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FOLLOWING IS TEXT OF DOUGLAS RELEASE ON SUCCESSFUL FIRST FIRING OF CLUSTERED P&W RL10 ENGINES. OCCURRED AT 11.12 A.M. PDT, AUGUST 17.

SATURN HISTORY DOCUMENT
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SATURN S-IV FIRST FIRING

SACRAMENTO, CALIF.--MAN'S EFFORT TO REACH THE MOON MOVED NEARER REALITY TODAY WITH THE SUCCESSFUL FIRST FIRING HERE OF THE SIX LIQUID OXYGEN-LIQUID HYDROGEN FUELED ENGINES OF THE SATURN S-IV.

THE S-IV, SECOND STAGE OF THE NATIONAL AERONAUTICS AND SPACE ADMINISTRATION'S POWERFUL SATURN C-1 VEHICLE, IS BUILT BY DOUGLAS AIRCRAFT COMPANY'S MISSILE AND SPACE SYSTEMS DIVISION.

LASTING FOR 10 SECONDS, THE STATIC FIRING IS A MAJOR MILESTONE IN THE S-IV DEVELOPMENT PROGRAM. ALTHOUGH IT WAS OF SHORT DURATION, THE FIRING HELPED PAVE THE WAY FOR THE FIRST FULLY POWERED C-1 FLIGHT, SET FOR 1963. THE FIRING WAS CONDUCTED AT THE DOUGLAS MISSILE AND SPACE TEST INSTALLATION NEAR SACRAMENTO.

THE C-1 IS EXPECTED TO BE OPERATIONAL BY 1964. ITS CHIEF MISSION IS THE EXPLORATION OF SPACE IN PREPARATION FOR FLIGHTS TO THE MOON.

TEST OF THE SIX-ENGINE CLUSTER, GENERATING A TOTAL THRUST OF

90,000 POUNDS, IS THE FIRST CLUSTERED FIRING OF THESE PRATT & WHITNEY RL-10 ENGINES. IT INDICATED BASICALLY THAT THE CLUSTER OF ENGINES CAN BE SUCCESSFULLY STARTED AND THAT THE ENGINES ARE COMPATIBLE WITH THE VEHICLE PROPELLANT FEED SYSTEMS.

THE FIRING WAS THE FIRST IN A SERIES OF S-IV VEHICLE TESTS USING A HEAVY-DUTY "BATTLESHIP" VEHICLE. THESE TESTS WILL BE FOLLOWED HERE BY SIMILAR STATIC FIRINGS USING A FLIGHT-TYPE "ALL SYSTEMS" VEHICLE AND LATER BY A STATIC FIRING OF THE FIRST ACTUAL FLIGHT VEHICLE BEFORE IT IS TRANSPORTED TO CAPE CANAVERAL FOR THE INITIAL LAUNCH.

THE "BATTLESHIP" VEHICLE, CONSISTING OF HEAVY-WALL STAINLESS STEEL TANKS WITH DIMENSIONS CORRESPONDING TO THE ACTUAL FLIGHT VEHICLE, IS POSITIONED ON ONE OF THE STATIC TEST STANDS AT THE DOUGLAS SACRAMENTO INSTALLATION.

SUBSEQUENT PHASES OF THE BATTLESHIP PROGRAM WILL INCLUDE TESTS TO DEMONSTRATE THAT RATED THRUST OF THE SIX-ENGINE CLUSTER CAN BE ACHIEVED AND TO DETERMINE OTHER PERFORMANCE AND OPERATIONAL CHARACTERISTICS OF THE VEHICLE SYSTEMS.

TESTING WITH THE ALL-SYSTEMS VEHICLE IS SCHEDULED FOR EARLY 1963, WHEN A COMPLETE FLIGHT-TYPE S-IV WILL BE STATIC FIRED. WHEN THE BATTLESHIP TESTS ARE PHASED OUT, STATIC FIRING OF THE PRODUCTION VEHICLES WILL BEGIN.

AFTER SUCCESSFUL STATIC FIRING AND CHECKOUT, THE S-IVS WILL BE TRANSPORTED BY BARGE AND SHIP FROM SACRAMENTO TO THE PANAMA CANAL AND ON TO CAPE CANAVERAL. THERE THEY WILL BE ATTACHED TO THE S-I BOOSTER OF THE SATURN C-1 VEHICLE IN PREPARATION FOR LAUNCH INTO SPACE.

EXTENSIVE TESTING OF THE S-IV, INCLUDING NUMEROUS VEHICLE LOADING TESTS AND ENGINE PRE-FIRING OPERATIONS, HAD BEEN CONDUCTED FOR SEVERAL MONTHS BEFORE THE FIRST FIRING OF THE SIX-ENGINE CLUSTER.