

TEMPORARY REVISION NO. 72-17

(PT6C-67C)

INSERT Temporary Revision 72-17 facing page 201, Chapter 72-50-02

COMPRESSOR TURBINE - MAINTENANCE PRACTICES

PURPOSE: The purpose of this temporary revision is to add spreader (PWC30335) in the removal procedure of CT disk assembly and the graphic revised to show retaining bolt and keywasher.

5. Removal/Installation (Heavy Maintenance Only)

NOTE: Refer to INTRODUCTION for the definition of Heavy Maintenance. These instructions for heavy maintenance are given with the expectation that:

- Standard Practices, Chapter 70, has been read, entirely understood and will be followed;
- Persons that do heavy maintenance have the appropriate training in this type of maintenance.

A. Removal of CT Disk Assembly (Ref. Fig. 201)

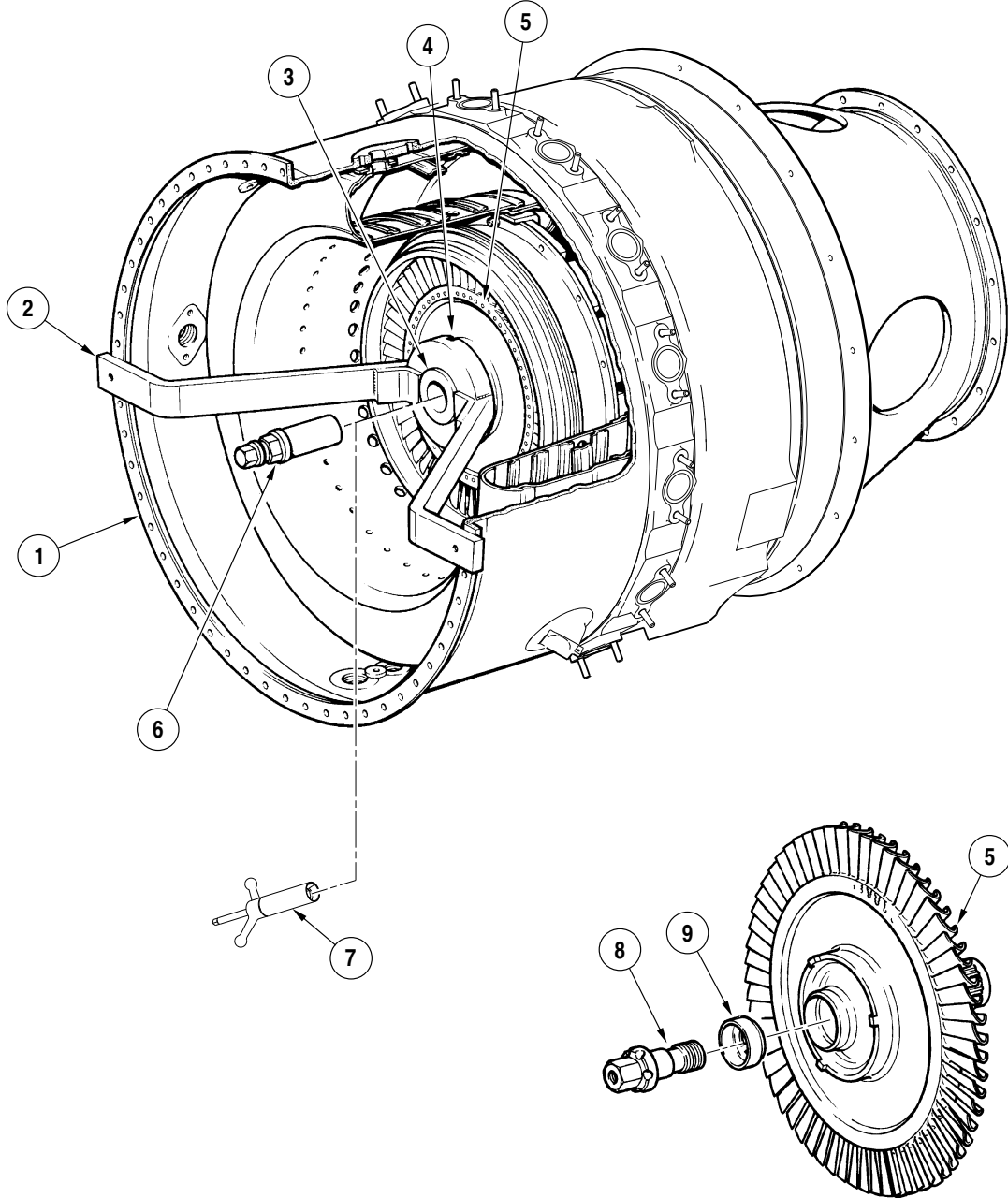
- (1) Remove power section module (Ref. 72-00-00, REMOVAL/INSTALLATION).

NOTE: When necessary, check CT blade radial tip clearance (Ref. Inspection/Check) before proceeding.

- (2) Install holding wrench (2) on flange C (1) of gas generator case. Make sure slots are correctly seated on turbine disk balancing rim lugs (4). Install protector (3).

NOTE: The wrench prevents disk rotation during removal of retaining bolt (8) and keywasher (9).

- (3) Insert the spreader (PWC30335) (6) into centerbore over compressor turbine retaining bolt (8). Uncrimp the turbine retaining bolt keywasher (9). Remove the spreader (PWC30335).
- (4) Remove the turbine retaining bolt (8), turbine retaining bolt keywasher (9), wrench (2) and protector (3).
- (5) If turbine retaining bolt (8) is seized, proceed as follows:
 - (a) Apply sufficient penetrating oil (50% kerosene, 50% engine oil is suitable) into bolt center hole to flood stubshaft cavity.
 - (b) Rotate CT several times to let oil reach slots in bolt thread, and let soak for 20 minutes minimum.



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Removal/Installation of Compressor Turbine Assembly (Typical)
Figure 201

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Key to Figure 201

1. Flange C
2. CT Disk Wrench (PWC30331)
3. Protector (PWC30336)
4. Lugs
5. CT Disk Assembly
6. Spreader (PWC30335)
7. Keywasher Locking Tool (PWC30458)
8. Turbine Retaining Bolt
9. Turbine Retaining Bolt Keywasher

- (c) Break torque on bolt (50 to 100 lb. ft.). If bolt does not move, apply sufficient tightening force to move bolt, then loosen. Repeat tightening/loosening until bolt is free and can be removed.

NOTE: If force required to move bolt does not decrease, DO NOT exceed 150 lb. ft. This indicates permanent seizure, and the bolt must be drilled out. Remove in two stages. DO NOT exceed minor thread dia. of 0.5538 inch.

CAUTION: CONTINUED OPERATION OF PULLER DURING REMOVAL OF DISK MAY DAMAGE BLADE TRAILING EDGES IF SHROUD HOUSING IS CONTACTED.

- (6) Insert puller (PWC30403) into centerbore of turbine disk and release turbine disk snap diameters. Withdraw compressor turbine assembly from gas generator case.

NOTE: A drop of the disk or freedom of puller operation will be observed when the disk snap diameters are released.

CAUTION: HANDLE COMPRESSOR TURBINE ASSEMBLY WITH CARE.

- (7) Place compressor turbine assembly on clean bench and remove puller. Install assembly in a suitable container.
- (8) If compressor turbine disk assembly is to be replaced, remove trim weights (Ref. Approved Repairs).

B. Installation of CT Disk Assembly (Ref. Fig. 201)

CAUTION: HANDLE COMPRESSOR TURBINE ASSEMBLY WITH CARE.

- (1) Align master splines and install compressor turbine on compressor front stubshaft.
- (2) Check that new turbine retaining bolt keywasher (9) is dry and free from burrs and other surface damage. Apply light film of compound (PWC06-004) to inside of washer and to shoulder and threads of turbine retaining bolt (8). Make sure bolt, lubricating axial hole and slots in threads are free of compound.
- (3) Install the turbine retaining bolt keywasher (9) and turbine retaining bolt (8) into center of CT disk (5).
- (4) Install holding wrench (2) on flange C (1) of gas generator case. Make sure slots are correctly seated on turbine disk balancing rim lugs (4). Install protector (3).

NOTE: The holding wrench prevents CT disk rotation during installation and tightening of turbine retaining bolt (8).

- (5) Torque the turbine retaining bolt (8) (REF. 72-50-01, Fits & Clearances, Ref. No. 701).
- (6) Remove protector and wrench from gas generator case.

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- (7) Check runout on disk face directly below rivet chamfer. Run out must not exceed 0.002 in. FIR.
- (8) Check CT blade radial tip clearance (Ref. Inspection/Check).
- (9) Install the locking tool (PWC30458) (7) in centerbore of disk, and lock the turbine retaining bolt keywasher (9). Remove the locking tool (PWC30458) carefully from the disk.
- (10) Install power section module (Ref. 72-00-00, REMOVAL/INSTALLATION).

SUPPLEMENTARY INFORMATION

1. Special Tools List

The special tools listed below are used in the above procedure.

| Tool No. | Name |
|----------|---------------------|
| PWC30335 | Spreader, Cupwasher |