STANDARD AIRCRAFT CHARACTERISTICS
WV-3 "SUPER CONSTELLATION"
LOCKHEED

15 JUNE 1956
POWER PLANT
NO. & MODEL:............................................. B-3550-34
M.P.H.:............................................. 240 M.A.P.
SUPERCH.:............................................. 1 Stage, 2 Speed
PROP. GEAR RATIO:............................................. 0.475
PROP. M.P.H.:............................................. Hamilton Std.
PROP. DEG. NO:............................................. 6903A
NO. H.P./SIA:............................................. 3/15'-2"

RATINGS
HPF HP HP ALT.
TAK-F OFF 3,250 2,900 5,000
NORMAL 2,500 2,600 16,700
  2,600 2,600 6,500
  2,450 2,600 17,900

Spec. No. KH-726

MISSION AND DESCRIPTION
The WV-3 is a special weather reconnaissance airplane.

The WV-3 is a military adaptation of the Lockheed Model 1049 Super Constellation. The aircraft features flaperons, control surface boosters, rubber de-icing boots and a pressurized fuselage. The WV-3 is similar to the WV-2 (AV) airplane except for a change in internal arrangements resulting from the addition of necessary weather reconnaissance equipment and the corresponding deletion of certain search radar equipment. Provisions allow conversion to permit combat information center configuration.

DEVELOPMENT
First Flight:.........................15 July 1955
Service Use:.........................September 1955

WEIGHTS
LOADING CAP. L.F.
EMPTY (Actual)............................................. 81,961
BASIC............................................. 84,596
DESIGN............................................. 150,000
COMBAT............................................. 114,600
MAX. T.O.**.............................................
w/tip tanks............................................. 145,000
w/o tip tanks............................................. 145,000
MAX. Payload.............................................
w/o tanks but empty............................................. 122,000

ALL WEIGHTS ARE CALCULATED.
*Limited by strength.

FUEL AND OIL
NO. TANKS GALS. LOCATION
6 5,220 Aft
2 1,750 Fuselage
2 1,200 Wing Tip

FUEL GRADE:............................................. 155/145
FUEL SPEC.:............................................. applicable MIL-F-5972

OIL
CAPACITY:............................................. 300
SPEC.:............................................. applicable MIL-Q-5682

DIMENSIONS
WING
AREA............................................. 1650 sq. ft.
SPAN (w/tip tanks)............................................. 123'
M.A.C.............................................. 1176'
LENGTH............................................. 116'-2"'
HEIGHT............................................. 27'-6"
TENNAB............................................. 81'-0"
PROP. Ord. Clearance............................................. 1'-8"

ELECTRONICS
NAVIGATIONAL
AN/ARN-4-Direct. Finder Auto
AN/ARN-12-Ref. Marker Beacon
AN/ARN-17-Ref. Altimeter
AN/ARN-17-Ref. Glide Slope
AN/ARN-15-Ref. VHF Nav.
SDR-718-Radio Altimeter High Alt.

15 JUNE 1956
## PERFORMANCE SUMMARY

### TAKE-OFF LOADING CONDITION

<table>
<thead>
<tr>
<th></th>
<th>Normal Search</th>
<th>Overload Search</th>
<th>Ferry Range</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Take-off Weight</strong></td>
<td>lbs.</td>
<td>lbs.</td>
<td>lbs.</td>
</tr>
<tr>
<td>Fuel</td>
<td>139,000</td>
<td>144,900</td>
<td>139,970</td>
</tr>
<tr>
<td>Fuel</td>
<td>38,090</td>
<td>38,090</td>
<td>38,090</td>
</tr>
<tr>
<td>Fuel</td>
<td>lbs.</td>
<td>lbs.</td>
<td>lbs.</td>
</tr>
<tr>
<td>Wing loading</td>
<td>78.7</td>
<td>87.7</td>
<td>84.8</td>
</tr>
<tr>
<td>Stall speed - power-off</td>
<td>104</td>
<td>102</td>
<td></td>
</tr>
<tr>
<td>Take-off run at S.L.</td>
<td>ft.</td>
<td>3,900</td>
<td>4,900</td>
</tr>
<tr>
<td>Take-off run at 5 L.</td>
<td>ft.</td>
<td>7,300</td>
<td>5,600</td>
</tr>
<tr>
<td>Max. speed/altitude</td>
<td>(A) km/hr</td>
<td>285/14,110</td>
<td>272/14,110</td>
</tr>
<tr>
<td>Rate of climb at S.L.</td>
<td>fpm</td>
<td>1,050</td>
<td>830</td>
</tr>
<tr>
<td>Time: S.L. to 10,000 ft.</td>
<td>(A) min.</td>
<td>10.8</td>
<td>14.4</td>
</tr>
<tr>
<td>Time: S.L. to 20,000 ft.</td>
<td>(A) min.</td>
<td>30.0</td>
<td>44.0</td>
</tr>
<tr>
<td>Service ceiling (100 fpm)</td>
<td>ft.</td>
<td>22,610</td>
<td>19,200</td>
</tr>
<tr>
<td>Combat range</td>
<td>n.m.</td>
<td>3,200</td>
<td>2,900</td>
</tr>
<tr>
<td>Average cruising speed</td>
<td>km/ft.</td>
<td>207</td>
<td>212</td>
</tr>
<tr>
<td>Cruising altitude(s)</td>
<td>ft.</td>
<td>10,000</td>
<td>10,000</td>
</tr>
<tr>
<td>Combat radius</td>
<td>(A) n.m.</td>
<td>1,325</td>
<td>1,890</td>
</tr>
<tr>
<td>Average cruising speed</td>
<td>km/ft.</td>
<td>207</td>
<td>212</td>
</tr>
<tr>
<td>Time on station</td>
<td>(A) hr.</td>
<td>4.5</td>
<td>10.3</td>
</tr>
<tr>
<td>at 1,000 n.m.</td>
<td>hr.</td>
<td>4.3</td>
<td>4.4</td>
</tr>
<tr>
<td>radius</td>
<td>(20,000 ft.)</td>
<td>3.2</td>
<td>7.3</td>
</tr>
</tbody>
</table>

### COMBAT LOADING CONDITION

<table>
<thead>
<tr>
<th></th>
<th>Normal</th>
<th>Normal</th>
<th>Normal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engine power</td>
<td>lbs.</td>
<td>lbs.</td>
<td>lbs.</td>
</tr>
<tr>
<td>Fuel</td>
<td>22,610</td>
<td>31,310</td>
<td>31,310</td>
</tr>
<tr>
<td>Combat speed/comb alt.</td>
<td>km/hr</td>
<td>277/20,000</td>
<td>277/20,000</td>
</tr>
<tr>
<td>Rate of climb/comb alt.</td>
<td>fpm</td>
<td>1,000/10,000</td>
<td>1,000/10,000</td>
</tr>
<tr>
<td>Combat ceiling (500 fpm)</td>
<td>ft.</td>
<td>20,200</td>
<td>18,300</td>
</tr>
<tr>
<td>Rate of climb at S.L.</td>
<td>fpm</td>
<td>1,360</td>
<td>1,170</td>
</tr>
<tr>
<td>Max. speed at S.L.</td>
<td>km/ft.</td>
<td>255</td>
<td>252</td>
</tr>
<tr>
<td>Max. speed/altitude</td>
<td>km/hr</td>
<td>289/19,100</td>
<td>289/19,100</td>
</tr>
</tbody>
</table>

### LANDING WEIGHT

<table>
<thead>
<tr>
<th></th>
<th>lbs.</th>
<th>lbs.</th>
<th>lbs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fuel</td>
<td>25,920</td>
<td>35,290</td>
<td>90,840</td>
</tr>
<tr>
<td>Stall speed - power-off</td>
<td>km/hr</td>
<td>85</td>
<td>88</td>
</tr>
<tr>
<td>Stall speed - with approach power</td>
<td>km/hr</td>
<td>75</td>
<td>75</td>
</tr>
</tbody>
</table>

### NOTES

(A) Normal rated power.

(B) At 10,000 feet altitude with zero search time on station.

PERFORMANCE BASIS: Flight tests of the WV-2 airplane.

RANGE AND RADIUS are based on WV-2 flight test fuel consumption data increased by 5%.

Fuel Reserve for the Normal Search range mission is 2,790 pounds.

Fuel Reserve for the Overload Search range mission is 3,410 pounds.

WV-3

15 June 1956
NOTES

Three engine rate-of-climb at sea level - normal rated power.

<table>
<thead>
<tr>
<th>GROSS WEIGHT</th>
<th>RATE-OF-CLIMB FEET PER MINUTE</th>
</tr>
</thead>
<tbody>
<tr>
<td>124,000</td>
<td>570</td>
</tr>
<tr>
<td>145,000</td>
<td>410</td>
</tr>
</tbody>
</table>

SEARCH RADIUS PROBLEM

JAMN-UP, TAXI, TAKE-OFF: 10 minutes at normal rated power at sea level.

CLIMB: On course to cruise altitude to 10,000 feet at normal rated power.

Cruise-Out: To a 1,000 nautical miles radius point at long range airspeeds.

CLIMB OR DECREASE TO SEARCH ALTITUDE: Fuel used and distance gained in climb but not descent.

SEARCH: At search altitude at maximum endurance speeds.

RETURN: To radius point at the end of search. Fuel is used and distance gained for climb but not descent.

Cruise-Back: At 10,000 feet at long range airspeeds.

Reserve: Fuel allowance for 2 hours at long range airspeeds at 1,500 feet.

RANGE PROBLEM

JAMN-UP, TAXI, TAKE-OFF: 10 minutes at normal rated power at sea level.

CLIMB: On course to 10,000 feet at normal rated power.

Cruise-Out: At long range airspeeds at 10,000 feet.

Reserve: Fuel allowance for 30 minutes at sea level at maximum endurance speed plus 5% of the initial fuel load.

ELECTRONICS (Cont'd)

COMMUNICATION

AN/AFK-6A-1FF Transponder
AN/AFR-15A-HP Rec.
AN/ALE-5-LP Receiver (LIA)
AN/ART-13-LP Trans.
AN/AFC-27-DHF Trans.-Rec.
AN/AID-10-IDS
AN/ASK-26-Keyer, Emer.
AN/AFA-89-Gudder (Group)
AN/AOG-1-VHF Trans. Receiver

WEATHER EQUIPMENT

Vortex Thermometer
Psychrometer ML-313/AN
Anemoid Barometer ML-401/U
Flight Recorder
Icing Rate Meter
Radar Oil