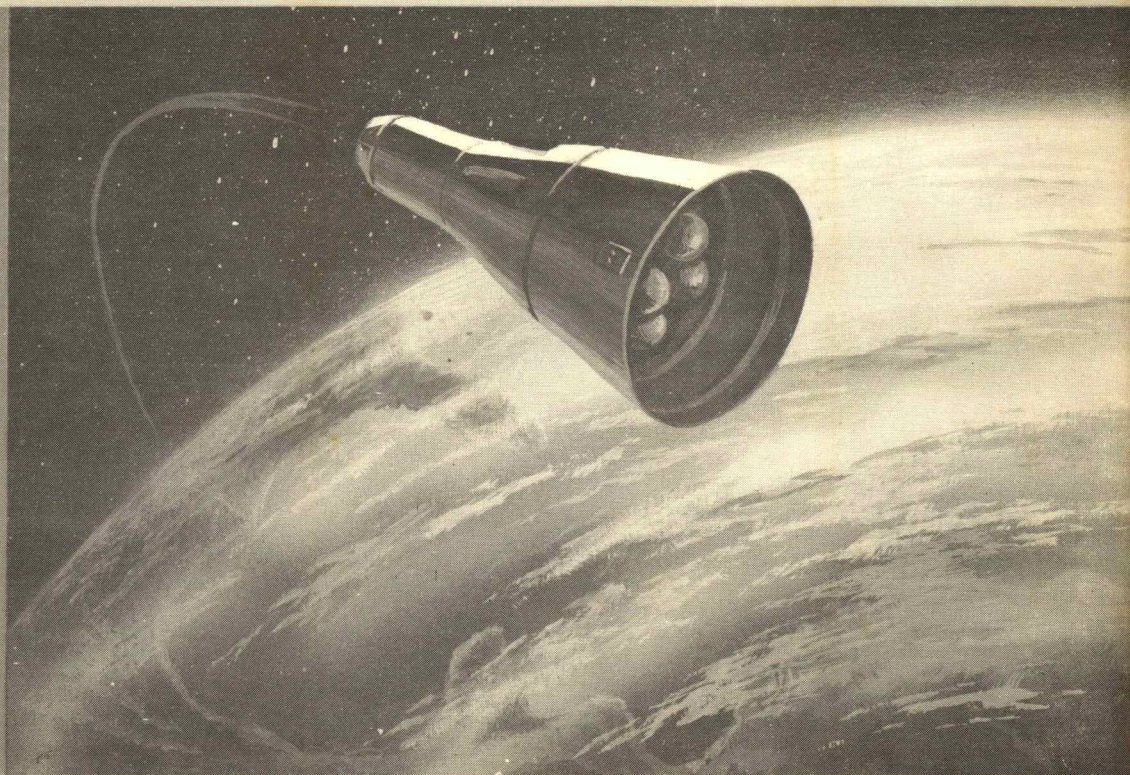


project gemini

MANNED SPACECRAFT CENTER
FLORIDA OPERATIONS

SPACECRAFT PRELAUNCH TEST PROCEDURE

FLIGHT CREW COUNTDOWN



PREPARED BY

MCDONNELL COMPANY



CAPE SEDR 640-12

DATE 31 OCTOBER 1966

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PROJECT GEMINI
FLIGHT CREW COUNTDOWN

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PURPOSE

THIS DOCUMENT SPECIFIES THE FLIGHT CREW AND FLIGHT CREW
SUPPORT FUNCTIONS TO BE PERFORMED DURING THE LAUNCH
OF MANNED GEMINI SPACECRAFT.

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SECTION I - REQUIREMENTS

1.1 SYMBOLS

CM/1	FLIGHT CREW, COMMAND PILOT
CM/2	FLIGHT CREW, PILOT
CM/3	FLIGHT CREW, BACK-UP COMMAND PILOT
CM/4	FLIGHT CREW, BACK-UP PILOT
FCD	FLIGHT CREW DIRECTOR
F/COM	FLIGHT CREW COMMUNICATOR
FS/1	FLIGHT SURGEON
FS/2	FLIGHT SURGEON
LI	LIFE INSTRUMENTATION ENGINEER
LI/T1	LIFE INSTRUMENTATION TECHNICIAN
LI/T2	LIFE INSTRUMENTATION TECHNICIAN
PL	PAD LEADER
SS/E	SPACE SUIT ENGINEER
SS/T1	SPACE SUIT TECHNICIAN
SS/T2	SPACE SUIT TECHNICIAN
STC	SPACECRAFT TEST CONDUCTOR

1.2 ABBREVIATIONS

MSO	MANNED SPACECRAFT OPERATIONS BUILDING AT KENNEDY SPACE CENTER
MCC	MISSION CONTROL CENTER

1.3 COMMUNICATIONS CHANNELS

19	SPACECRAFT TEST CONDUCTOR
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PREPARATION SHEET NO. 1

THIS PREPARATION SHEET APPLIES TO THE MSO BUILDING AND IS THE RESPONSIBILITY OF THE FCD.

1. PROVIDE ACCESS LIST TO SECURITY GUARD AT PILOTS QUARTERS IN MSO BUILDING BY T-48 HOURS.
2. MAKE FOLLOWING ARRANGEMENTS FOR AUTOMOBILE TRANSPORTATION FROM THE MSO BUILDING TO THE PILOTS READY ROOM, COMPLEX 16..
 - A. NOTIFY KSC TRANSPORTATION OFFICE THAT TWO TRANSFER VEHICLES, WITH DRIVERS, ARE TO BE DELIVERED TO THE DESIGNATED PARKING AREA IN FRONT OF THE MSO BUILDING BY T-230 MINUTES. DRIVERS ARE TO REPORT TO FCD ON ARRIVAL.
 - B. NOTIFY NASA SECURITY THAT DESIGNATED PARKING AREA IS TO BE CLEARED BY T-12 HOURS.
 - C. NOTIFY NASA SECURITY THAT AUTOMOBILE ESCORT IS REQUIRED FROM MSO BUILDING TO COMPLEX 16. THE SECURITY PATROL IS TO BE AT THE DESIGNATED AREA AT THE MSO BLDG BY T-230 MINUTES. DRIVER TO REPORT TO FCD ON ARRIVAL.
 - D. VERIFY WITH NASA SECURITY THAT ARRANGEMENTS HAVE BEEN MADE FOR ACCESS OF TRANSPORTATION VEHICLES THROUGH ROAD-BLOCK TO COMPLEX 16.
3. VERIFY THAT STEWARDS, COOKS, AND KITCHEN HELP ARE ON DUTY IN CREW QUARTERS IN MSO BUILDING AT T-520 MINUTES.

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PREPARATION SHEET NO. 2

THIS PREPARATION SHEET APPLIES TO THE PILOTS READY ROOM AT COMPLEX 16 AND IS THE RESPONSIBILITY OF F/COM.

1. INSURE PILOTS READY ROOM PREPARED BY T-300 MINUTES.
2. MAKE ARRANGEMENTS FOR PAA SECURITY GUARD TO BE ON STATION AT T-18 HOURS. PROVIDE GUARD WITH ACCESS LIST FOR PILOTS READY ROOM.
3. INSURE THAT ONE AIR-CONDITIONED TRANSFER VAN, WITH DRIVER, IS ON STATION AT THE PILOTS READY ROOM AT COMPLEX 16 BY T-350 MINUTES WITH THE FOLLOWING EQUIPMENT..

A. SIX (6) CLOSED LOOP VENTILATORS, SERVICED AND OPERATIONAL.

B. EIGHT (8) CANNISTER MASKS.

DRIVER TO REPORT TO F/COM ON ARRIVAL.

4. INSURE FOLLOWING EQUIPMENT IS CHECKED AND READY BY T-320 MINUTES..

SPACE SUIT ASSEMBLIES AND SUIT ACCESSORIES
BIO-INSTRUMENTATION HARNESES, SENSORS AND
SIGNAL CONDITIONERS
RESTRAINT HARNESES
LIFE VESTS

5. INSURE PORTABLE COMMUNICATIONS SYSTEMS ARE CHECKED AND OPERATIONAL BY T-320 MINUTES.
6. INSURE LIFE INSTRUMENTATION AGE IS POWERED, FUNCTIONALLY TESTED, AND OPERATIONAL BY T-320 MINUTES.
7. INSURE TWENTY CANNISTER MASKS ARE PLACED IN THE PILOTS READY ROOM BY T-320 MINUTES.

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PREPARATION SHEET NO. 3

THIS PREPARATION SHEET APPLIES TO THE 100 FOOT LEVEL OF THE COMPLEX 19 WHITE ROOM AND IS THE RESPONSIBILITY OF CM/4.

1. INSURE THAT TWO SPACE SUIT/MITOC ADAPTER CABLES ARE CHECKED OUT, OPERATIONAL AND INSTALLED IN MITOC STATIONS 281 AND 282 AT THE 100 FOOT LEVEL IN THE WHITE ROOM.

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PREPARATION SHEET NO. 4

THIS PREPARATION SHEET APPLIES TO THE FIRST LEVEL OF COMPLEX 19 BLOCKHOUSE AND IS THE RESPONSIBILITY OF THE F/COM.

1. INSURE THAT 2 CLOSED-LOOP VENTILATORS ARE SERVICED AND OPERATIONAL BY T-350 AND ARE TO BE LOCATED INSIDE THE DOOR ON THE 1ST LEVEL OF COMPLEX 19 BLOCKHOUSE.

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TIME	COMM. NET	SEQUENCE	SYSTEM AREA	DESCRIPTION	REMARKS
		01-000		FLIGHT CREW COUNTDOWN -----	
-520	0524	01-001	F/COM	STEWARD, COOKS AND KITCHEN HELP ON STATION.	
-480	0746	01-002	F/COM	AWAKEN CM/3, CM/4 AND BREAKFAST FOR SAME.	
-390	0916	01-003	CM/3 CM/4	ON STATION AT 100 FOOT LEVEL OF WHITE ROOM, COMPLEX 19, TO MONITOR SETTING OF SPACECRAFT SWITCHES. REPORT ARRIVAL TO PAD LEADER.	
-360	0946	01-004	F/COM CM/4	REPORT COMPLETION OF PREP SHEET 3 BY TELEPHONE.	
-350	0956	01-005	F/COM	TRANSFER VAN ARRIVES AT PILOTS READY ROOM, COMPLEX 16, AND PARKS IN DESIGNATED AREA. DRIVER REPORTS ARRIVAL TO F/COM AND RETURNS TO VEHICLE.	
-300	1046	01-006	FCD F/COM	REPORT COMPLETION OF PREP SHEETS 2 AND 3 BY TELEPHONE. REPORT FOLLOWING PERSONNEL ON STATION AT PILOTS READY ROOM AT COMPLEX 16 LI/T1 - LIFE INSTRUMENTATION TECHNICIAN LI/T2 - LIFE INSTRUMENTATION TECHNICIAN SS/E - SPACE SUIT ENGINEER SS/T1 - SPACE SUIT TECHNICIAN SS/T2 - SPACE SUIT TECHNICIAN SECURITY GUARD - WITH ACCESS LIST	
-264	1122	01-007	FCD	AWAKEN FLIGHT CREW.	
-249	1135	01-008	FCD FS/1 FS/2	MEDICAL EXAMINATION OF FLIGHT CREW.	
-230	1156	01-009	FCD	TWO TRANSFER VEHICLES ARRIVE AT MSO BUILDING AND PARK IN DESIGNATED AREA. DRIVERS REPORT ARRIVAL TO FCD BY TELEPHONE AND RETURN TO VEHICLES. REPORT PREP. SHEET 1 COMPLETED.	

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TIME	COMM. NET	SEQUENCE	SYSTEM AREA	DESCRIPTION	REMARKS
-230	1156	01-010	FCD	SECURITY PATROL VEHICLE ARRIVES AT MSO BUILDING AND PARKS IN DESIGNATED AREA. DRIVER REPORTS ARRIVAL TO FCD BY TELEPHONE AND RETURNS TO VEHICLE.	
-230	1156	01-011	FCD CM/1 CM/2	BREAKFAST.	
-194	1232	01-012	CM/3 CM/4	DEPART WHITE ROOM, COMPLEX 19, AND REPORT TO PILOTS READY ROOM, COMPLEX 16.	
-194	1232	01-013	CM/1 CM/2 FCD	DEPART PILOTS QUARTERS, MSO BUILDING, FOR TRANSFER VEHICLE.	
-191	1235	01-014	CM/1 CM/2 FCD FS/1 FS/2	DEPART MSO BUILDING BY TRANSFER VEHICLE FOR PILOTS READY ROOM, COMPLEX 16.	
-179	1247	01-015	CM/1 CM/2 FCD	ARRIVE PILOTS READY ROOM, COMPLEX 16.	
-178	1248	01-016	F/COM FS/1 FS/2 LI/T1 LI/T2	PLACE BIO-INSTRUMENTATION SENSORS ON FLIGHT CREW.	
-174	1252	01-017	F/COM CM/1 CM/2 LI/T1 LI/T2	DON UNDERWEAR. INSTALL BIO-INSTRUMENTATION SIGNAL CONDITIONERS.	
-170	1256	01-018	F/COM CM/1 CM/2 FS/1 FS/2 LI	VERIFY PERFORMANCE OF BIO-INSTRUMENTATION PARAMETERS.	
-170	1256	01-019	FCD CM/3 CM/4	SPACECRAFT STATUS BRIEFING.	

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TIME	COMM. NET	SEQUENCE	SYSTEM AREA	DESCRIPTION	REMARKS
-160	1306	01-020	F/COM	CM/3 RETURN TO 100 FOOT LEVEL OF WHITE ROOM, CM/4 COMPLEX 19 WHEN CLEARED BY STC.	
-159	1307	01-021	F/COM	CM/1 DON SPACE SUIT ASSEMBLIES AND SUIT CM/2 ACCESSORIES, WITH EXCEPTION OF HELMETS SS/T1 AND GLOVES. SS/T2	
-152	1314	01-022	F/COM	SS/T2 INSTALL PORTABLE COMMUNICATIONS SYSTEMS IN TRANSFER VAN AND ONE TRANSFER VEHICLE. INSTRUCT DRIVERS TO TURN ON VEHICLE AIR CONDITIONERS. PLACE FOUR CANNISTER MASKS IN TRANSFER VAN.	
-144	1322	01-023	F/COM	CM/1 DON HELMENTS AND GLOVES AND CHECK CM/2 HELMET COMMUNICATIONS. MEASURE FS/1 ORAL TEMPERATURES AND VERIFY PER- FS/2 FORMANCE OF BIO-INSTRUMENTATION LI PARAMETERS. SS/T1 SS/T2	
-139	1327	01-024	F/COM	STC VERIFY SPACECRAFT READY FOR FLIGHT CREW INGRESS, OR DETERMINE HOLD PERIOD	
-137	1329	01-025	F/COM	SS/E START SPACE SUIT PURGE. SS/T1 SS/T2	
-131	1335	01-026	F/COM	SS/E PERFORM SPACE SUIT PRESSURE CHECK. SS/T1 SS/T2	
-128	1338	01-027	F/COM	FS/1 VERIFY SUIT OXYGEN CONCENTRATION FS/2	
-126	1340	01-028	F/COM	SS/T1 CONNECT PORTABLE VENTILATORS TO SPACE SS/T2 SUITS.	

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TIME	COMM. NET	SEQUENCE	SYSTEM AREA	DESCRIPTION	REMARKS
-125	1341	01-029	F/COM	CM/1 DEPART PILOTS READY ROOM IN TRANSFER CM/2 VAN FOR WHITE ROOM, COMPLEX 19. SS/T1 SS/T2 FCD	
-124	1342	01-030		FS/1 DEPART PILOTS READY ROOM BY TRANSFER FS/2 VEHICLE FOR BLOCKHOUSE, COMPLEX 19. REPORT TO STC ON COMM CHANNEL 19 ON ARRIVAL AT AEROMED CONSOLE.	
		01-031	F/COM	STC REPORT TO SPACECRAFT TEST CONDUCTOR THAT FLIGHT CREW HAS DEPARTED FOR WHITE ROOM, COMPLEX 19.	
-122	1344	01-032		F/COM SECURE PILOTS READY ROOM.	
-119	1349	01-033		CM/1 ARRIVE AT 100 FOOT LEVEL OF WHITE ROOM, CM/2 COMPLEX 19. SS/T1 SS/T2	
	19	01-034	STC	PL REPORT ARRIVAL OF FLIGHT CREW IN WHITE ROOM.	
-115	1351	01-035	STC	CM/1 FLIGHT CREW ENTERS SPACECRAFT. CM/2 PL SS/T1 SS/T2	
-88	14:18	01-036		CM/3 DEPART WHITE ROOM FOR MCC. CM/4 FCD	
		01-037		SS/T1 DEPART WHITE ROOM FOR FALL-BACK AREA. SS/T2	
-80	14:26	01-038		F/COM PROVIDE SECURITY GUARD AT PILOTS READY ROOM WITH INSTRUCTIONS FOR DEPARTURE.	
		01-039		F/COM DEPART PILOTS READY ROOM FOR LI FALL-BACK AREA. LI/T1 LI/T2	