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Copy 7 of 11

NRO Review Completed.

13 September 66


MEMORANDUM FOR THE RECORD

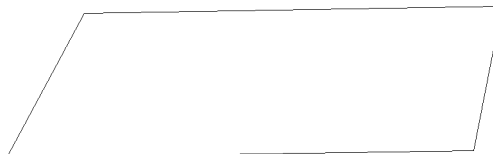
SUBJECT : U-2R Standard Aircraft Characteristics Chart

REFERENCE : LAC Report SP-937, "Proposal for U-2R
Airplane", 27 December 1965

Attached herewith is one copy of the U-2R Standard Aircraft Characteristics Chart prepared by ASD/D/R&D/OSA. This chart represents the ASD/Lockheed estimated performance of the U-2R aircraft for the exact configuration as proposed in the reference report. It does not include the various

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 It does include the current off-the-shelf payload configuration as used in the U-2C. Subsequent revisions to this chart will be prepared and issued as the program progresses and more data become available.



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Deputy for
Research and Development
Special Activities

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APD/OSA/pca (13 Sept 66)

Attachment - 1
As noted above

Distribution:

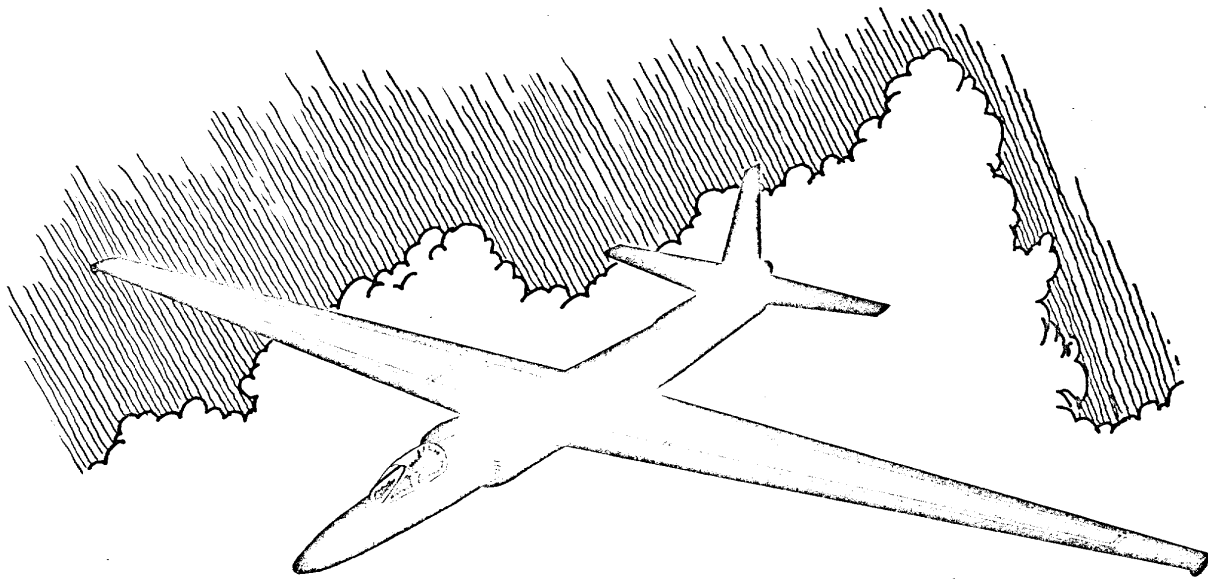
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- 6 - IDEA Div/O/OSA w/att
- 7 - ASD/OSA w/att
- 8 - PSD/OSA w/att
- 9 - SSD/OSA w/att
- 10 - ASD/OSA (Chrono) wo/att
- 11 - RB/OSA wo/att



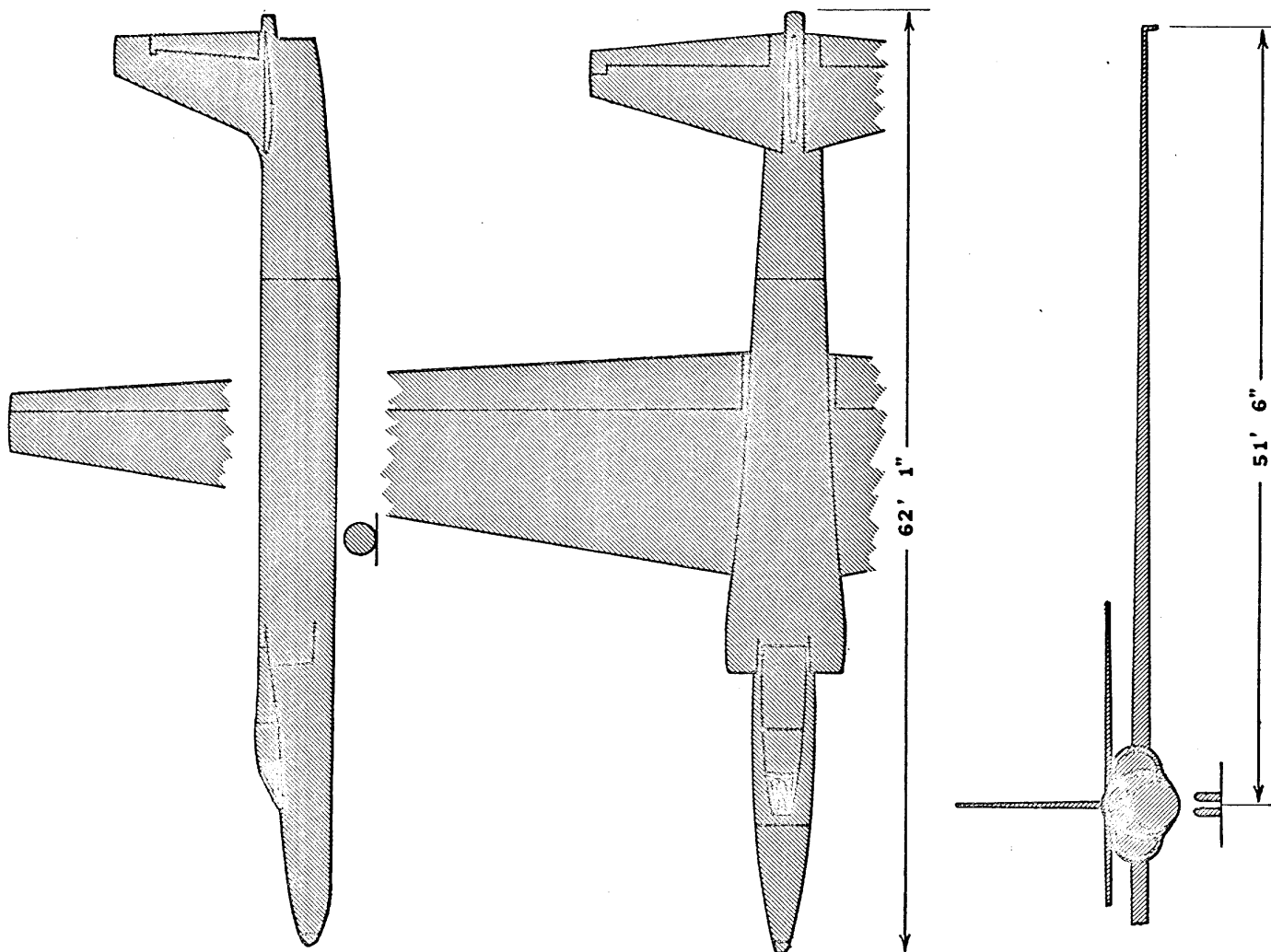
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GROUP 1
Excluded from automatic
downgrading and
declassification

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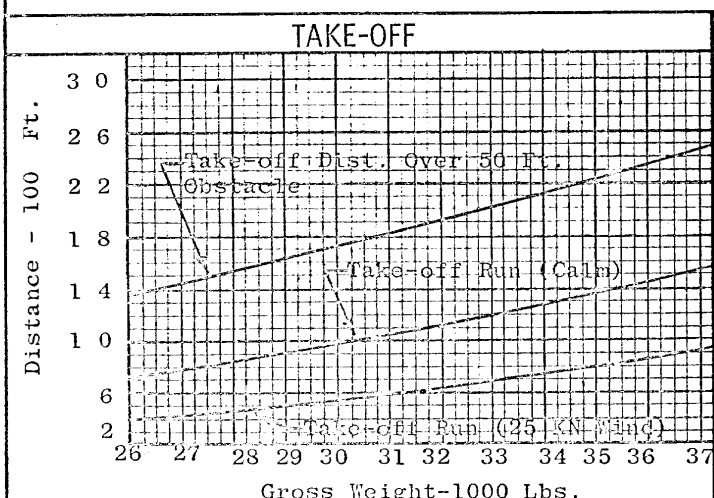
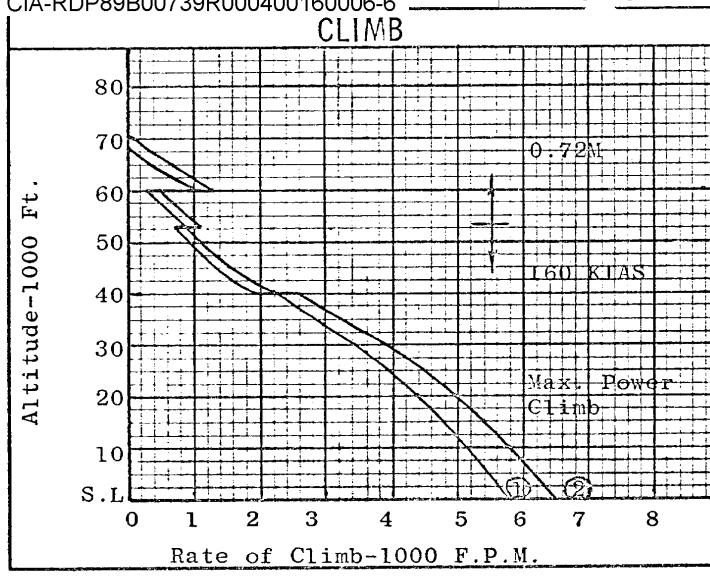
STANDARD
AIRCRAFT CHARACTERISTICS
U-2R



POWERPLANT	MISSION AND DESCRIPTION	WEIGHTS															
<p>Nbr. & Model.... (1) J75P-13B Mfr.....Pratt & Whitney A/C Engine Spec Nbr. N-2614G Appendix B Type.....Turbojet Augmentation.....None Length.....132.62 In. (Not Including Tailpipe) Diameter (Max Flange) 42.94 In. Weight Dry (Spec)...4,960 Lbs <u>Condition</u> <u>Thrust</u> <u>SFC</u> S.L.S. 17,000 lbs. .82</p>	<p>The mission of the U-2R model airplane is to perform aerial photo and electronic reconnaissance. The U-2R is a single-place, single engine aircraft built by Lockheed Aircraft Corporation. The airplane is an improved design which utilizes the salient features of the U-2C model. The improvements made have been in the use of a larger wing, higher thrust available, increased payload flexibility and higher fuel capacity. The improvements in the wing, thrust and fuel capacity have enabled the U-2R to have higher altitude capability, range and speed than its predecessor, the U-2C. This airplane has the necessary provisions for operations from naval aircraft carriers.</p>	<table border="1"> <thead> <tr> <th>Loading</th> <th>Lbs.</th> <th>L.F.</th> </tr> </thead> <tbody> <tr> <td>Empty.....</td> <td>15,950</td> <td></td> </tr> <tr> <td>Zero Fuel.....</td> <td>17,400*</td> <td></td> </tr> <tr> <td>Normal T.O.....</td> <td>30,130**</td> <td>2.5</td> </tr> <tr> <td>Overload T.O....</td> <td>36,750+</td> <td>2.0</td> </tr> </tbody> </table> <p>*Includes 100 lbs. of unusable fuel and 945 lbs. payload. ** Zero fuel weight plus 12,730 lbs. of fuel + Zero fuel weight plus 19,350 lbs. of fuel</p>	Loading	Lbs.	L.F.	Empty.....	15,950		Zero Fuel.....	17,400*		Normal T.O.....	30,130**	2.5	Overload T.O....	36,750+	2.0
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<p>ELECTRONICS</p>		<p>FUEL AND OIL</p>															
<p><u>Comm. & Nav. Systems</u> AN/ARC-34.....UHF Radio AN/ARC-51.....UHF Radio 618-T.....HFSSB Radio AN/ARC-59 Radio Compass (ADF) ARC Type 15F.....UHF (VOR) 914-1 (Wilcox).....IFF ARC-12.....UHF Radio</p>	<p><u>DEVELOPMENT</u> Proposal.....27 December 1965 25X1</p>	<table border="1"> <thead> <tr> <th>LOCATION</th> <th>FUEL</th> <th>GALLONS</th> </tr> </thead> <tbody> <tr> <td>Normal Wing Fuel.....</td> <td></td> <td>1,935</td> </tr> <tr> <td>Overload Wing Fuel....</td> <td></td> <td>1,006</td> </tr> <tr> <td>Spec.....</td> <td>MIL-J-5161E (ASG)</td> <td></td> </tr> </tbody> </table> <p>25X1 <u>OIL</u> 9 gallons Spec.....MIL-L-23699</p>	LOCATION	FUEL	GALLONS	Normal Wing Fuel.....		1,935	Overload Wing Fuel....		1,006	Spec.....	MIL-J-5161E (ASG)				
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	<p>DIMENSIONS</p>	<p>PHOTO-SENSORS</p>															
<p>*Presented in Lockheed proposal and do not represent contemplated U-2R defensive systems. Subsequent charts to be published reflecting U-2R defensive systems capability.</p>	<p>Wing Span.....103 Ft., 91'8" folded Area.....1,000 sq. ft. Thickness.....9%C (Root) 6%C (Tip) Aspect Ratio.....10.67 Length.....62 Ft. 1.0 In. Tread.....50 Ft.</p>	<p>Proposed photo-sensors and characteristics are shown on separate page of this document.</p>															

PERFORMANCE SUMMARY

TAKE-OFF LOADING CONDITION		①	②	
TAKE-OFF WEIGHT	lb.	30,130	26,790	
Fuel internal/external	(B) lb./lb.	12,730/-	9,390/-	
Payload	lb.	945	945	
Wing loading	lb./sq. ft.	30.13	26.79	
Stall speed--power off	(C) kn.	89.5	84.5	
Take-off run at S.L. - calm	ft.	1,000	782	
Take-off run at S.L. -25 kn. wind	ft.	560	420	
Take-off to clear 50 ft. - calm	ft.	1,730	1,432	
Max. speed/at maximum altitude	kn./ft.	413/Max. Alt.	413/Max. Alt.	
Rate of climb at S.L.	fpm	5,775	6,520	
Time: S.L. to 65,000 ft.	Hrs.	0.68	0.54	
Time: S.L. to Max. Initial Alt.	Hrs.	1.1	1.1	
Max. Initial Altitude	ft.	68,200		25X1
Range	(A) n.mi.	3,959	2,793	
Average Cruising Speed	M/kn.	0.72/413	0.72/413	
Max. Cruising altitude(s)	ft.	68,200		25X1
Mission radius/mission time	n.mi./hr.	1979/9.7	1396/6.8	
Average cruising speed	M/kn.	0.72/413	0.72/413	
LANDING WEIGHT	lb.	18,387	18,387	
Fuel	lb.	987	987	
Stall speed-power-off/approach power(C)/(D)	kn/kn.	70/64.8	70/64.8	
Landing distance over 50 ft. obst/ground roll	ft/ft	1690/942	1690/942	
A. No credit for descent distance B. Fuel density 6.58 Lbs./Gal. C. Flaps Up D. Flaps Down 35 Degrees				
Performance Basis: Estimated				



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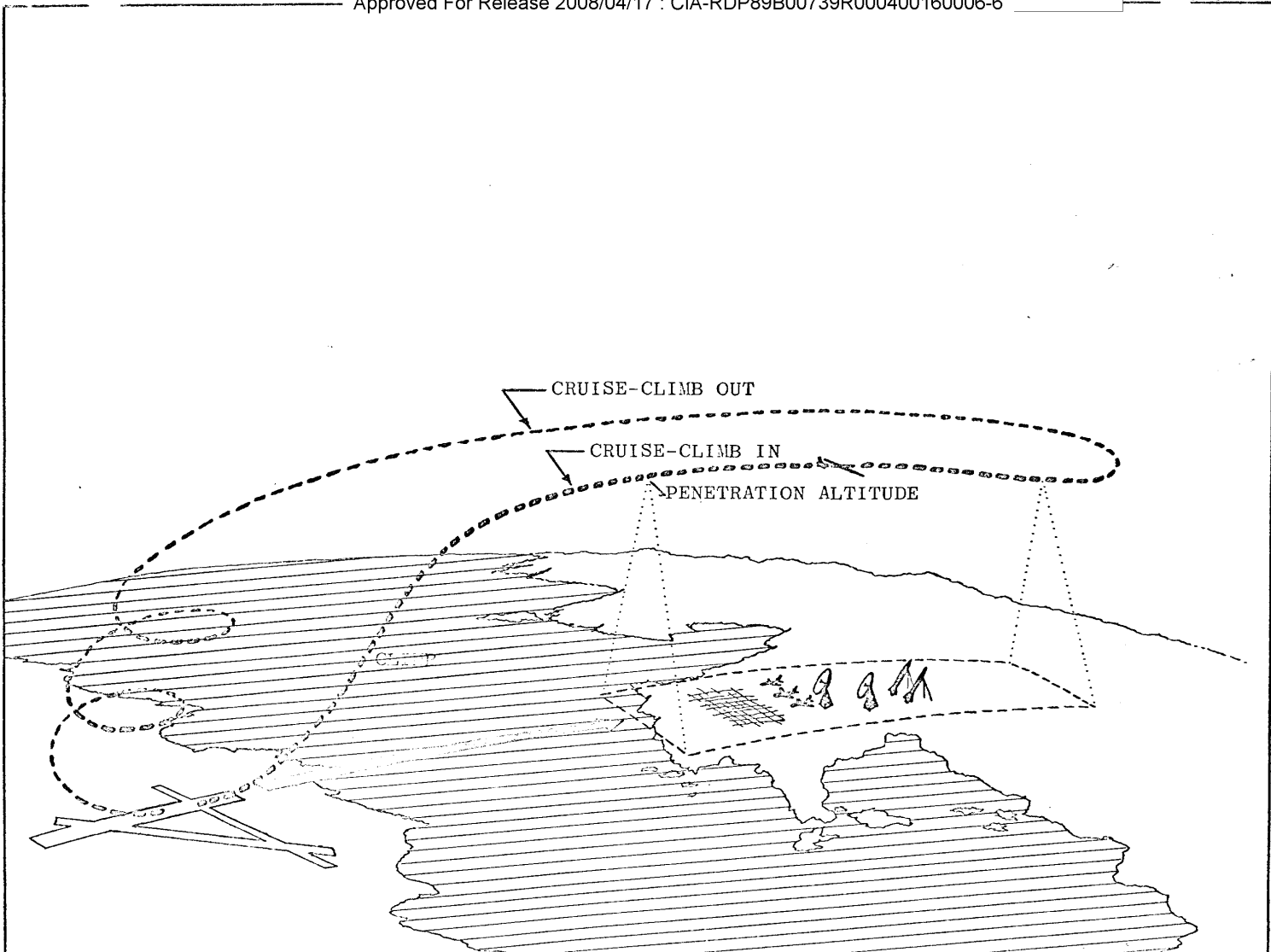
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