

# **Hawker Beechcraft Corporation**

## **BEECH SUPER KING AIR® A200C**

**US NAVY UC-12B (BJ-1 through BJ-66)**

## **Maintenance Manual Supplement**

**This publication supersedes publication number 92-38347B**

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**P/N 976-33408A9**

**Issued: March 31, 2002  
Revised: November 30, 2011**

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## MODEL BEECH SUPER KING AIR A200C (UC-12B) MAINTENANCE MANUAL SUPPLEMENT

### 1. INTRODUCTION

This Beech Super King Air Model A200C (UC-12B) Maintenance Manual Supplement (P/N 976-33408) supersedes the Beech Model A200C/B200C Maintenance Manual (P/N 92-38347B). This manual provides supplemental maintenance information for the Beech Super King Air Model A200C (Serial Numbers BJ-1 through BJ-66). This information is to be used in conjunction with the Super King Air 200 Series Maintenance Manual (P/N 101-590010-19). This manual is a supplement to, and does not entirely replace, the Super King Air 200 Series Maintenance Manual. In that manual the configuration of airplane serials BB-2 through BB-1462 is equivalent to Navy aircraft serials BJ-1 through BJ-66.

Each supplemental page reflects additional or changed information applicable only to aircraft Serial Numbers BJ-1 through BJ-66. In case of conflict, information in this manual will take precedence over information in the Super King Air 200 Series Maintenance Manual, and information in an applicable Maintenance Engineering Directive will take precedence over information in this manual.

The supplemental information in this manual may be retained intact or integrated into the applicable chapter of the Super King Air 200 Series Maintenance Manual. If the manual is integrated, the supplemental pages will be easily identified by the page color and masthead.

### NOTE

Hawker Beechcraft Corporation expressly reserves the right to supersede, cancel, and/or declare obsolete any parts, part numbers, kits or publications that may be referenced in this manual without prior notice.

### 2. SYSTEM/CHAPTER INDEX GUIDE

The following System/Chapter, Subsystem/Section Index Guide is prepared in accordance with both GAMA Specification No. 2 and ATA Specification No. 2200 for use with maintenance manuals, parts catalogs and wiring diagram manuals. Only the chapters that are applicable to this maintenance manual supplement are listed.

#### SYSTEM/ CHAPTER

#### SUBSYSTEM/SECTION

#### TITLE

#### INTRODUCTION

#### AIRCRAFT GENERAL

|   |                                |                              |
|---|--------------------------------|------------------------------|
| 5 | TIME LIMITS/MAINTENANCE CHECKS |                              |
|   | 00-00                          | General                      |
|   | 10-00                          | Time Limits                  |
|   | 20-00                          | Scheduled Maintenance Checks |
|   | 20-10                          | Phase 1 Inspection           |
|   | 20-20                          | Phase 2 Inspection           |

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MODEL BEECH SUPER KING AIR A200C (UC-12B) MAINTENANCE MANUAL SUPPLEMENT

## CHAPTER 76 - ENGINE CONTROLS

### TABLE OF CONTENTS

| <i>SUBJECT</i>                                           | <i>PAGE</i> |
|----------------------------------------------------------|-------------|
| <b>76-00-00</b>                                          |             |
| <b>ENGINE CONTROLS - DESCRIPTION AND OPERATION</b> ..... | <b>1</b>    |
| GENERAL .....                                            | 1           |
| SPECIAL TOOLS AND SUPPORT EQUIPMENT .....                | 1           |
| CONSUMABLE MATERIALS .....                               | 1           |
| <b>76-10-00</b>                                          |             |
| <b>POWER CONTROLS - DESCRIPTION AND OPERATION</b> .....  | <b>1</b>    |
| GENERAL .....                                            | 1           |
| Description .....                                        | 1           |
| Operation .....                                          | 1           |
| <b>POWER CONTROLS - MAINTENANCE PRACTICES</b> .....      | <b>201</b>  |
| ADJUSTMENTS .....                                        | 201         |
| ENGINE AND PROPELLER CONTROLS .....                      | 201         |
| Condition Lever Low-Idle Catch Gate Inspection .....     | 201         |
| ENGINE CONTROL CROSS SHAFT .....                         | 201         |
| Inspection .....                                         | 201         |

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## ENGINE CONTROLS

### DESCRIPTION AND OPERATION

#### 1. GENERAL

The engine controls govern operation of the engine. The engine controls include units and components interconnected for emergency shutdown. The system includes linkages and controls to the prop governor, fuel control, or other units being controlled during flight operation.

76-10-00 Power Controls: The portion of the system used to control the main fuel control.

#### 2. SPECIAL TOOLS AND SUPPORT EQUIPMENT

The special tools and support equipment listed in Table 1 are required to perform maintenance on this system.

**Table 1 - Special Tools and Support Equipment**

| Nomenclature     | Part Number         | Use              |
|------------------|---------------------|------------------|
| 1. Torque Wrench | 0 - 150 inch-pounds | General Torquing |

#### 3. CONSUMABLE MATERIALS

The consumable materials listed in Table 2 are required to perform maintenance on this system.

**Table 2 - Consumable Materials**

| Material      | Specification | Product |
|---------------|---------------|---------|
| None Required |               |         |

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## ENGINE CONTROLS POWER CONTROLS

### DESCRIPTION AND OPERATION

#### 1. GENERAL

##### A. Description

The control levers provide control of engine power, from idle through takeoff, by operation of the gas generator ( $N_1$ ) governor in the fuel control unit (FCU). Engine and propeller functions are controlled by levers and push-pull cables. When performing engine run-up checks or final operational checks, make sure that all personnel are clear of the aircraft exhaust and propeller danger areas shown in Figure 1.

##### B. Operation

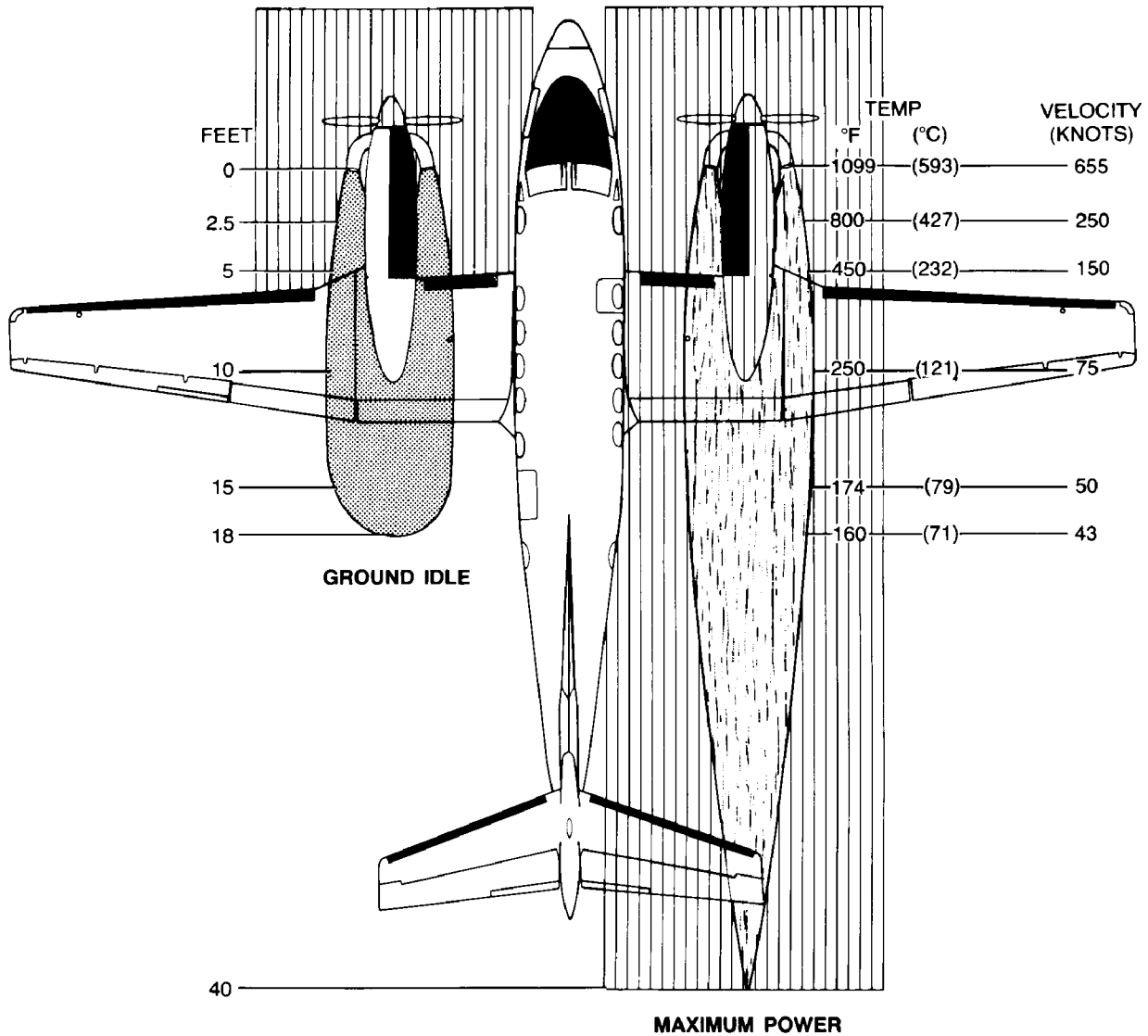
Movement of the power lever forward results in increased  $N_1$  rpm. This increase causes a proportional increase in engine shaft horsepower available for propeller and accessory drive. Movement of the lever, aft, to the detent sets  $N_1$  rpm to the lowest level of power for flight operations.

The PT6A-41 engines are controlled by three levers: the power lever, propeller control lever, and the condition (idle and fuel cutoff) lever. Refer to the applicable engine maintenance manual for complete description and maintenance information on the engine and accessories.

The power lever controls fuel flow to the affected engine to increase or decrease engine RPM. The propeller control lever controls the prop pitch and manual feather. The condition lever enriches or leans the fuel system to provide best engine operation and provides a fuel shutoff.

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-  EXHAUST DANGER AREA (GROUND IDLE)
-  EXHAUST DANGER AREA (MAX POWER)
-  PROPELLER DANGER AREA

## NOTE

- THE EXHAUST DANGER AREA DOES NOT INCLUDE PROPELLER WAKE WHICH INCREASES VELOCITY, AND SIGNIFICANTLY REDUCES TEMPERATURE.
- EXHAUST GAS TEMPERATURE AND VELOCITY AT GROUND IDLE IS VERY LOW, HOWEVER, THE IMMEDIATE AREA OF EXHAUST DISCHARGE SHOULD BE AVOIDED.

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Figure 1 - Exhaust and Propeller Danger Areas

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## ENGINE CONTROLS POWER CONTROLS

### MAINTENANCE PRACTICES

#### 1. ADJUSTMENTS

Refer to applicable engine manufacturer's maintenance manual.

#### 2. ENGINE AND PROPELLER CONTROLS

##### A. Condition Lever Low-Idle Catch Gate Inspection

- (1) Disconnect battery and external power from aircraft.
- (2) Remove screws that attach the light panel to the pedestal engine control section.
- (3) Inspect the catch gates for excessive wear by attempting to move each condition lever straight back (without using lateral force) from the low-idle position into the fuel cut-off position.
- (4) If the levers move into the fuel cut-off position when moved straight back, make sure that the condition is clearly annotated in the aircraft logbook and that the aircrews are briefed of the condition prior to flight. Replace the catch plate within 30 days.
- (5) Visually inspect the low-idle catch gate for wear. Refer to Figure 202. If the catch gate appears worn, replace within 90 days from the date of inspection.

#### 3. ENGINE CONTROL CROSS SHAFT

##### A. Inspection

- (1) Disconnect battery and external power from aircraft.
- (2) Remove access covers from the left and right sides of the pedestal.
- (3) Locate the engine control cross-shaft attachment hardware. Refer to Figure 203.
- (4) Make sure that there is a MS35335-34 star lock washer installed under the heads of the left and right AN5-4A bolts. Refer to Figure 204.
- (5) Using a torque wrench (1, Table 1, 76-00-00), check the cross-shaft attachment bolts for security. The correct torque on the bolts is 65 - 85 inch pounds.

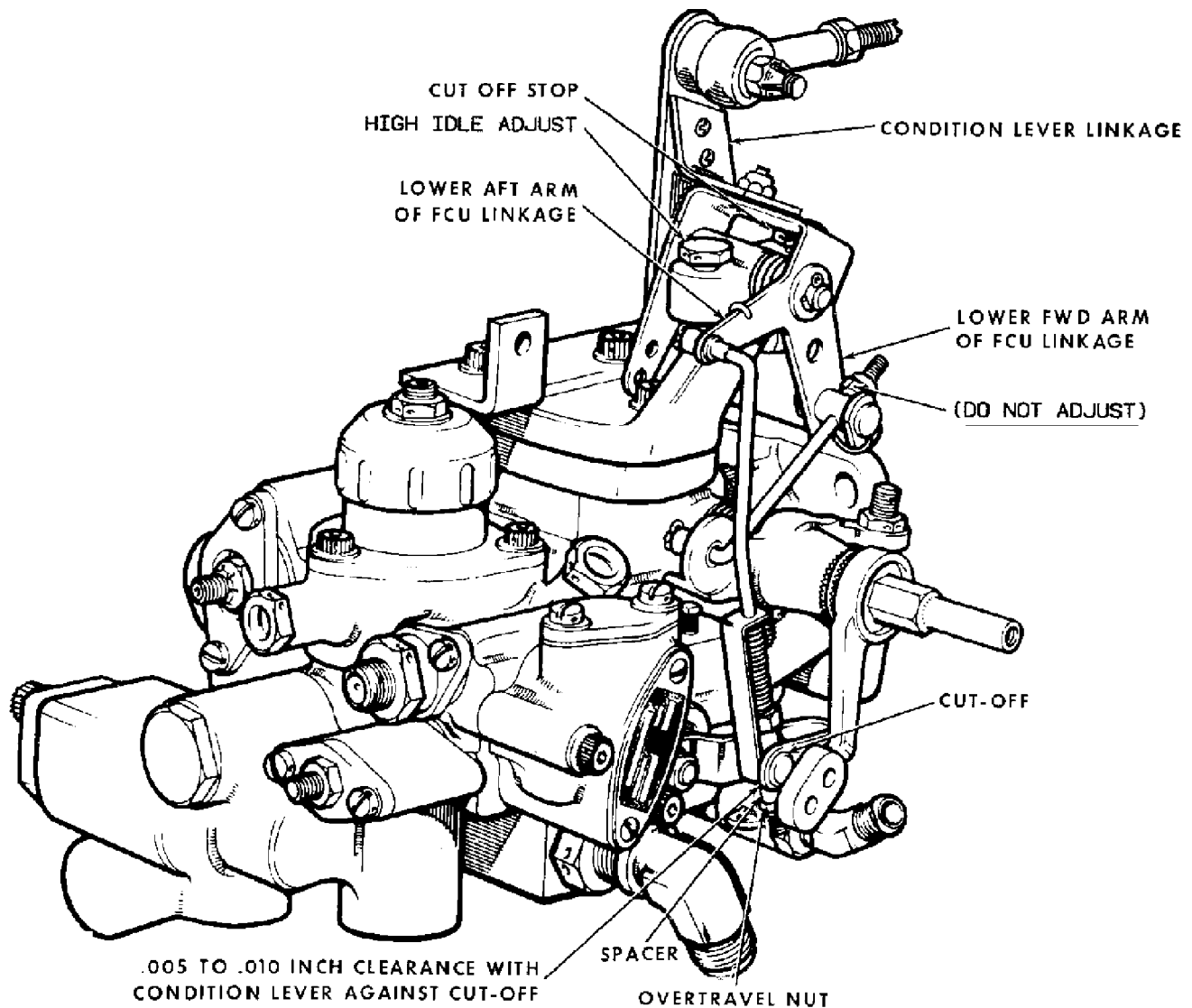
#### NOTE

If the cross-shaft attachment bolts are removed for any reason, a new star lock washer shall be installed prior to attachment bolt installation.

- (6) If loose bolts or missing hardware are found, corrective action shall be taken before returning the aircraft to service.
- (7) Install the left and right pedestal access covers.

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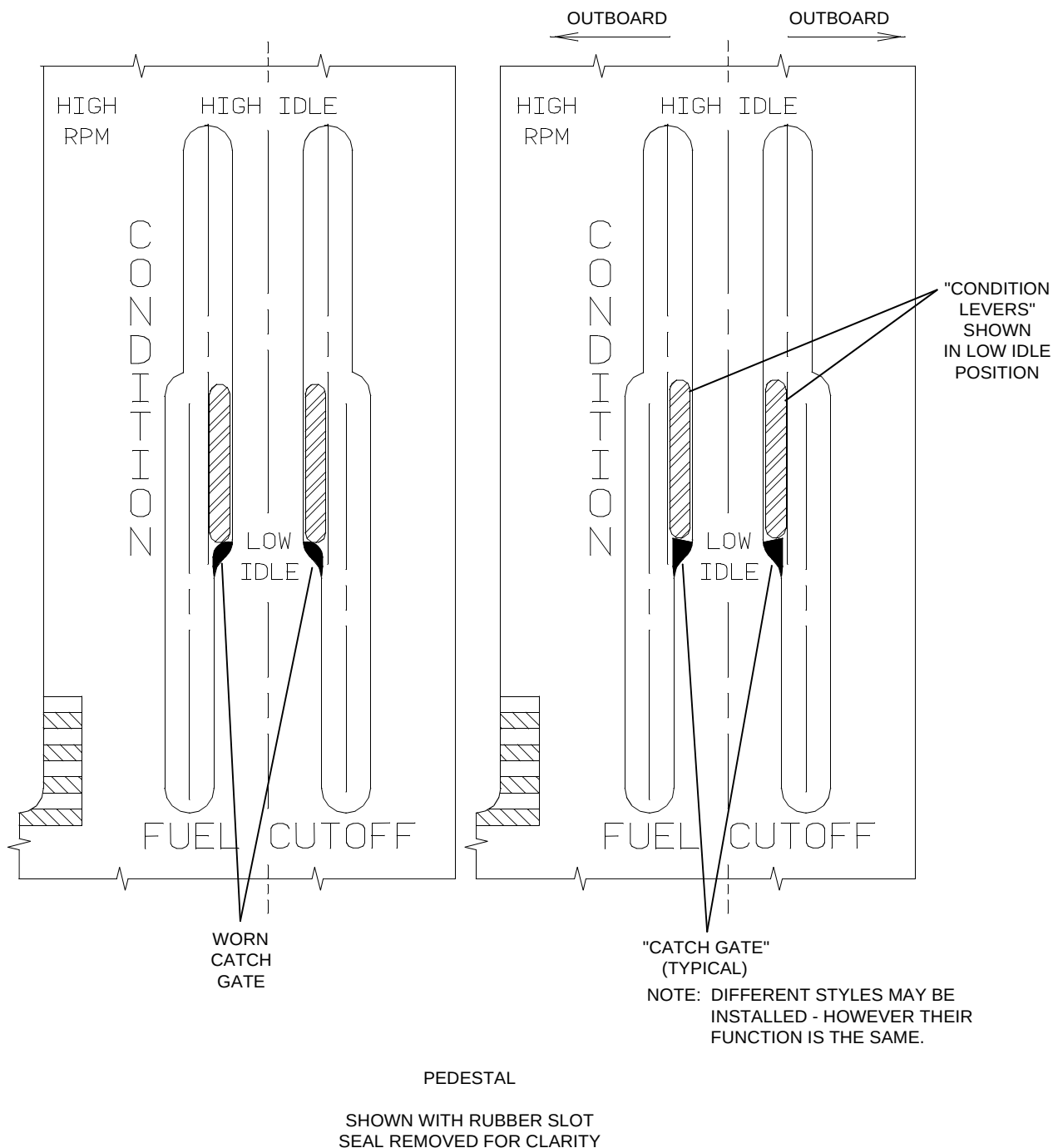


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Figure 201 - Fuel Control Unit (FCU)

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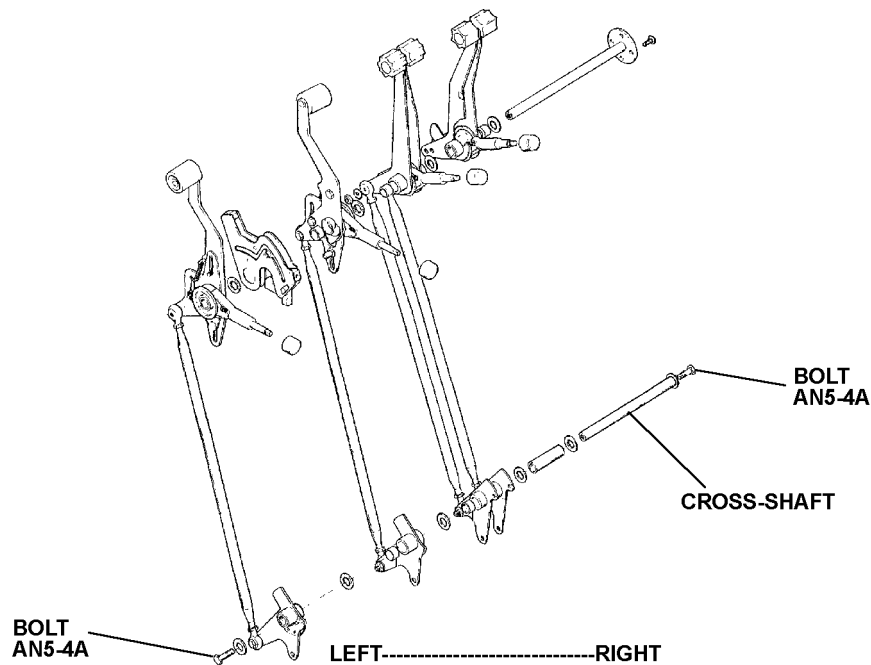


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Figure 202 - Condition Lever Low-Idle Catch Gate inspection

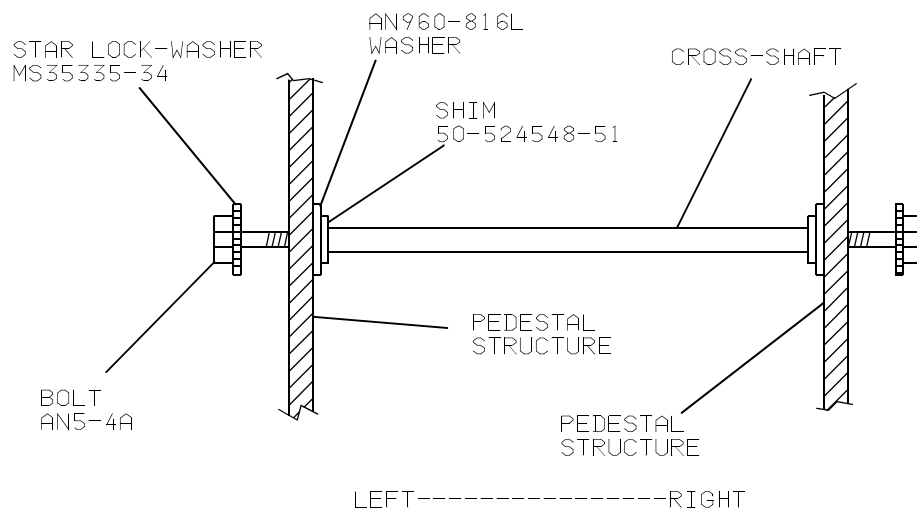
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**Figure 203 - Engine Control Cross-Shaft Inspection**



VIEW SHOWN WITHOUT ATTACHING  
COMPONENTS FOR CLARITY OF VIEW

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**Figure 204 - Engine Control Cross-Shaft Hardware**