ACCESS DOORS AND PANELS

1 INTERPHONE JACK COVER LATCH
2 EXTERNAL POWER COVER LATCH
3 BUSHING
4 RETAINER
5 SHAFT
6 LATCH
7 RETAINER
8 FORWARD BRACKET
9 AFT BRACKET
10 FWD LANDING GEAR ACCESS PANEL
11 LATCH
12 PANEL ASSY
13 PANEL ASSY
14 FUEL PUMP ACCESS PANEL
15 COVER ASSY
16 LATCH
17 AFT LANDING GEAR ACCESS PANEL
18 ANTENNA HOUSING ASSY
19 TUNNEL ACCESS LATCH
20 STRUT ASSY

21 BRACKET
22 TUNNEL ACCESS COVER ASSY
23 TUNNEL ACCESS COVER ASSY
24 TUNNEL ACCESS COVER ASSY
25 XMSN OIL FILLER COVER ASSY
26 RAMP ACTUATOR AND INTERPHONE JACK ACCESS COVER ASSY
27 FUEL SHUT-OFF COVER ASSY
28 LATCH
29 OIL COOLER FAN COVER ASSY
30 OIL COOLER FAN COVER ASSY
31 AFT ROTOR XMSN COVER ASSY
32 PYLON REMOVAL COVER ASSY
33 PYLON ACCESS COVER ASSY
34 HYDRAULIC TEST COVER ASSY
35 APU ACCESS PANEL ASSY
36 SUPPORT ARM ASSY
37 DRIP TRAY ASSY
38 WORK PLATFORMS

HC-1B TRAINING CHART
CARGO HOOK INSTALLATION

HC-1B TRAINING CHART

1 Bolt
2 Bungee
3 Beam Track Support
4 Beam Track Assembly
5 Roller
6 Bearing
7 Emergency Release Handle
8 Carriage Assembly
9 Bolt
10 Bolt
11 Block
12 Strap Assembly
13 Strap Assembly
14 D Ring
15 Spacer
16 Hydraulic Line Connection
17 Electrical Connector
18 Bolt
19 Hook Assembly
16. Combustion Chamber Assembly
17. Vaporizing Tubes
18. Cover-Oil Tank
19. Fireshield
20. Compressor Turbine
21. 1st Power Turbine
22. 2nd Power Turbine
23. Flow Splitter Scoop
24. Exhaust Diffuser
25. Inner Cone Flange
26. Exhaust Cone Flange
LEGEND

ANTI-ICING AIR

Anti-Icing System-Internal
Figure 1.2 Right Front View

Figure 1.3 Left Front View
GAS TURBINE APU

HC-1B TRAINING CHART
REDUCTION DRIVE GEAR TRAIN

- INPUT PINION: 56,000 RPM
- OUTPUT SHAFT: 6,000 RPM
- PLANET GEAR ELEMENTS
- OIL PUMP DRIVE GEAR
- INTERMEDIATE GEAR (ACCESSORY DRIVE)

HC-1B TRAINING CHART
HC-1B TRAINING CHART
ENG. NO. 1 CONDITION CONTROL (N1)

**N1 ENGINE CONDITION CIRCUIT**

STOP POSITION

28 V DC PRIMARY BUS

ACTUATOR GAS PRODUCER POWER LEVER (N1)

GROUND POSITION 10°

28 V DC PRIMARY BUS

ACTUATOR GAS PRODUCER POWER LEVER (N1)

FLIGHT POSITION 90°

28 V DC PRIMARY BUS

ACTUATOR GAS PRODUCER POWER LEVER (N1)

SWITCH LEGEND

S1 - CLOSED IN "STOP" POS, OPEN IN "GROUND" & "FLIGHT" POS.
S2 - OPEN IN "STOP" & "FLIGHT" POS, CLOSED IN "GROUND" POS.
S3 - OPEN IN "STOP" & "GROUND" POS, CLOSED IN "FLIGHT" POS.

LEVER LIMIT SWITCH OPERATION

<table>
<thead>
<tr>
<th>0°</th>
<th>3°</th>
<th>10°</th>
<th>13°</th>
<th>90°</th>
<th>93°</th>
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<tr>
<td>LS1</td>
<td>OPEN</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>LS2</td>
<td>CLOSED</td>
<td>OPEN</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LS3</td>
<td>OPEN</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>LS4</td>
<td></td>
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</tr>
</tbody>
</table>

**HC-1B TRAINING CHART**
ENGINE CONTROLS

- LOW OIL PRESS
- HIGH EXH TEMP
- OVSP
- APU TACHOMETER
- START
- STOP
- APU

ENGINE NO. 1
- IGNITION
- START
- FUEL
- OFF
- CLOSE
- ON
- OPEN

ENGINE NO. 2
- IGNITION
- START
- FUEL
- OFF
- CLOSE
- ON
- OPEN

EMER ENG TRIM SWITCH

HC-1B TRAINING CHART
1. Pump Filter
2. Control Filter
3. Fuel Selector
4. Military Speed
5. Ground Idle Speed
6. nII Control Shaft
7. Max. nII Speed Adj. Screw
8. Interstage Air Bleed Adj. Screw
9. Acceleration Fuel Flow Limit
10. nI Control Shaft
FUEL SYSTEM

STATION 451.00
HEATER FUEL CONNECTION

STATION 372.26
DRAIN

APU BOOST PUMP

THERMAL RELIEF GATE VALVE
DEFUELING CONNECTION

 Pune

STATION 262.26
TANK UNIT

DRAIN

BOOST PUMP

APU

STATION 596.00

SOLENOID VALVE

GATE VALVE

MANUAL SHUT-OFF VALVE

VENT

PRESSURE SWITCH

FLOAT SWITCH

BOOST PUMP

DRAIN VALVE

HC-1B TRAINING CHART
HEATER INSTALLATION

HC-1B TRAINING CHART
FIRE EXTINGUISHING SYSTEM

SECTION A-A

HC-1B TRAINING CHART
ENGINE FIRE EXTINGUISHING SYSTEM

HC-1B TRAINING CHART
HC-1B TRAINING CHART

ENGINE FIRE DETECTION SYSTEM

FIRE WARNING HANDLES
CONTROL UNITS
SENSING UNITS

STA 482.00
SHAFT ADAPTER - ENGINE TO COMBINING TRANSMISSION

END VIEW

HC-1B TRAINING CHART
COMBINING TRANSMISSION

HC-1B TRAINING CHART
OUTER RACE FREEWHEELING
INNER RACE FREEWHEELING
CLUTCH AT FREEWHEELING

OUTER RACE FORCE
INNER RACE FORCE
CLUTCH PARTIALLY LOADED

OUTER RACE FORCE
INNER RACE FORCE
CLUTCH UNDER HIGH LOAD

SPRAG CLUTCH PRINCIPLE

HC-1B TRAINING CHART
HC-1B TRANSMISSION - FORWARD ROTARY WING DRIVE

HC-1B TRAINING CHART
ACCESSORY DRIVE AFT TRANSMISSION VIEW LOOKING FWD

HYDRAULIC PUMP

FLIGHT HYDRAULIC PUMP
3740 RPM

FLIGHT HYDRAULIC PUMP
3740 RPM

OIL PUMP 4375 RPM

ALTER 7995 RPM

IDLER GEAR

IDLER GEAR

DRIVE GEAR 7728 RPM

ALTER 7995 RPM

HYDRAULIC MOTOR 7479 RPM

HC-1B TRAINING CHART
AFT ROTARY-WING DRIVE TRANSMISSION REMOVAL

1 Hoist Kit
2 Transportation Trailer
3 Adapter
4 Aft Transmission Unit

HC-1B TRAINING CHART
1 MAINTENANCE CRANE
2 TRANSPORTATION TRAILER
3 ADAPTER
4 MAINTENANCE CRANE SLIDER
5 FORWARD TRANSMISSION UNIT
6 HOISTING EYE
ROTARY WING BUILD-UP

STAINLESS STEEL LEADING EDGE
4340 STEEL WEIGHT
STAINLESS STEEL CHANNEL

FIBERGLASS SKINS

ALUMINUM RIBS
STAINLESS STEEL TRAILING EDGE

4340 STEEL SPAR

HC-1B TRAINING CHART
ROTARY WING SHOCK ABSORBER

PITCH BEARING HOUSING

ROTARY WING SOCKET

BOLT

WASHER

WASHER

WASHER

WASHER

WASHER

NUT

COTTER PIN

HANDLE IN LOCKED POSITION

SHAFT

WASHER

SPRING PACK

WASHER

RING

WASHER

NUT

HANDLE IN UNLOCKED POSITION

ROLLER

HC-1B TRAINING CHART
UPPER AND LOWER DRIVE ARM ASSEMBLIES

HC-1B TRAINING CHART
FORWARD AND AFT DUAL STICK HYDRAULIC BOOST CYLINDER MANIFOLD

PACKING

PACKING

HOLDER

PACKING

PLUNGER

SPRING

BUSHING

RETAINING RING

CHECK VALVE ASSEMBLY

ACTUATOR

MANIFOLD

DETAIL OF CHECK VALVE

HC-1B TRAINING CHART
DUAL STICK BOOST ACTUATOR SCHEMATIC

HC-1B TRAINING CHART
EXTENSIBLE LINK HYDRAULIC SCHEMATIC

TORQUE MOTOR

AUTHORITY COVER

FILTER

LOCK PISTON

KEY TO FLOW

PRESSURE

RETURN

ALTERNATING PRESSURE AND RETURN

HC-1B TRAINING CHART
HC-1B HYDRAULIC SYSTEM - UTILITY

WINCH HYDRAULIC MOTOR

HOIST BRAKE RELEASE VALVE

HOIST CONTROL VALVE

FLOW REGULATOR

PRESSURE REDUCER

WINCH HYDRAULIC MOTOR

HC-1B TRAINING CHART

ROTARY-WING BRAKE, AFT PARKING BRAKE, AND SWIVEL-LOCK SYSTEM

AFT WHEEL SWIVEL-LOCK KNOB

ROTATOR BRAKE RELEASE

LOCK CHECK VALVE

AIR PRESSURE INDICATOR

ACCUMULATOR

PRESSURE REDUCER

AFT WHEEL BRAKE SOLENOID VALVE

SWIVEL-LOCK SOLENOID VALVE

SWIVEL-LOCK CYLINDERS

AFT PARKING BRAKES

ROTARY-WING BRAKE VALVE

PRESSURE SWITCH

PARK BRAKE ON

ROTATOR BRAKE ON

PARKING BRAKE KNOB

AFT BRAKE SOLENOID VALVE

HC-1B TRAINING CHART
PILOTS' COMPARTMENT CONTROLS

THRUSS CONT
BREAK TRIGGER

STABIL
TRIM
UP
R

DOWN

TRIGGER
1ST POS INTERPHONE
2ND POS RADIO

CYCLIC STICK GRIP

HC-1B TRAINING CHART

CYCLIC STICK CONTROL PANEL
COCKPIT TRANSFER BELLCRANK INSTALLATION

HC-1B TRAINING CHART
LATERAL AND DIRECTIONAL CONTROL SYSTEMS

HC-1B TRAINING CHART
LONGITUDINAL AND THRUST CONTROL SYSTEMS

HC-1B TRAINING CHART
FEEL CONTROL

TO PITCH IDLER BELLCRANK

TO YAW EXTENSIBLE LINK

TO THRUST EXTENSIBLE LINK

VIEW A-A

TO ROLL EXTENSIBLE LINK

FROM THRUST COCKPIT TRANSFER BELLCRANK

FROM YAW COCKPIT TRANSFER BELLCRANK

FROM ROLL COCKPIT TRANSFER BELLCRANK

FROM PITCH COCKPIT TRANSFER BELLCRANK

STATION 95.00

STATION 120.00

HC-1B TRAINING CHART
TUNNEL CONTROLS

HC-1B TRAINING CHART
FIRST STAGE MIXING STOPS

HC-1B TRAINING CHART
SECOND STAGE MIXING STOPS
CHART 1

HC-1B TRAINING CHART
SECOND STAGE MIXING STOPS
CHART 2

STA 120.00

HC-1B TRAINING CHART
PERMANENT MAGNET GENERATOR
AC
DC

ALTERNATING CURRENT FREQUENCY SENSING

GENERATOR CONTROL BOX

FREQUENCY SENSOR

TIME DELAY RELAY

ON
OFF
RESET

GENERATOR CONTROL PANEL

FREQUENCY SENSOR CONTACTS CLOSE 236.5 ± 3.5 CPS (GENERATOR FREQUENCY 350 ± 5 CPS) TIME DELAY
RELAY CONTACTS REMAIN OPEN 13 SECONDS ± 10% AFTER LOSS OF DC VOLTAGE FROM FREQUENCY SENSOR
AC CIRCUIT BREAKER BOX

HC-1B TRAINING CHART
FUEL QUANTITY INDICATING SYSTEM

1 FUEL QUANTITY INDICATOR
2 FUEL QUANTITY SELECTOR SWITCH
3 FORWARD OR AFT TANK UNIT
4 LOW FUEL SENSOR
5 CENTER TANK UNIT
6 THERMISTOR CONTROL UNIT
FUEL QUANTITY SYSTEM BASIC BRIDGE

REFERENCE LEG

MOTOR

AMPLIFIER

INDICATOR LEG

TANK UNIT LEG

HC-1B TRAINING CHART
COMBINED BRIDGE SCHEMATIC
FUEL QUANTITY

AMPLIFIER
MOTOR

FULL ADJ

EMPTY ADJ

RH

TOTAL

LH

SIMULATOR CAPACITOR

RH TANK

LH TANK

HC-1B TRAINING CHART
SELECTOR SWITCH AND LOW FUEL LEVEL SCHEMATICS

FUEL QUANTITY SYSTEM

* RELAY SHOWN IN ENERGIZED POSITION

HC-1B TRAINING CHART
FUEL QUANTITY INSTALLATION TEST CIRCUIT

PT06P-14-19S

TEST HARNESS

PT06P-14-19S

PT06-12-10S

SELECTOR SWITCH

B
D
E
S
V
G
T
J
H
L

115 V - 400 ~
BRIDGE GROUND
SIMULATOR LOW
TU HIGH
TU LOW

FUEL QUANTITY INDICATOR

MD-2 TESTER
MD-1 TESTER

S210-1
S230-1

S210-1

115 V, 400 ~

TEST SW

TO TANK UNITS

HC-1B TRAINING CHART
FUEL QUANTITY INDICATOR SCHEMATIC

MOTOR

FUEL QUANTITY INDICATOR SCHEMATIC

PINS NOT USED

TO PIN E OF B267-14 SW
TO HIGH Z OF T.U.

TO LOW T.U.

TEST SWITCH

115 V
400 N

HC-1B TRAINING CHART
1. RADIO CALL PLATE (2)
2. MASTER CAUTION LIGHT (2)
3. TORQUEMETER (DUAL) (2)
4. AIRSPEED INDICATOR (2)
5. ATTITUDE INDICATOR (VGI) (2)
6. ALTIMETER (2)
7. ROTARY-WING TACHOMETER (2)
8. ATTITUDE INDICATOR (VGI) SWITCH (2)
9. RADIO MAGNETIC INDICATOR
10. COMPASS (DIRECTIONAL INDICATOR)
11. SLAVING SWITCH (2)
12. VERTICAL VELOCITY INDICATOR (2)
13. COPILOT'S CHECKLIST
14. DESK PLATE (2)
15. MARKER BEACON CAUTION LIGHT
16. CLOCK (2)
17. FIRE CONTROL HANDLE (2)
18. FIRE EXTINGUISHER AGENT SWITCH
19. FIRE DETECTOR TEST SWITCH
20. A-C LOADMETER (2)
21. D-C LOADMETER (2)
22. GAS PRODUCER TACHOMETER (2)
23. EXHAUST TEMPERATURE INDICATOR (2)
24. ENGINE OIL TEMPERATURE INDICATOR (2)
25. ENGINE OIL PRESSURE INDICATOR (2)
26. TRANSMISSION OIL PRESSURE INDICATOR
27. TRANSMISSION OIL PRESSURE SELECTOR SWITCH
28. TRANSMISSION OIL TEMPERATURE INDICATOR
29. TRANSMISSION OIL TEMPERATURE SELECTOR SWITCH
30. FUEL QUANTITY INDICATOR
31. HYDRAULIC BOOST PRESSURE INDICATOR (#1)
32. HYDRAULIC BOOST PRESSURE INDICATOR (#2)
33. UTILITY HYDRAULIC BOOST PRESSURE INDICATOR
34. RADAR ALTIMETER
35. RADIO MAGNETIC INDICATOR (C-6H)
36. PILOT'S CHECKLIST
37. PARKING BRAKE KNOB
38. COURSE INDICATOR (VOR/LOC/ADF)
1. PITOT TUBE
2. STATIC PRESSURE PORTS
3. PITOT-STATIC SYSTEM INDICATORS
4. SYSTEM DRAIN CAPS

HC-1B TRAINING CHART