



Rolls-Royce

ADVANCED RELEASE

TO: Holders of RR300 Series Operations and Maintenance Manual, Publication CSP 21009.

Reason: Revised installation procedure.

Component: Compressor Assembly

Remarks: Contact Rolls-Royce

72-30-00-400-802

Jul 31/23



COMPRESSOR ASSEMBLY ASSEMBLY

TASK 72-30-00-400-802

1. Install the Compressor Front Bearing and Seal

CAUTION: DO NOT TOUCH TITANIUM PARTS, BEARING, OR MATING RING WITH BARE HANDS. WEAR LATEX GLOVES OR CLEAN, LINT FREE, WHITE COTTON GLOVES OR USE PROTECTIVE ANTI-PERSPIRANT HAND CREAM. THE PARTS MUST BE KEPT IN A PROTECTIVE MATERIAL. IF YOU TOUCH TITANIUM PARTS WITH BARE HANDS CORROSION TO THE PARTS CAN OCCUR.

A. General

This task gives you the procedure to install the compressor front bearing and seal.

B. Materials

- (1) Cream, barrier.
- (2) Gloves, lint-free.

C. Consumable Materials

- (1) Oil, engine, AS5780.
- (2) Petrolatum, VV-P-236.

D. Expendable Parts

EM		NAME	LIPC		
FIG	ITEM		SUBJECT	FIG	ITEM
1001	1	Packing	72-30-00	1	40
1001	4	Packing	72-30-00	1	45
1001	5	Packing	72-30-00	1	85
1001	7	Packing	72-30-00	1	85
1001	11	Packing	72-30-00	1	85

E. Special Tools and Equipment

- (1) Adapter - Engine Turning, Spare Hydraulic Drive, 6799790.

F. References

- (1) TASK 72-30-00-000-802, Remove the Compressor Front Bearing and Seal.
- (2) TASK 72-30-13-200-802, Do the Inspection of the Compressor Front Roller Bearing.
- (3) TASK 72-30-15-200-802, Do the Inspection of the Compressor Front Mating Ring Seal.
- (4) TASK 72-30-60-200-802, Do the Inspection of the Compressor Rotor Assembly.
- (5) TASK 80-11-10-000-801, Remove the Starter Generator.
- (6) TASK 70-01-04-900-801, Standard Torque Procedures, SPM.
- (7) TASK 72-25-09-100-801, Do the Preservation and Storage of the Bearings, SPM.

EFFECTIVITY: ALL



G. Procedure

WARNING: DO NOT BREATHE THE FUMES FROM SYNTHETIC LUBRICATING OIL. IT CAN CONTAIN TRICRESYL PHOSPHATE. USE IN AN AREA WITH CONTINUOUS AIRFLOW. KEEP AWAY FROM HEAT, SPARKS, AND OPEN FLAMES. DO NOT GET IT ON YOUR SKIN OR IN YOUR EYES. WEAR GOGGLES, CHEMICAL-RESISTANT GLOVES, AND SAFETY CLOTHING. IF YOU GET IT ON YOUR SKIN, CLEAN WITH SOAP AND WATER. IF YOU GET IT IN YOUR EYES, FLUSH WITH WATER. GET MEDICAL AID.

SUBTASK 72-30-00-450-001

REF. FIG. 1001/TASK 72-30-00-990-803

REF. FIG. 1002/TASK 72-30-00-990-804

(1) Install the compressor front bearing and seal.

(a) Install the encased seal (12) as follows.

1 Soak the encased seal (12) and packing (11) in engine oil (AS5780).

NOTE: For P/N M250-10913 seal only, do not lubricate inside the replacement oil seal with engine oil (by soaking). No oil is to be applied to the sealing surfaces. If evidence of oil is present it may be removed by lightly wiping with an alcohol soaked cloth or wipe. The carbon face element and mating ring should be clean and free of any dirt and/or lint. Remove debris with a lint free cloth or wipe. Carbon seal P/N M250-10913 should only be installed with P/N 23004514 mating ring.

2 Install the packing (11) on the front OD of the encased seal (12).

3 Install the encased seal (12) onto the compressor rotor shaft (shaft) (13).

4 Measure and record DIM B, DIM C, and DIM E.

5 Install the mating ring seal (10) onto the shaft (13) with the smaller OD of the mating ring seal (10) set forward.

(b) Install the compressor front roller bearing (6 and 9) as follows.

CAUTION: DO NOT TOUCH A BEARING WITH BARE HANDS. USE LINT-FREE GLOVES, LATEX GLOVES, OR BARRIER CREAM WHEN YOU TOUCH OR MOVE A BEARING OR MATING RING. DAMAGE OR CONTAMINATION CAN OCCUR.

CAUTION: DO NOT PUT BEARINGS OR BEARING COMPONENTS ON TOP OF OTHER BEARINGS OR BEARING COMPONENTS. DAMAGE CAN OCCUR.

CAUTION: DO NOT LET THE BEARING DROP ON A HARD SURFACE. DAMAGE CAN OCCUR.

CAUTION: DO NOT MIX THE BEARING COMPONENTS WITH THE OTHER BEARING COMPONENTS. MAKE SURE THAT YOU KEEP THE BEARING COMPONENTS OF THE SAME BEARING TOGETHER. BEARING FAILURE CAN OCCUR DURING ENGINE OPERATION.

CAUTION: DO NOT REMOVE THE ROLLERS FROM THE CAGE. BEARING FAILURE WILL OCCUR DURING ENGINE OPERATION.

CAUTION: DO NOT LET THE BEARING BE IN THE AIR FOR MORE THAN FOUR HOURS AFTER YOU CLEAN IT. IF THE BEARING ASSEMBLY PROCEDURE IS NOT COMPLETED BEFORE FOUR HOURS, YOU MUST PRESERVE THE BEARING IN OIL. BEARING CORROSION CAN OCCUR.

1 Install the bearing inner race and rollers (9) on the shaft (13).

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CAUTION: DO NOT LET THE WRENCH TOUCH THE BEARING ROLLERS WHILE YOU INSTALL THE NUT. IF YOU TOUCH THE BEARING ROLLERS DAMAGE CAN OCCUR.

CAUTION: DO NOT USE NUTS WITH RED OR YELLOW NYLON CAPS TO HOLD THE FRONT BEARING INNER RACE AND ROLLERS. USE A BLACK RETAINING NUT. BLACK RETAINING NUTS HAVE A HIGHER RETAINING VALUE THAN RED OR YELLOW NYLON CAPPED REATINING NUTS. IF YOU USE A RED OR YELLOW NYLON CAPPED NUT, DAMAGE TO EQUIPMENT CAN OCCUR.

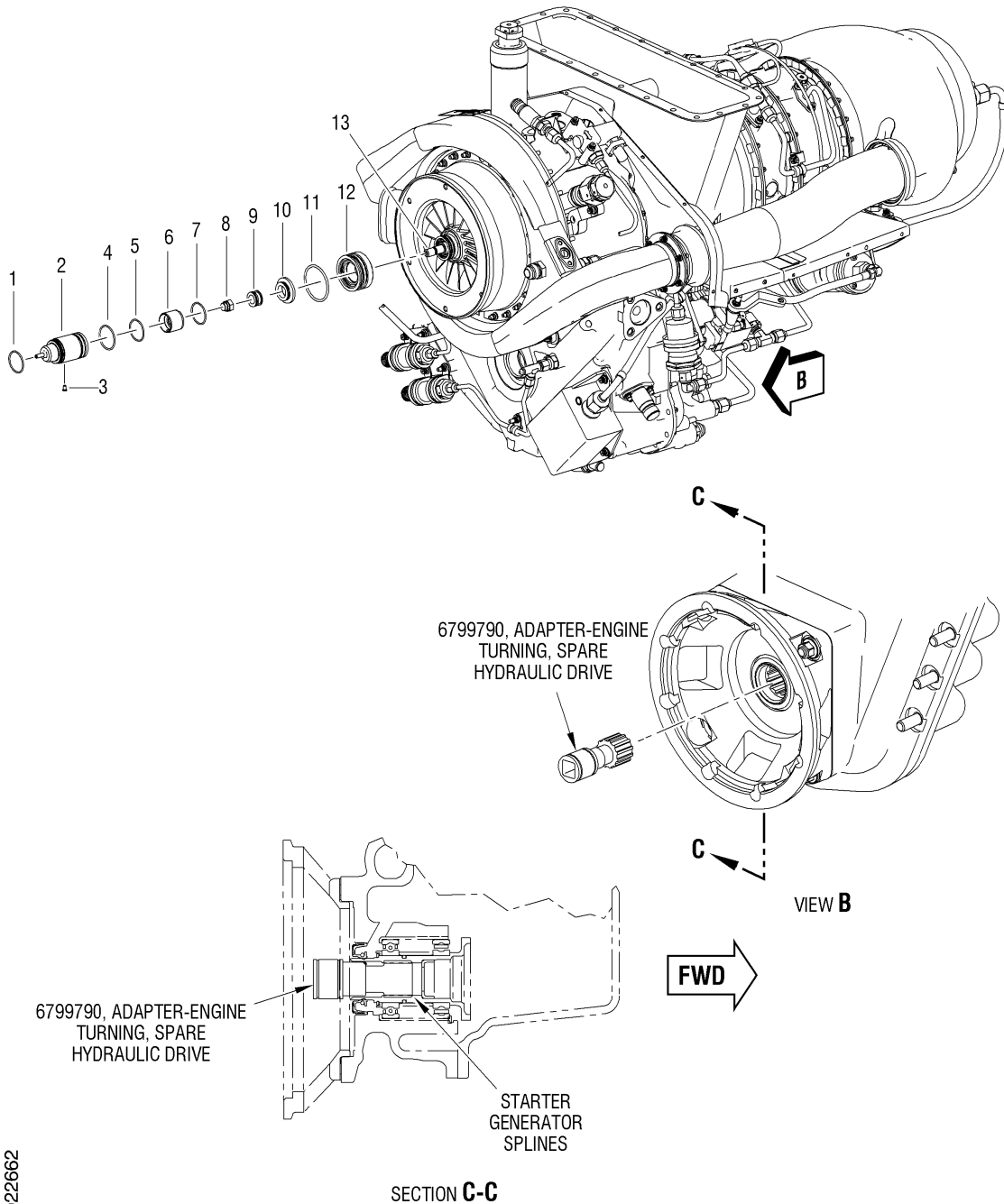
- 2 Install a slave nut (8) loosely on the compressor shaft (13).
- 3 Remove the starter generator (Ref. TASK 80-11-10-000-801).
- 4 Install the spare hydraulic drive engine turning adapter (6799790) into the gearbox starter-generator shaft to keep the shaft (13) from turning.
- 5 Use a socket that has a maximum of 7/16 in. (11 mm) broach depth and a torque wrench to torque the nut (8) to 130-140 in-lb. (14.7-15.8 Nm) (Ref. TASK 70-01-04-900-801).
- 6 Use a socket that has a maximum of 7/16 in. (11 mm) broach depth to remove the slave nut (8).
- 7 Measure and record DIM D.
- 8 Make sure DIM D equals previously recorded DIM E minus DIM B and DIM C.
 - a If DIM D is less than previously recorded DIM E minus DIM B and DIM C return to step 2.
 - b If after performing this task a second time DIM D is less than previously recorded DIM E minus DIM B and DIM C, remove the bearing and seal (Ref. TASK 72-30-00-000-802) and inspect the compressor rotor assembly (Ref. TASK 72-30-60-200-801), the seal (Ref. TASK 72-30-15-200-801), and the bearing (Ref. TASK 72-30-13-200-801) for damage.
- 9 Install the nut (8) with a black color on the compressor shaft (13).
- 10 Use a socket that has a maximum of 7/16 in. (11 mm) broach depth and a torque wrench to torque the nut (8) to 80-90 in-lb (9.0-10.2 Nm) above drag torque (Ref. TASK 70-00-00-910-801).
- 11 Use engine oil (AS5780) to lubricate the packings (1, 4, 5, and 7).
- 12 Install the packings (5 and 7) on the OD of the front bearing outer race (5).
- 13 Install packing (4) on the rear OD of the bearing housing (2).
- 14 Install packing (1) on the front OD of the bearing housing (2).
- 15 Use engine oil (AS5780) to lubricate the bearing outer race (8).
- 16 Install the bearing outer race (8) into the bearing housing (2).
- 17 Install the pin (3) through the bearing housing (2) and bearing outer race (6).

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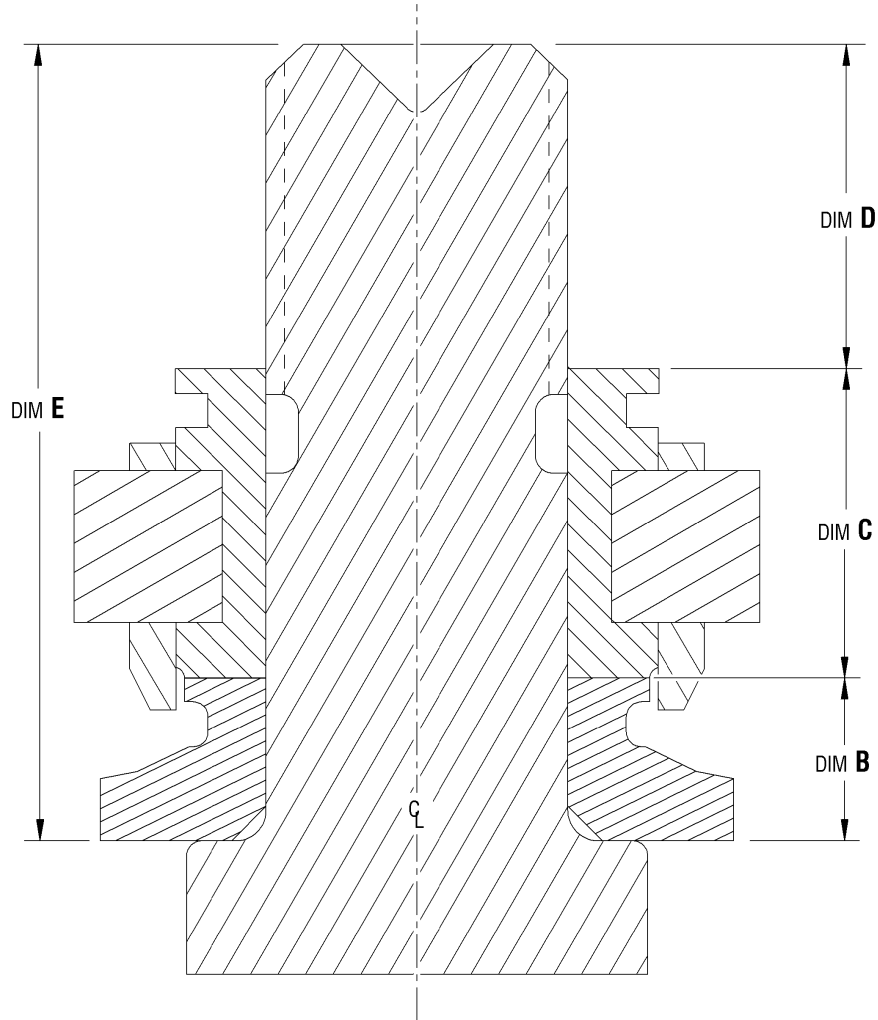
Compressor Front Bearing and Seal - Installation
FIG. 1001/TASK 72-30-00-990-803

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Compressor Front Bearing and Seal - Installation
FIG. 1002/TASK 72-30-00-990-804

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