

SATURN V APOLLO FLIGHT CONFIGURATION

VEHICLE STATION IN: INCHES METERS  
SPACECRAFT (NORTH AMERICAN AVIATION)

LES JETTISON MOTOR & LAUNCH ESCAPE SYSTEM

LES LAUNCH ESCAPE TOWER

COMMAND MODULE

COMMAND PILOT  
SENIOR PILOT  
PILOT

SERVICE MODULE

CARRY ON UMBILICAL 3757.17 95.432

FLY AWAY UMBILICAL 3760.92 95.527

FUEL PUMP TANK

H<sub>2</sub> CRYOGENIC STORAGE TANK

LUNAR MODULE (GRUMMAN AIRCRAFT ENGINEERING)

RCS THRUSTER ASSEMBLY 4 PLACES

L/M UPPER DOCKING TUNNEL

L/M ASCENT STAGE

L/M DESCENT STAGE

L/M LANDING GEAR 4 PLACES

INSTRUMENT UNIT (IBM)

S-IVB (DOUGLAS)

LH<sub>2</sub> TANK VENT 3203.56 81.370

ACCESS PLATFORM SUPPORT FITTING 3161.56 80.303

ANTENNAS CENTERLINE 3193.56 81.116

COLD HELIUM SPHERES (8)

LOX TANK PROBE

LOX TANK

LINE FAIRING LH<sub>2</sub> FILL & DRAIN

TOP OF AFT SKIRT 2832.00 71.933

LOX LH<sub>2</sub> FILL & DRAIN 2760.05 70.105

RETRO ROCKET (4 PLACES)

BOTTOM OF AFT SKIRT 2746.50 69.701

ACCESS PLATFORM SUPPORT FITTING 2664.33 67.674

S-II (NORTH AMERICAN AVIATION)

SYSTEMS TUNNEL 938.50 23.837

LH<sub>2</sub> VENT 942.00 23.926

S-II TOP FORWARD SKIRT 2519.00 63.982

RADIO COMMAND ANTENNA 4 PLACES 923.00 23.444

TELEMETRY ANTENNA 4 PLACES 902.00 22.910

LOX TANK

LOX PROPELLANT MANAGEMENT PROBE

RING SLOSH BAFFLE 357.00 9.067

LH<sub>2</sub> RECIRCULATION SYSTEM 5 PLACES 366.60 9.311

LH<sub>2</sub> FILL & DRAIN 341.00 8.661

DIVISION OF AFT SKIRT 283.00 7.188

TOP OF AFT SKIRT 326.00 8.280

BOTTOM OF SLOSH BAFFLE 284.00 7.213

TOP ULLAGE ROCKET FAIRING MOTOR 176.68 3.725

TOP OF THRUST CONE 223.00 5.664

BOTTOM OF THRUST CONE 112.00 2.844

S-IC (BOEING)

TOP FORWARD SKIRT 1541.00 39.141

LOWER SECTION OF FORWARD SKIRT 1420.30 36.075

RING SLOSH BAFFLES

LOWER SECTION OF HELIUM BOTTLES (4) 946.50 24.041

TOP OF INTERTANK ASSEMBLY 885.20 22.484

FUEL VENT LINE 696.00 17.678

ACCESS DOOR (FAR SIDE)

LOX FILL & DRAIN (FAR SIDE) 794.18 20.172

LOX FILL & DRAIN (FAR SIDE) 776.18 19.715

BOTTOM OF INTERTANK ASSEMBLY 628.80 15.971

SLOSH BAFFLES

FUEL FILL & DRAIN 130.00 3.302

RETRO ROCKETS (2 EACH 4 PLACES)

BOTTOM OF FUEL TANK 225.00 5.715

TOP OF HEAT SHIELD 112.00 2.844

BOTTOM OF F-1 ENGINE (5 PLACES) -115.36 -2.930

VEHICLE STATIONS IN: INCHES METERS  
SPACECRAFT

VEHICLE STATION 4240.79 107.716

BASE OF CONARD NOSE CONE 4203.73 106.774

CENTERLINE LAUNCH ESCAPE MOTOR 4185.53 106.312

BOTTOM OF LES SKIRT 3960.03 100.585

TOP OF BOOST COVER 3890.03 98.527

VEHICLE SEPARATION 40.03 97.936

AFT HEAT SHIELD 3749.56 95.239

REACTION CONTROL SYSTEM MODULE 3715.45 94.372

VEHICLE STATION FLIGHT SEPARATION 3594.55 91.301

VEHICLE SEPARATION 3593.50 91.275

PROPULSION MOTOR

RENDEZVOUS RADAR ANTENNA

LUNAR MODULE

L/M FORWARD DOCKING TUNNEL

VEHICLE SEPARATION 3340.05 84.837

VEHICLE STATION 3285.19 83.443

INSTRUMENT UNIT

S-IVB

TOP FORWARD SKIRT

BOTTOM OF FORWARD SKIRT 3100.56 78.754

FUEL MASS SENSOR PROBE

INSTRUMENTATION PROBE

AUXILIARY PROPULSION SYSTEM (APS) (2)

FLIGHT SEPARATION

LOX VENT (FAR SIDE) 2759.00 70.078

HELIUM SPHERES (9 PLACES)

TOP J-2 ENGINE 2645.85 67.204

J-2 ENGINE

BOTTOM S-IVB TOP S-II 2519.00 63.982

S-II

BOTTOM OF FORWARD SKIRT 823.00 20.904

LH<sub>2</sub> PROPELLANT MANAGEMENT PROBE

PRESSURIZATION MAST

LOX VENT LINE

TOP OF LH<sub>2</sub> FEED FAIRING 5 PLACES 451.75 11.474

LOX TANK EQUATOR 1848 46.939

LOX FILL & DRAIN (FAR SIDE) 207.00 5.257

CRUCIFORM BAFFLE 173.00 4.394

BOTTOM LH<sub>2</sub> FEED FAIRING 158.00 4.013

FLIGHT SEPARATION 1760.00 44.704

GIMBAL PLANE 100.00 2.540

BOTTOM ULLAGE R M FAIRING -0.44 -0.011

J-2 ENGINES (5 PLACES)

S-IC

FLIGHT SEPARATION 0.00 0.000

S-II INTERSTAGE BOTTOM 1541.00 39.141

LOX VENT 1521.00 38.633

GOX LINE 1511.75 38.398

Y RING 1404.00 35.661

PRESSURIZATION TUNNEL (2 PLACES)

LOX FEED LINE TUNNEL (5 PLACES)

Y RING 909.00 23.088

BOTTOM OF LOX TANK 772.00 19.608

TOP OF FUEL TANK 742.00 18.846

FUEL PRESSURE LINE 692.80 17.576

Y RING 605.00 15.367

TOP OF ENGINE FAIRING 362.00 9.194

TOP OF THRUST STRUCTURE 345.70 8.780

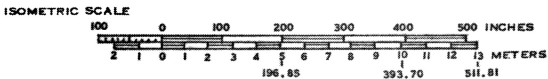
INTERCONNECT LOX DRAIN 130.00 3.302

BOTTOM OF ENGINE FAIRING 48.50 1.231

BOTTOM OF THRUST STRUCTURE 116.00 2.946

GIMBAL 100.00 2.540

NOTE: S-IC STAGE ROTATED 45°  
COUNTER CLOCKWISE  
FOR CLARITY



SHEET 1 OF 2 SATURN APOLLO 500 SERIES

THE **BOEING** COMPANY  
SPACE DIVISION, LAUNCH SYSTEMS BRANCH  
HUNTSVILLE, ALA 35807

SATURN V APOLLO  
FLIGHT CONFIGURATION

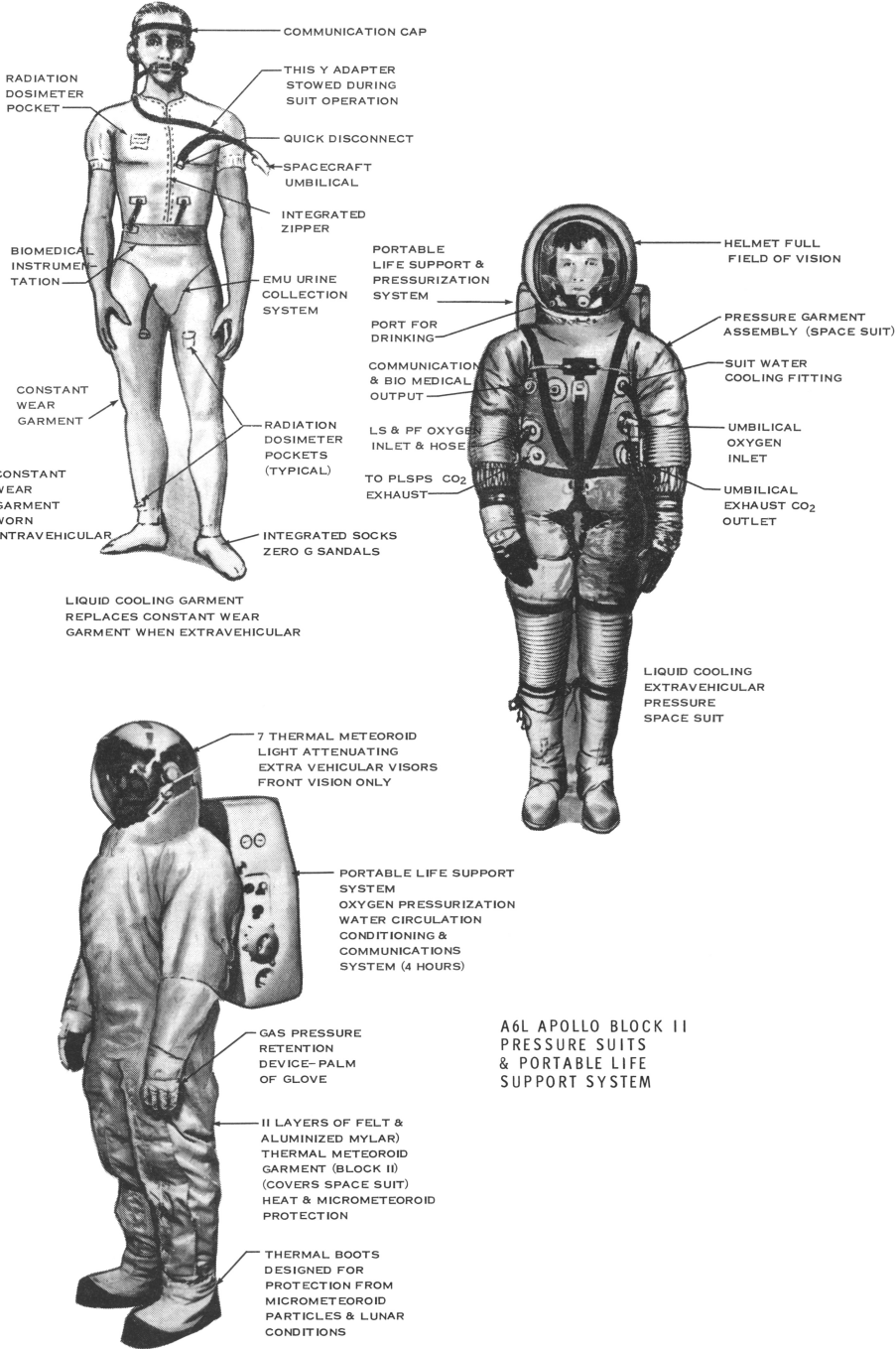
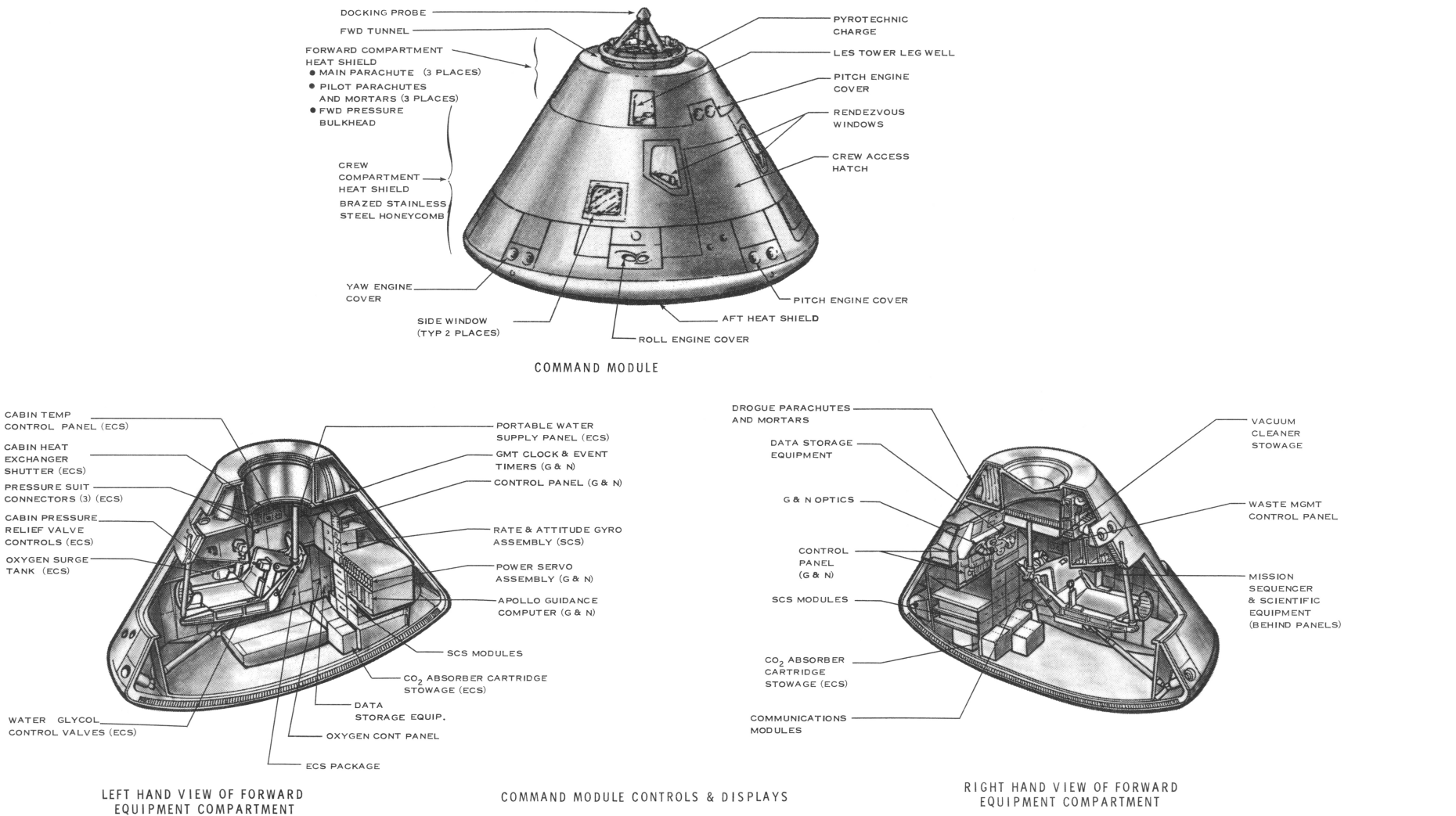
THE **HEROICRELICS** WEB SITE  
RELICS OF THE HEROIC AGE OF MANNED  
SPACE FLIGHT  
HTTP://HEROICRELICS.ORG

DRAWING ORIGINATED BY: HUNTSVILLE  
ENGINEERING

DATE: 1 JANUARY 1966  
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SATURN V APOLLO FLIGHT CONFIGURATION



	FEET	LENGTH INCHES	METERS	FEET	DIAMETER INCHES	METERS	POUNDS WET WT. DRY WT.
APOLLO SPACECRAFT (NORTH AMERICAN AVIATION)							
TOTAL	81.865	982.380	24.952				93,420 33,745
LAUNCH ESCAPE SYSTEM	33.396	400.762	10.129				8,420
LES JETTISON MOTOR	23.538	282.462	7.174	2.166	26	.660	
COMMAND MODULE	11.125	133.500	3.391				11,250
SERVICE MODULE	13.500	162.000	4.115	12.83	154	3.911	40,450 10,275
SPACECRAFT L/M ADAPTER	28.000	336.000	8.534				3,800 3,800
LUNAR MODULE (GRUMMAN AIRCRAFT ENGINEERING)	19.3	231.6	5.882				29,500
L/M LUNAR LAUNCH STAGE	9.5	114.0	2.895				
L/M LUNAR LANDING STAGE	9.8	117.6	2.987				
LAUNCH VEHICLE INSTRUMENT UNIT (IBM)	3	36	.914				4,661
S-IVB THIRD STAGE (DOUGLAS)	58.63	704.00	17.881	21.66	260	6.604	264,998 26,472
(1) J2 ENGINE 200,000 POUNDS THRUST							
(2) S-IVB ULLAGE MOTORS (THIOL) 2848 POUNDS THRUST EACH							
S-II S-IVB INTERSTAGE (DOUGLAS)	18.958	227.5	5.778				7,611 8,536
(4) RETRO ROCKETS (THIOL) 34,800 POUNDS THRUST EACH							
S-II SECOND STAGE (NAA)	81.50	978	24.841	33.00	396	10.058	1,031,455 88,200
(5) J-2 ENGINES 1,000,000 POUNDS THRUST							
S-IC S-II INTERSTAGE (NAA)	18.25	219	5.562	33.00	396	10.058	14,920 12,200
(8) ULLAGE ROCKETS (ROCKETDYNE) 22,900 POUNDS THRUST EACH							
S-IC FIRST STAGE BOOSTER (BOEING)	138.03	1656.36	42.071	33.00	396	10.058	4,698,340 305,200
LOX TANK	64.083	769.00	19.532				
FUEL TANK	43.083	517.00	13.131				
(8) RETRO ROCKETS (THIOL) 91,610 POUNDS THRUST EACH							
FIN SPAN	62.73	752.77	19.12				
(5) F-1 ENGINES 7.5 MILLION POUNDS THRUST							
TOTAL LIFTOFF							6,115,403
VEHICLE LENGTH	363.01	4356.14	110.646				