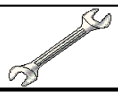
No. 3738-I-63

Information Notice

SUBJECT: MAIN ROTOR DRIVE

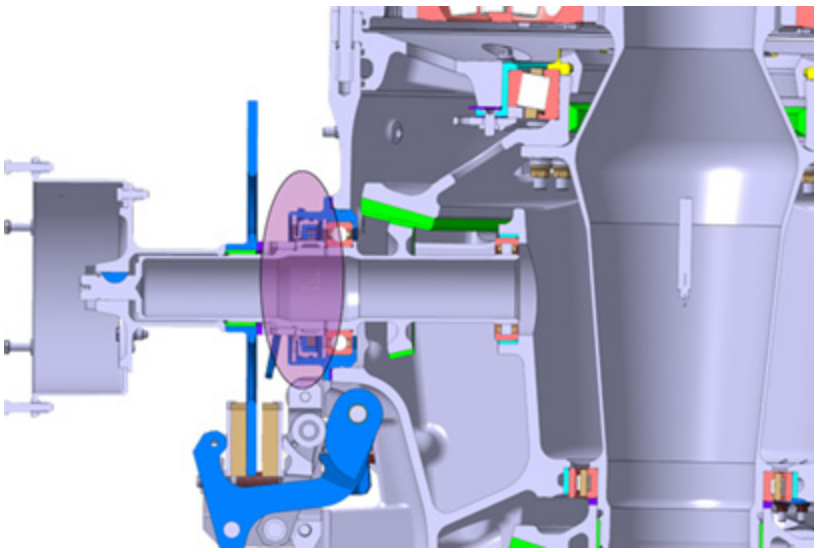
Oil leak from the fan seal: new seal installation

For the attention of


AIRCRAFT CONCERNED	Version(s)	
	Civil	Military
SA365 / AS365	C1, C2, C3, N, N1, N2, N3	F, Fs, Fi, K, K2
AS565		MA, MB, SA, SB, UB
SA366		GA
EC155	B, B1	

Following a number of cases of oil leaks reported by operators, a change in definition is introduced for the installation of this seal.

This modification has the number 0763D05.



Before modification, the seal was installed with a Hylomar adhesive. After the modification, it is installed with a Loctite adhesive.

The Loctite brand has been selected because it was shown to be effective when it was applied during repair through MRM Work Card 63-20-00-704. The Loctite adhesive reference is new to ensure better availability on the market.

Following this modification:

- The seal will be installed with Loctite for all MGBs undergoing overhaul from July 2022.

- The content of the following Work Cards is changing:

AS365/AS565	*single lubrication pump*	*MRM 63-20-00-704*
AS365/AS565/SA366	*dual lubrication pump*	*MRM 63-20-01-704*
SAWARI	*single lubrication pump*	*MRM 63-20-01-704*
EC155	*dual lubrication pump*	*AMM 63-24-02-061*

Main gearbox with single lubrification supply - Repair

704 Replacement of the seal on the fan power take-off

A. References

63-20-00-729 ..... Fits and clearance for the fan power take-off
60-00-00-300 MET
63-20-00-401 MET
63-23-00-402 MET
63-23-01-402 MET
20-02-08-410 MTC
20-04-03-401 MTC

B. Special Tools

360A93-3222-00 ..... nut wrench for the fan take-off bush
360A93-3223-20 ..... lock wrench for the fan take-off bush
360A93-3224-00 ..... seal holder extractor for the fan take-off
360A93-3225-20 ..... fan take-off seal holder assembly drift
360A93-3226-00 ..... dolly and drift for take-off seal
360A93-3227-00 ..... bush extractor for fan take-off
360A93-3228-00 ..... fan take-off bush assembly drift

C. Consumable Materials

CM 149 ..... Grease
CM 208 ..... Cleaning agent
CM 518 ..... Anti-corrosion agent
CM 677 ..... Locking compound
CM 698 ..... Locking compound

D. Routine Replacement Parts

MRM Fig.	MRM Item	Description	IPC Reference
Figure 701	(2)	Carbon seal	63-23-20-01
Figure 701	(5)	O-ring	63-23-20-01
Figure 701	(6)	Seal holder	63-23-20-01

E. Preliminary Steps

CAUTION

BEFORE STARTING ANY WORK ON THE MECHANICAL ASSEMBLIES, REFER TO (60-00-00-300 MET).

(1) Remove the rotor brake disc (63-23-01-402 MET) or (63-23-00-402 MET).

F. Procedure

(1) Removal (*Figure 701*, *Figure 702* and *Figure 703*).

(a) Remove the thickness shim (9) and the locking ring (8).

(b) Loosen and remove the nut (1) using the nut wrench for the fan take-off bush [360A93-3222-00] (10) and the lock wrench for the fan take-off bush [360A93-3223-20] (11) (*Figure 702* - DETAIL B).

(c) Remove the snap ring (7) and extract the seal holder (6) using the seal holder extractor for the fan take-off [360A93-3224-00] (12) (*Figure 702* - DETAIL C).

(d) Discard the seal holder (6), carbon seal (2) and O-ring (5) assembly.

(e) Extract the spacer (3) with the bush extractor for fan take-off [360A93-3227-00] (13) (*Figure 703* - DETAIL D).

(2) Cleaning.

(a) Clean the removed parts with Cleaning agent CM 208.

(b) Clean the spacer (3) and the bearing surface of the pinion shaft (4) with Cleaning agent CM 208.

(3) Inspection - check.

(a) Visual inspection: search for and remove any traces of corrosion (20-04-03-401 MTC).

(b) Dimensional check: perform this check on the parts that show signs of wear (63-20-00-729). Carefully check the bearing surface on the spacer (3).

(c) Perform a detailed inspection of the spacer (3) and the bearing surface of the pinion shaft (4):

1 make sure that there are no cracks, scratches, impact marks or corrosion,

2 if there is an anomaly on the spacer (3), replace the spacer (3),

3 if there is an anomaly on the bearing surface of the pinion shaft (4), replace the MGB (63-20-00-401 MET).

(4) Installation (*Figure 701*, *Figure 702*, *Figure 703* and *Figure 704*).

(a) If necessary, heat the new spacer (3) to 80˚C (176˚F).

(b) Apply Locking compound CM 677 to the section of the pinion shaft (4) where the spacer (3) will be installed.

(c) Install the spacer (3) on the pinion shaft (4) using the fan take-off bush assembly drift [360A93-3228-00] (15) (*Figure 704* - DETAIL G).

1 Remove the excess Locking compound CM 677.

(d) Install the nut (1) (*Figure 701*):

1 apply Grease CM 149 to the threads of the pinion shaft (4),

2 install and torque the nut (1) (*Figure 701*) with the nut wrench for the fan take-off bush [360A93-3222-00] (10) and with the lock wrench for the fan take-off bush [360A93-3223-20] (11) (*Figure 702* - DETAIL B),

3 make sure that the locking ring (8) can be installed (*Figure 701*).

(e) Install the carbon seal (2) in the seal holder (6) (*Figure 701* - DETAIL A and *Figure 703* - DETAIL F):

1 apply Locking compound CM 677 or Locking compound CM 698 to the internal section of the new seal holder (6),

2 position the new carbon seal (2) correctly (20-02-08-410 MTC),

3 apply new MGB service oil to the carbon section of the carbon seal (2),

CAUTION

BE ESPECIALLY CAREFUL NOT TO DAMAGE THE CARBON SEGMENTS OF THE CARBON SEAL (2) WITH THE DOLLY AND DRIFT FOR TAKE-OFF SEAL [360A93-3226-00] (14).

4 carefully install the carbon seal (2) in the seal holder (6) using the dolly and drift for take-off seal [360A93-3226-00] (14).

(f) Install the seal holder (6) and carbon seal (2) assembly (*Figure 701* - DETAIL A):

1 apply new MGB service oil to the new O-ring (5),

2 install the O-ring (5) on the seal holder (6) (20-02-08-410 MTC),

3 apply new MGB service oil to the carbon section of the carbon seal (2) (*Figure 701* - DETAIL A),

CAUTION

BE ESPECIALLY CAREFUL NOT TO DAMAGE THE CARBON SEGMENTS OF THE CARBON SEAL (2).

4 carefully install the seal holder (6) and carbon seal (2) assembly on the spacer (3) with the fan take-off seal holder assembly drift [360A93-3225-20] (16) (DETAIL H).

(g) Apply Anti-corrosion agent CM 518 to the mating surfaces of the snap ring (7), and install the snap ring (7).

(h) Install the locking ring (8) and the thickness shim (9).

G. Final Steps

(1) Install the rotor brake disc (63-23-00-402 MET) or (63-23-01-402 MET).

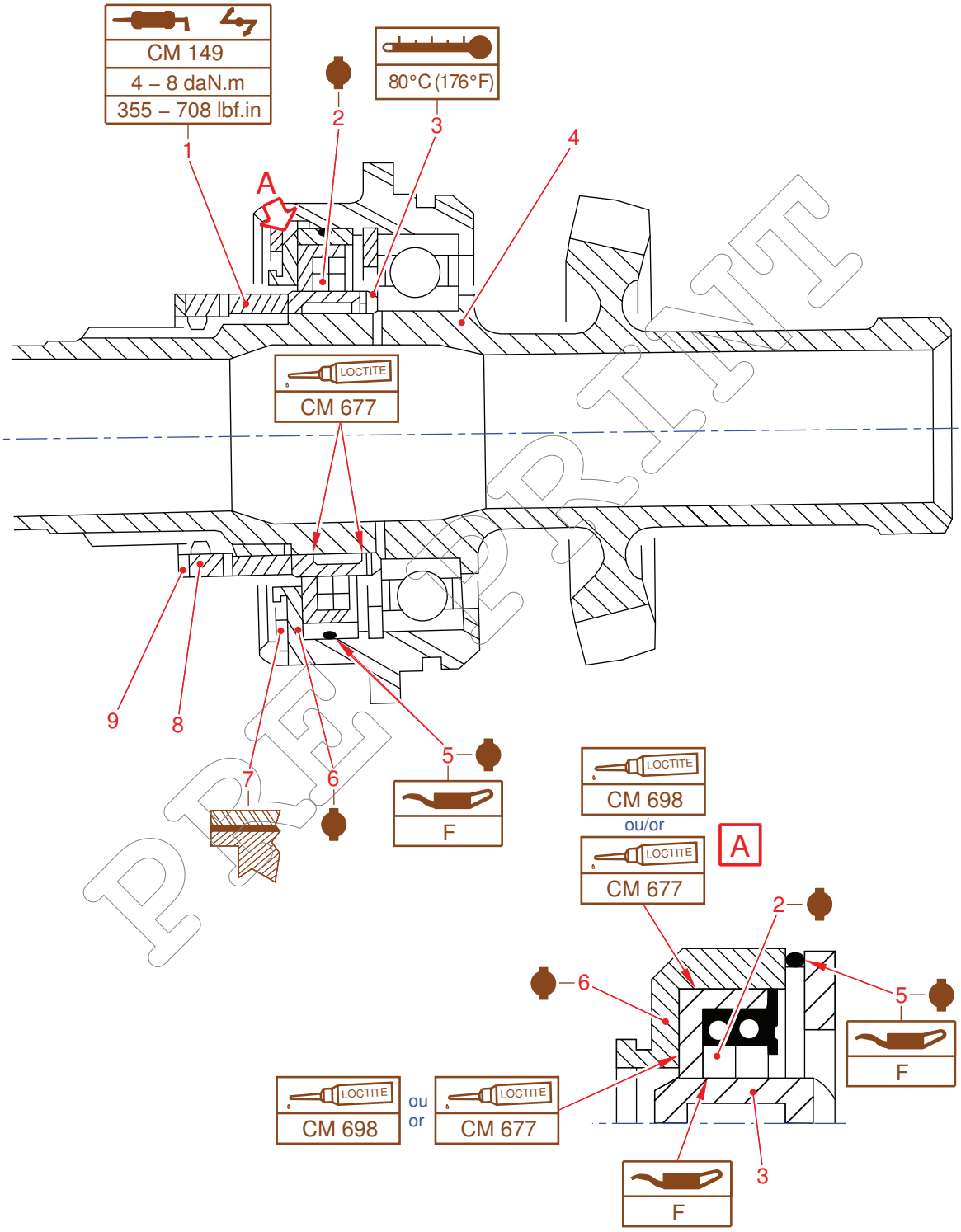


Figure 701

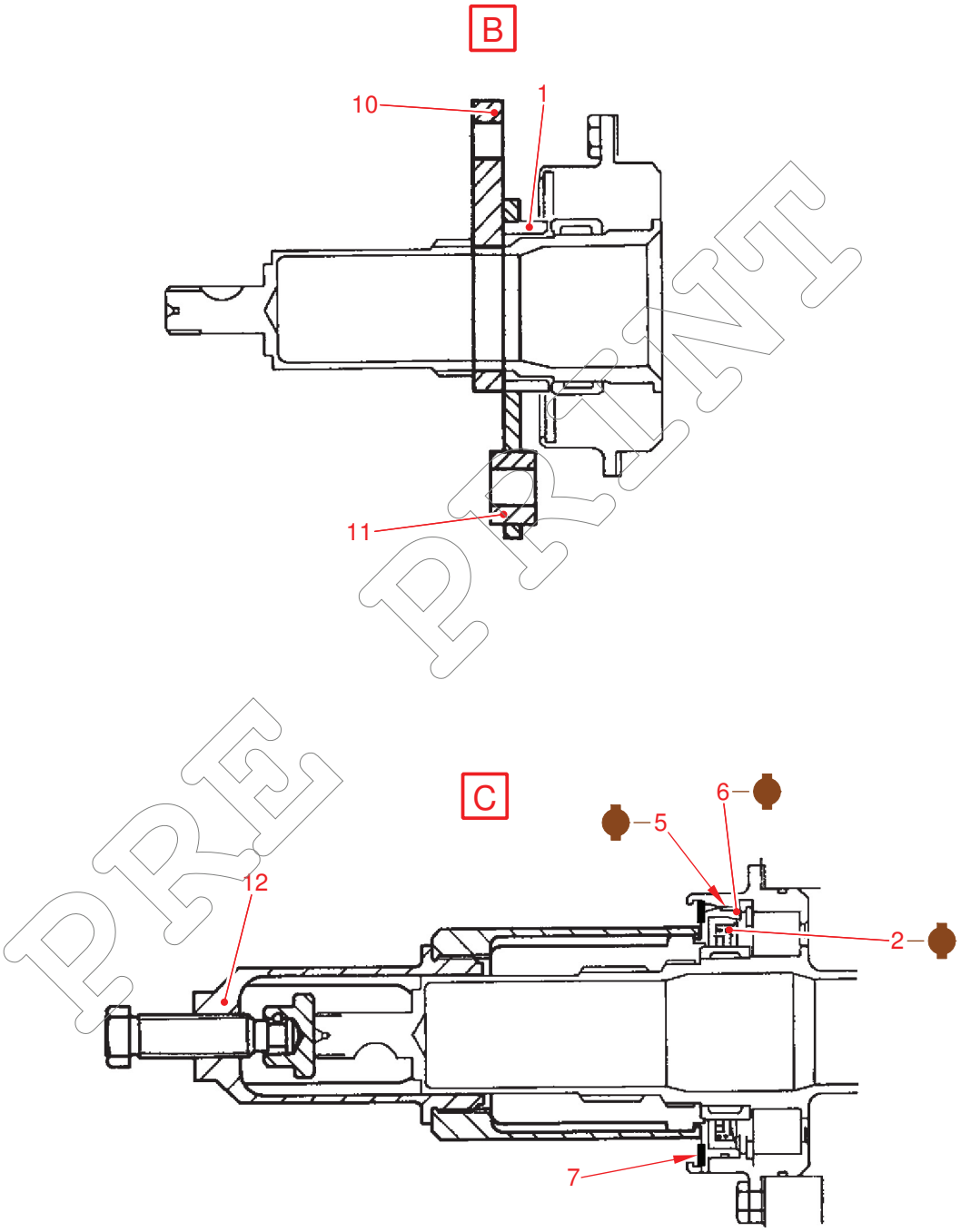


Figure 702

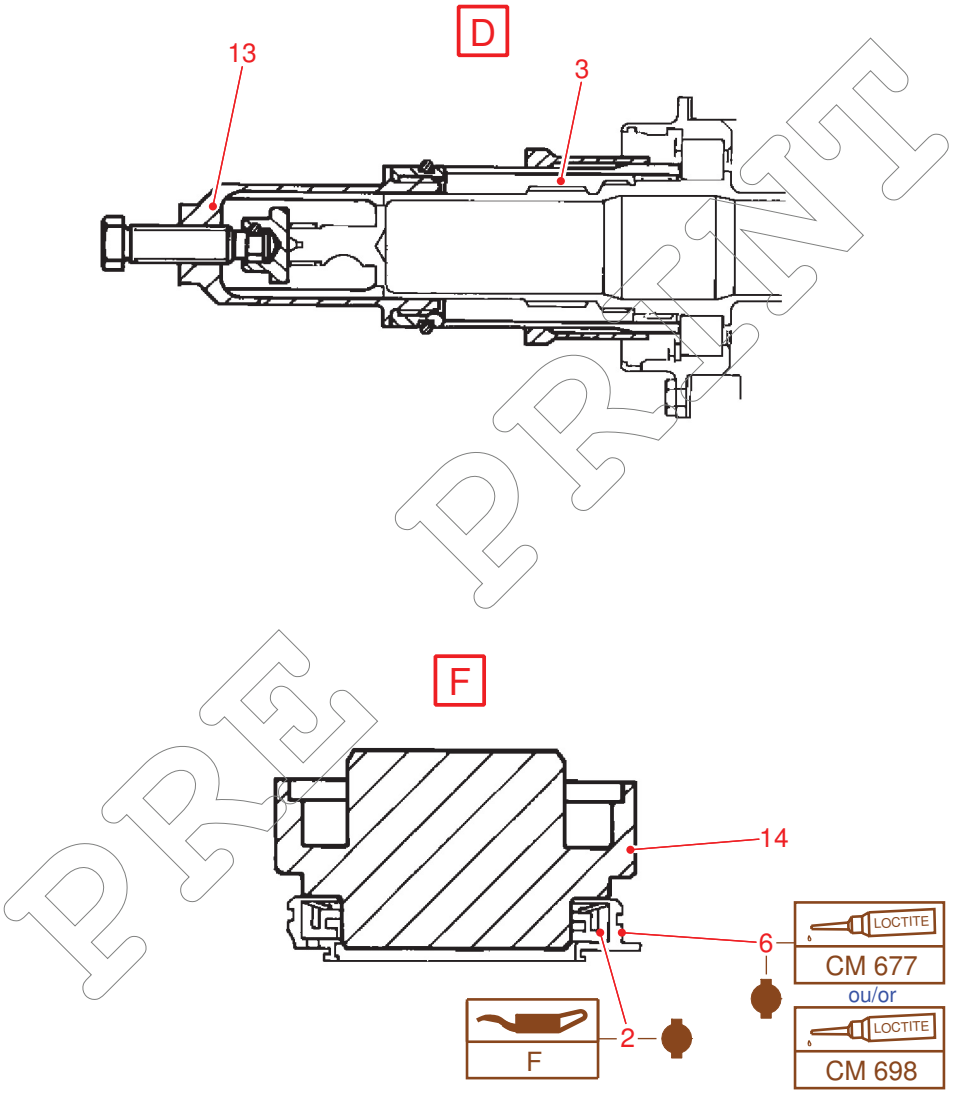


Figure 703

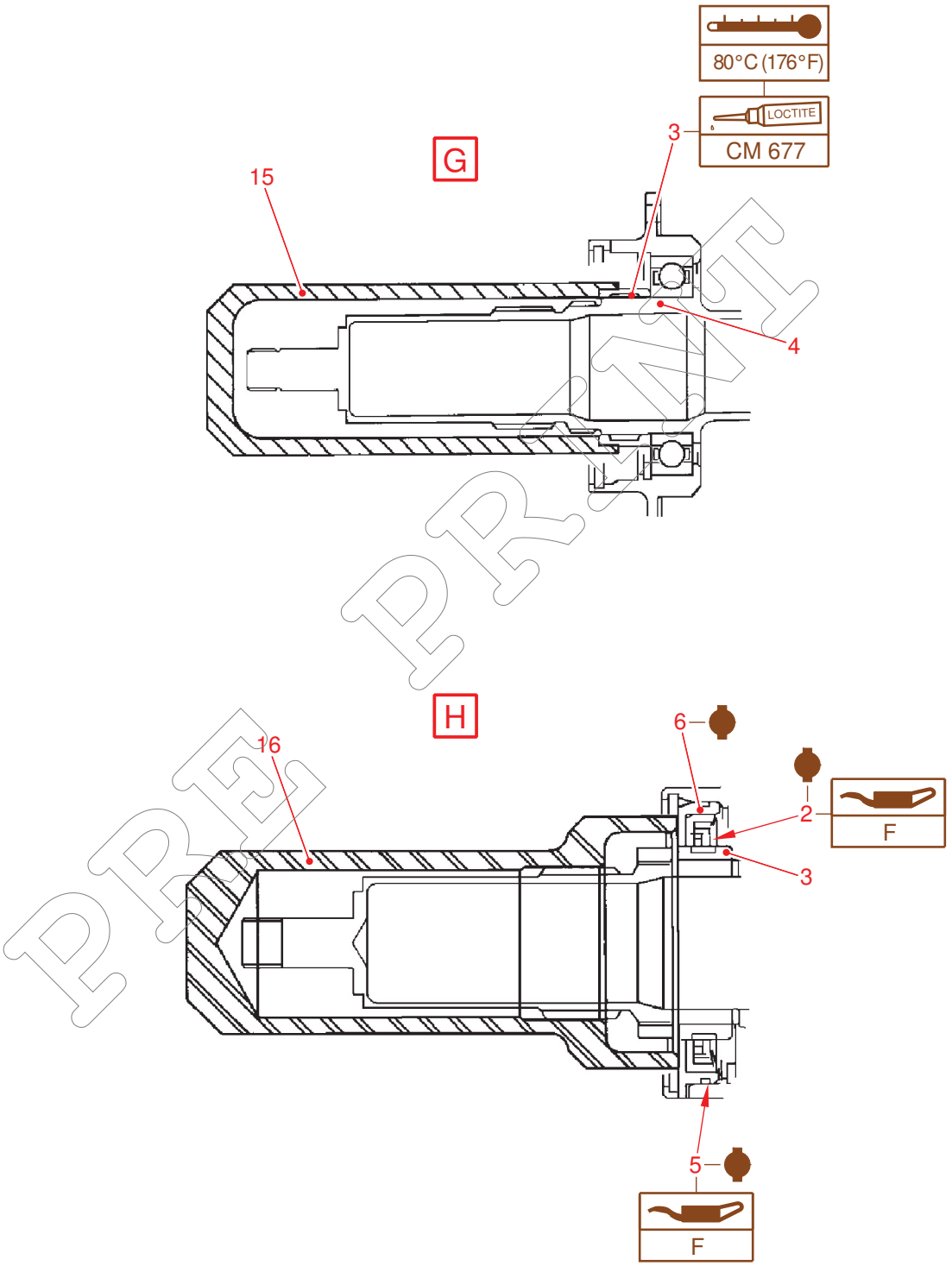


Figure 704

END OF MODULE

Main gearbox with dual lubrification supply - Repair

704 Replacement of seals on fan power take-off

A. References

63-20-01-729 ..... Clearance and tolerances for the fan power take-off
60-00-00-300 MET
63-20-01-401 MET
63-23-00-402 MET
63-23-01-402 MET
20-02-08-410 MTC
20-04-03-401 MTC

B. Special Tools

360A93-3222-00 ..... nut wrench for the fan take-off bush
360A93-3223-20 ..... lock wrench for the fan take-off bush
360A93-3224-00 ..... seal holder extractor for the fan take-off
360A93-3225-20 ..... fan take-off seal holder assembly drift
360A93-3226-00 ..... dolly and drift for take-off seal
360A93-3227-00 ..... bush extractor for fan take-off
360A93-3228-00 ..... fan take-off bush assembly drift

C. Consumable Materials

CM 149 ..... Grease
CM 208 ..... Cleaning agent
CM 518 ..... Anti-corrosion agent
CM 677 ..... Locking compound
CM 698 ..... Locking compound

D. Routine Replacement Parts

MRM Fig.	MRM Item	Description	IPC Reference
Figure 701	(2)	Carbon seal	63-23-20-01
Figure 701	(5)	O-ring	63-23-20-01
Figure 701	(6)	Seal holder	63-23-20-01

E. Preliminary Steps

CAUTION

BEFORE STARTING ANY WORK ON THE MECHANICAL ASSEMBLIES, REFER TO (60-00-00-300 MET).

(1) Remove the rotor brake disc (63-23-00-402 MET) or (63-23-01-402 MET).

F. Procedure

(1) Removal (*Figure 701*, *Figure 702* and *Figure 703*).

(a) Remove the thickness shim (9) and the locking ring (8).

(b) Loosen and remove the nut (1) using the nut wrench for the fan take-off bush [360A93-3222-00] (10) and the lock wrench for the fan take-off bush [360A93-3223-20] (11) (*Figure 702* - DETAIL B).

(c) Remove the snap ring (7) and extract the seal holder (6) using the seal holder extractor for the fan take-off [360A93-3224-00] (12) (*Figure 702* - DETAIL C).

(d) Discard the seal holder (6), carbon seal (2) and O-ring (5) assembly.

(e) Extract the spacer (3) with the bush extractor for fan take-off [360A93-3227-00] (13) (*Figure 703* - DETAIL D).

(2) Cleaning.

(a) Clean the removed parts with Cleaning agent CM 208.

(b) Clean the spacer (3) and the bearing surface of the pinion shaft (4) with Cleaning agent CM 208.

(3) Inspection - check.

(a) Visual inspection: search for and remove any traces of corrosion (20-04-03-401 MTC).

(b) Dimensional check: perform this check on the parts that show signs of wear (63-20-01-729). Carefully check the bearing surface on the spacer (3).

(c) Perform a detailed inspection of the spacer (3) and the bearing surface of the pinion shaft (4):

1 make sure that there are no cracks, scratches, impact marks or corrosion,

2 if there is an anomaly on the spacer (3), replace the spacer (3),

3 if there is an anomaly on the bearing surface of the pinion shaft (4), replace the MGB (63-20-01-401 MET).

(4) Installation (*Figure 701*, *Figure 702*, *Figure 703* and *Figure 704*).

(a) If necessary, heat the new spacer (3) to 80˚C (176˚F).

(b) Apply Locking compound CM 677 to the section of the pinion shaft (4) where the spacer (3) will be installed.

(c) Install the spacer (3) on the pinion shaft (4) using the fan take-off bush assembly drift [360A93-3228-00] (15) (*Figure 704* - DETAIL G).

1 Remove the excess Locking compound CM 677.

(d) Install the nut (1) (*Figure 701*):

1 apply Grease CM 149 to the threads of the pinion shaft (4),

2 install and torque the nut (1) (*Figure 701*) with the nut wrench for the fan take-off bush [360A93-3222-00] (10) and with the lock wrench for the fan take-off bush [360A93-3223-20] (11) (*Figure 702* - DETAIL B),

3 make sure that the locking ring (8) can be installed (*Figure 701*).

(e) Install the carbon seal (2) in the seal holder (6) (*Figure 701* - DETAIL A and *Figure 703* - DETAIL F):

1 apply Locking compound CM 677 or Locking compound CM 698 to the internal section of the new seal holder (6),

2 correctly position the new carbon seal (2) (20-02-08-410 MTC),

3 apply new MGB service oil to the carbon section of the carbon seal (2),

CAUTION

BE ESPECIALLY CAREFUL NOT TO DAMAGE THE CARBON SEGMENTS OF THE CARBON SEAL (2) WITH THE DOLLY AND DRIFT FOR TAKE-OFF SEAL [360A93-3226-00] (14).

4 carefully install the carbon seal (2) in the seal holder (6) using the dolly and drift for take-off seal [360A93-3226-00] (14).

(f) Install the seal holder (6) and carbon seal (2) assembly (*Figure 701* - DETAIL A):

1 apply new MGB service oil to the new O-ring (5),

2 install the O-ring (5) on the seal holder (6) (20-02-08-410 MTC),

3 apply new MGB service oil to the carbon section of the carbon seal (2) (*Figure 701* - DETAIL A),

CAUTION

BE ESPECIALLY CAREFUL NOT TO DAMAGE THE CARBON SEGMENTS OF THE CARBON SEAL (2).

4 carefully install the seal holder (6) and carbon seal (2) assembly on the spacer (3) with the fan take-off seal holder assembly drift [360A93-3225-20] (16) (DETAIL H).

(g) Apply Anti-corrosion agent CM 518 to the mating surfaces of the snap ring (7), and install the snap ring (7).

(h) Install the locking ring (8) and the thickness shim (9).

G. Final Steps

(1) Install the rotor brake disc (63-23-00-402 MET) or (63-23-01-402 MET).

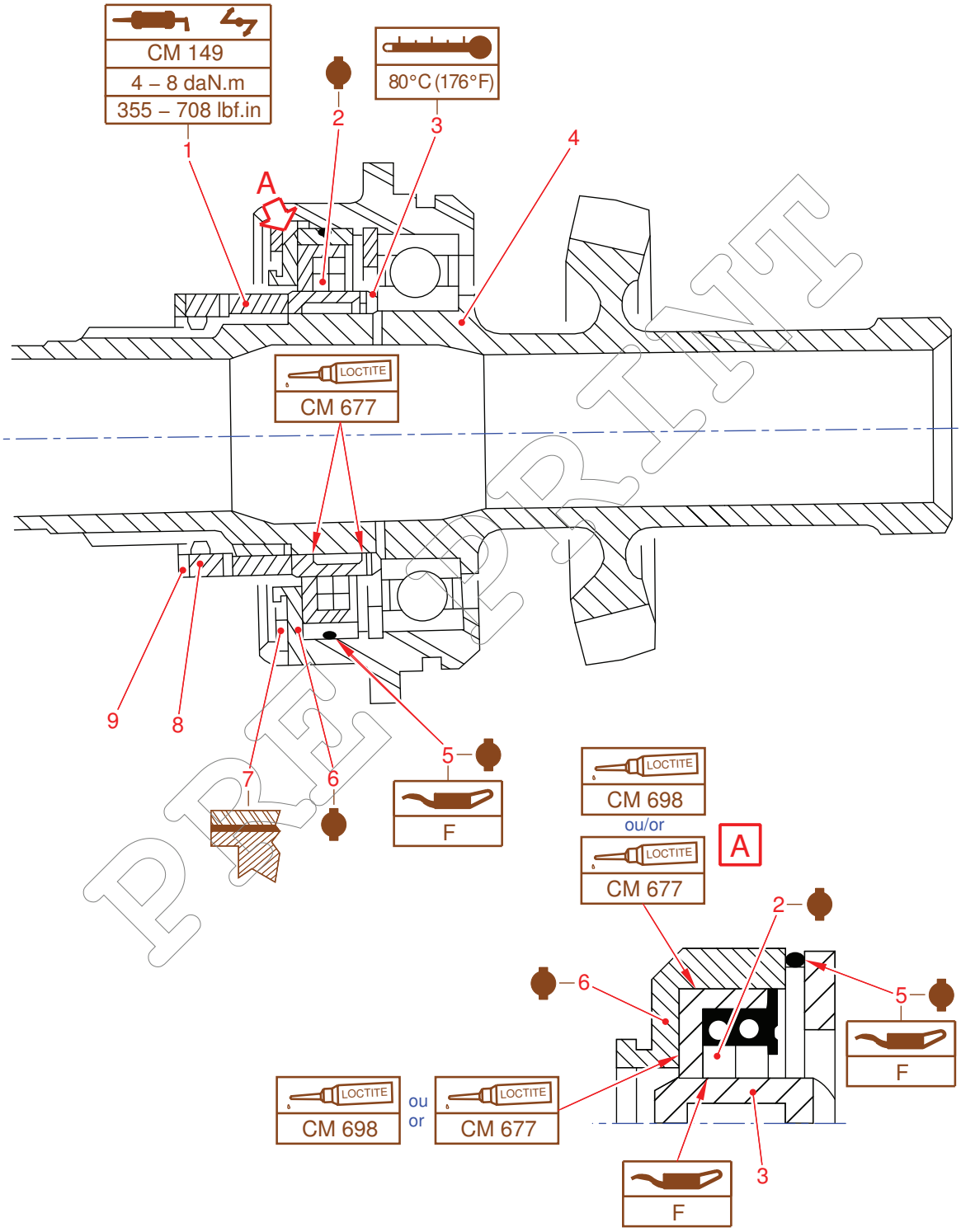


Figure 701

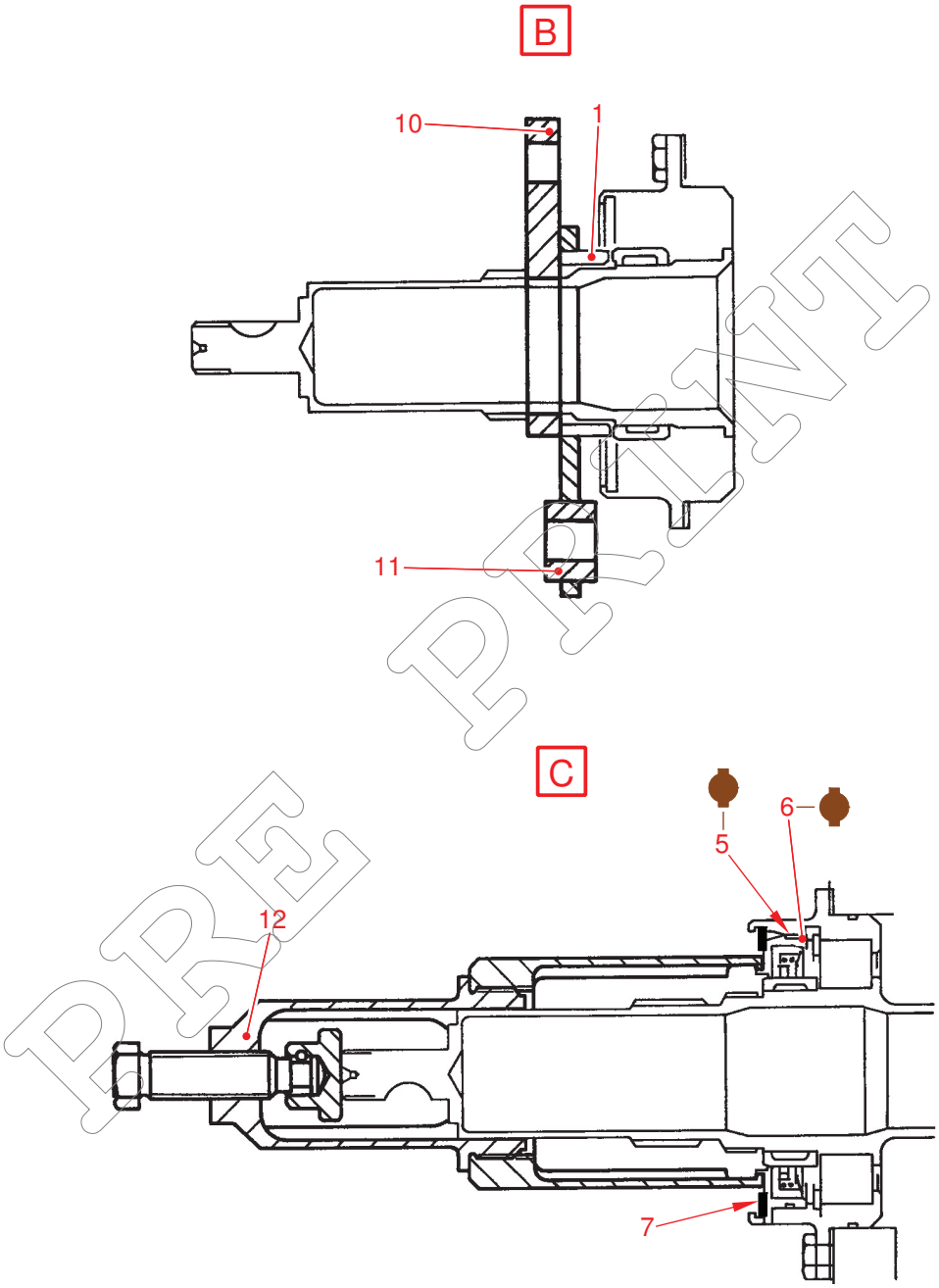


Figure 702

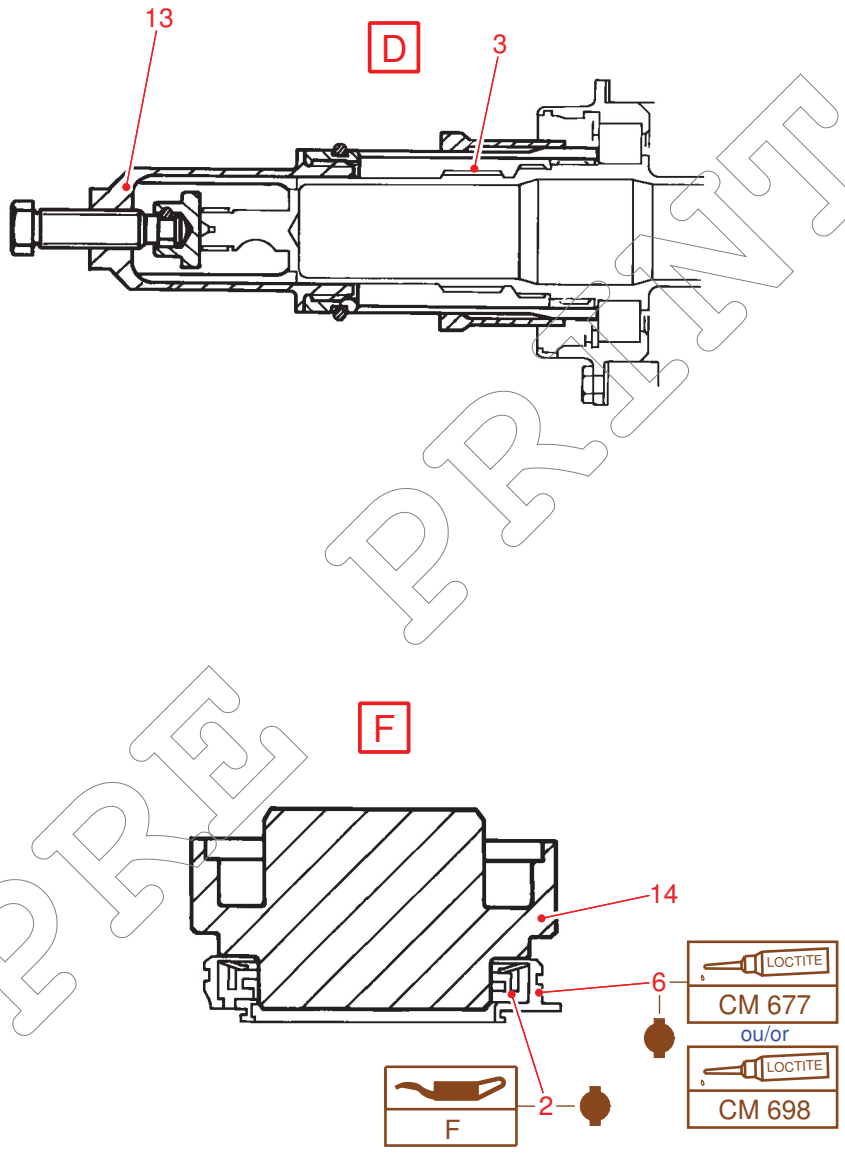


Figure 703

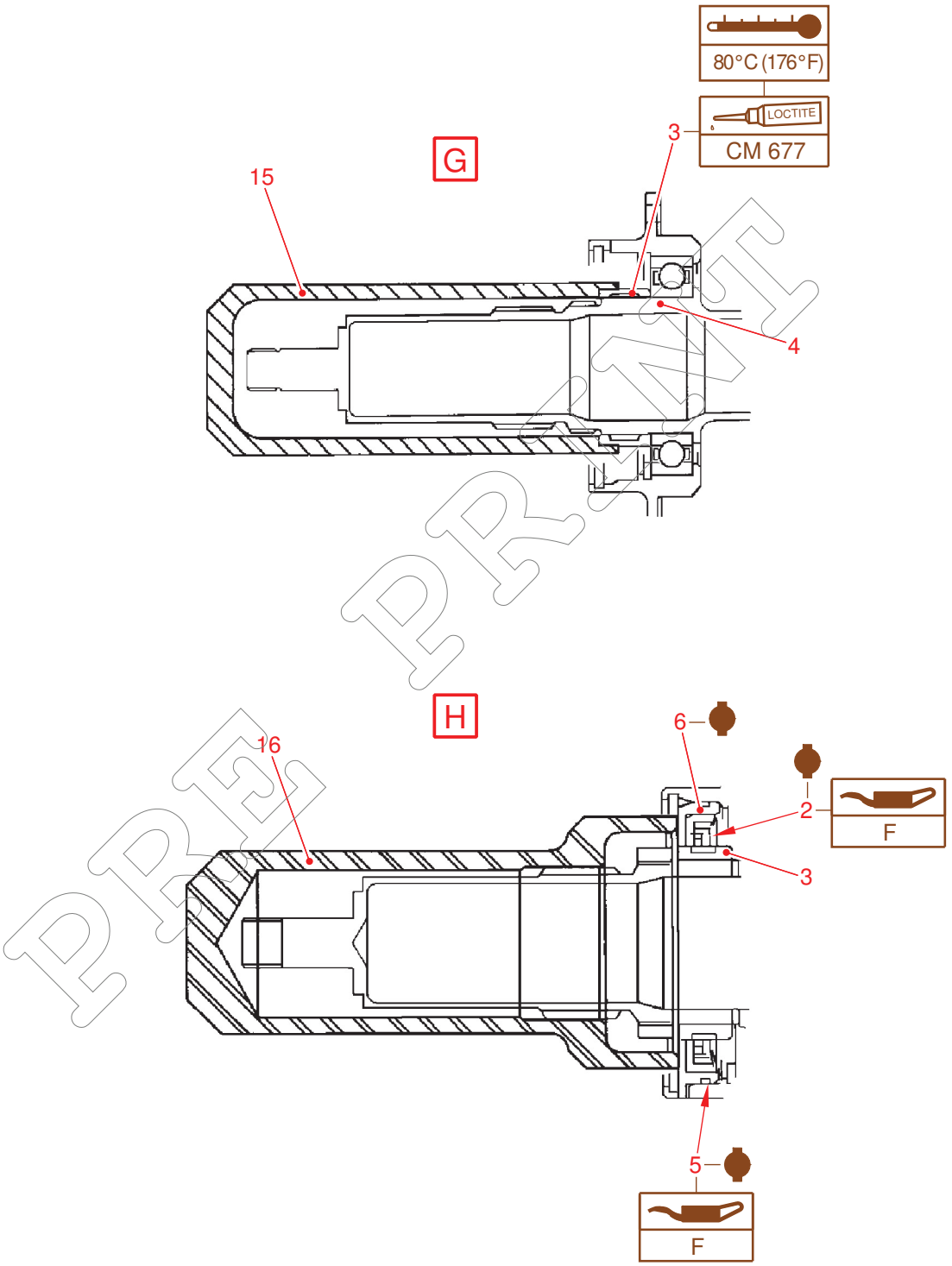


Figure 704

END OF MODULE

Fan Power Takeoff

061 Removal / Installation - Fan Power Takeoff Seals

A. Special Tools

360A93-3222-00 ..... wrench
360A93-3223-20 ..... wrench
360A93-3224-00 ..... extractor
360A93-3225-20 ..... drift
360A93-3226-00 ..... dolly and drift
360A93-3227-00 ..... extractor
360A93-3228-00 ..... drift

B. Materials

CM 149 ..... Grease
CM 204 ..... Cleaning agent
CM 231 ..... Cleaning agent
CM 518 ..... Anti-corrosion agent
CM 677 ..... Locking compound
CM 698 ..... Locking compound

C. Routine Replacement Parts

AMM		Nomenclature	IPC
Fig.	Item		Subject - Fig. - Item
Figure 1	(5)	Seal holder	63232001-150-
Figure 1	(6)	Seal	63232001-160-
Figure 1	(7)	Seal	63232001-170-
Figure 1	(8)	Spacer	63232001-180-

D. Applicable Documents

60-00-00-911 ..... General Safety Instructions - Power Transmission Systems
63-23-01-061 ..... Removal / Installation - Rotor Brake DisK
20-02-08-410 MTC

E. Preliminary Steps

(1) Remove the rotor brake disc as per sub-task 63-23-01-021-001 of task 63-23-01-061.

F. Procedure

Figure 1

CAUTION

BEFORE STARTING ANY WORK ON THE MECHANICAL ASSEMBLIES, REFER TO TASK 60-00-00-911.

Sub-Task 63-24-02-021-001
Figure 1

(1) Removal of the fan power take-off seals (*Figure 1 Sheet 1*).

(a) Remove the spacer (1) and the locking ring (2).

(b) Loosen and remove the special nut (3) using the [wrench 360A93-3222-00] (10) and the [wrench 360A93-3223-20] (11) (*Figure 1 Sheet 2* - DETAIL B).

(c) Remove the snap ring (4) (*Figure 1 Sheet 1*).

(d) Remove the seal holder (5) using the [extractor 360A93-3224-00] (12) (*Figure 1 Sheet 2* - DETAIL C).

(e) Discard the seal holder (5), seal (6) and seal (7) assembly (*Figure 1 Sheet 1*).

(f) Remove the spacer (8) using the [extractor 360A93-3227-00] (13) (*Figure 1 Sheet 3* - DETAIL D) and discard it.

(g) Clean the bearing surface of the shaft (9) using Cleaning agent CM 204 (*Figure 1 Sheet 1*).

(h) Clean the parts with Cleaning agent CM 231.

Sub-Task 63-24-02-421-001
Figure 1

(2) Installation of the fan power take-off seals (*Figure 1*).

(a) If necessary, heat the spacer (8) to 80˚C (176˚F) (*Figure 1 Sheet 4* - DETAIL F).

(b) Apply Locking compound CM 677 to the section of the shaft (9) that is in contact with the spacer (8).

(c) Install the spacer (8) on the shaft (9) using the [drift 360A93-3228-00] (15).

(d) Remove the excess Locking compound CM 677.

(e) Install the special nut (3) (*Figure 1 Sheet 1*):

1 apply Grease CM 149 to the threads of the special nut (3),

2 install and torque the special nut (3) as per *Figure 1 Sheet 1* using the [wrench 360A93-3222-00] (10) and the [wrench 360A93-3223-20] (11) (*Figure 1 Sheet 2* - DETAIL B),

3 make sure that the locking ring (2) can be installed (*Figure 1 Sheet 1*).

(f) Install the seal (7) in the seal holder (5) (*Figure 1 Sheet 3* - DETAIL E):

1 apply Locking compound CM 677 or Locking compound CM 698 to the internal section of the new seal holder (5),

2 position the new seal (7) correctly as per 20-02-08-410 MTC,

3 apply new MGB service oil on the carbon segments (Zone A) of the seal (7),

CAUTION

BE ESPECIALLY CAREFUL NOT TO DAMAGE THE CARBON SEGMENTS (ZONE A) OF THE SEAL (7) WITH THE [DOLLY AND DRIFT 360A93-3226-00] (14).

4 carefully install the seal (7) in the seal holder (5) with the [dolly and drift 360A93-3226-00] (14).

(g) Install the seal holder (5) and seal (6) assembly (*Figure 1 Sheet 4* - DETAIL G):

1 apply new MGB service oil on the new seal (6),

2 install the seal (6) on the seal holder (5) as per 20-02-08-410 MTC,

3 apply new MGB service oil on the carbon segments (Zone A) of the seal (7),

CAUTION

BE ESPECIALLY CAREFUL NOT TO DAMAGE THE CARBON SEGMENTS (ZONE A) OF THE SEAL (7) DURING INSTALLATION.

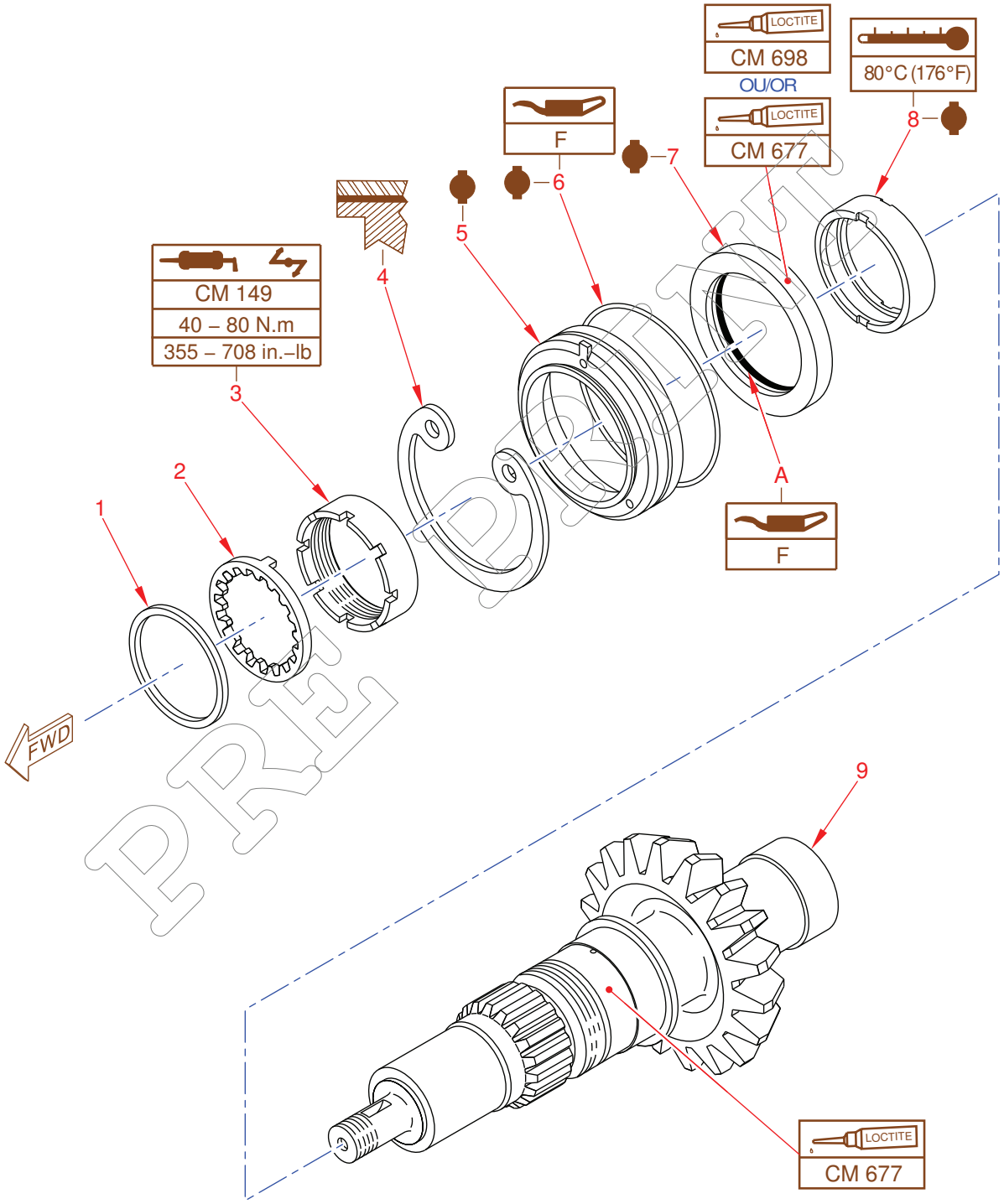
4 carefully install the seal holder (5), seal (6) and seal (7) assembly on the spacer (8) with the [drift 360A93-3225-20] (16).

(h) Apply Anti-corrosion agent CM 518 to the contact faces of the snap ring (4), and install the snap ring (4) (*Figure 1 Sheet 1*).

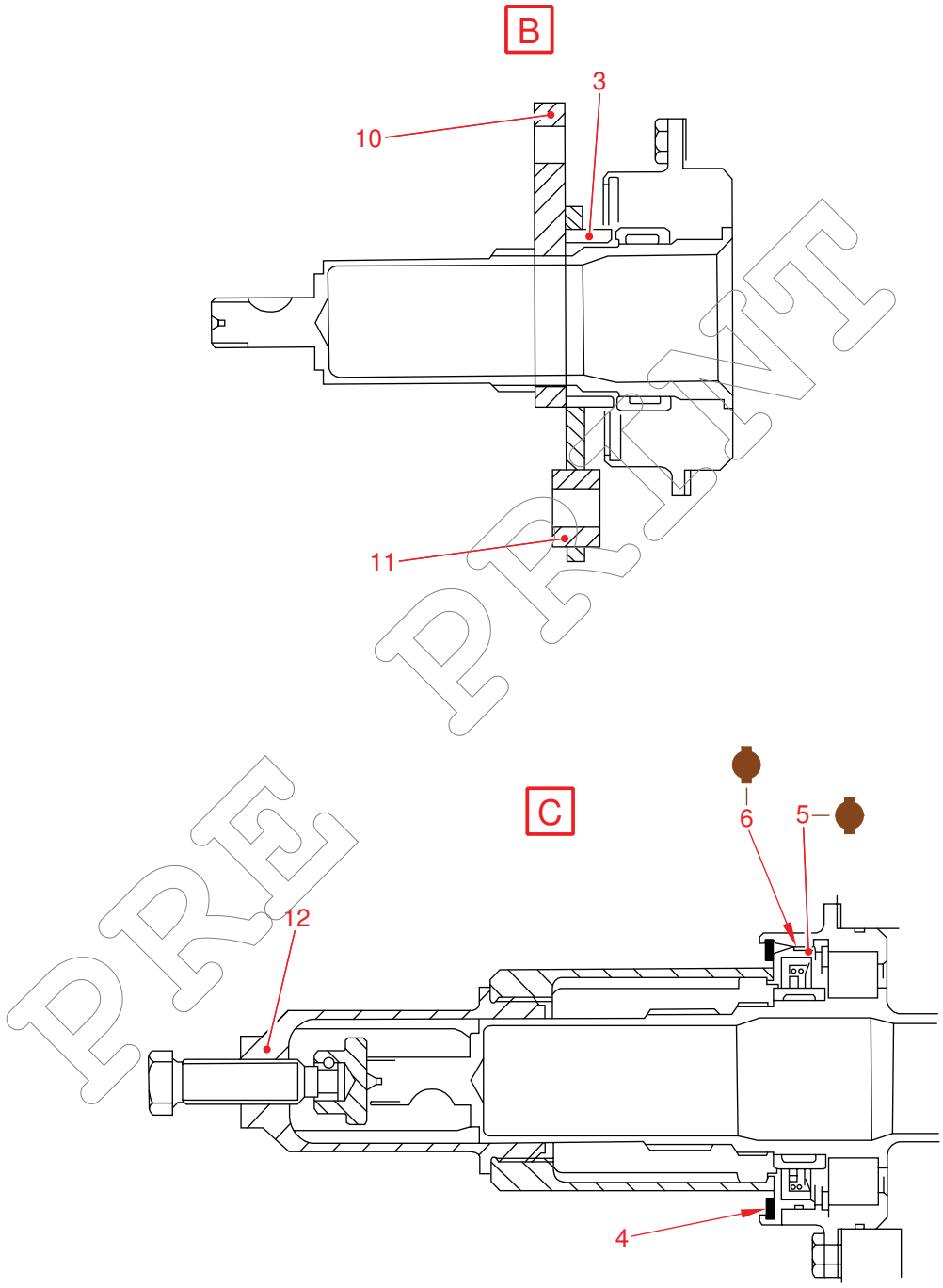
(i) Install the locking ring (2) and the spacer (1).

G. Final Steps

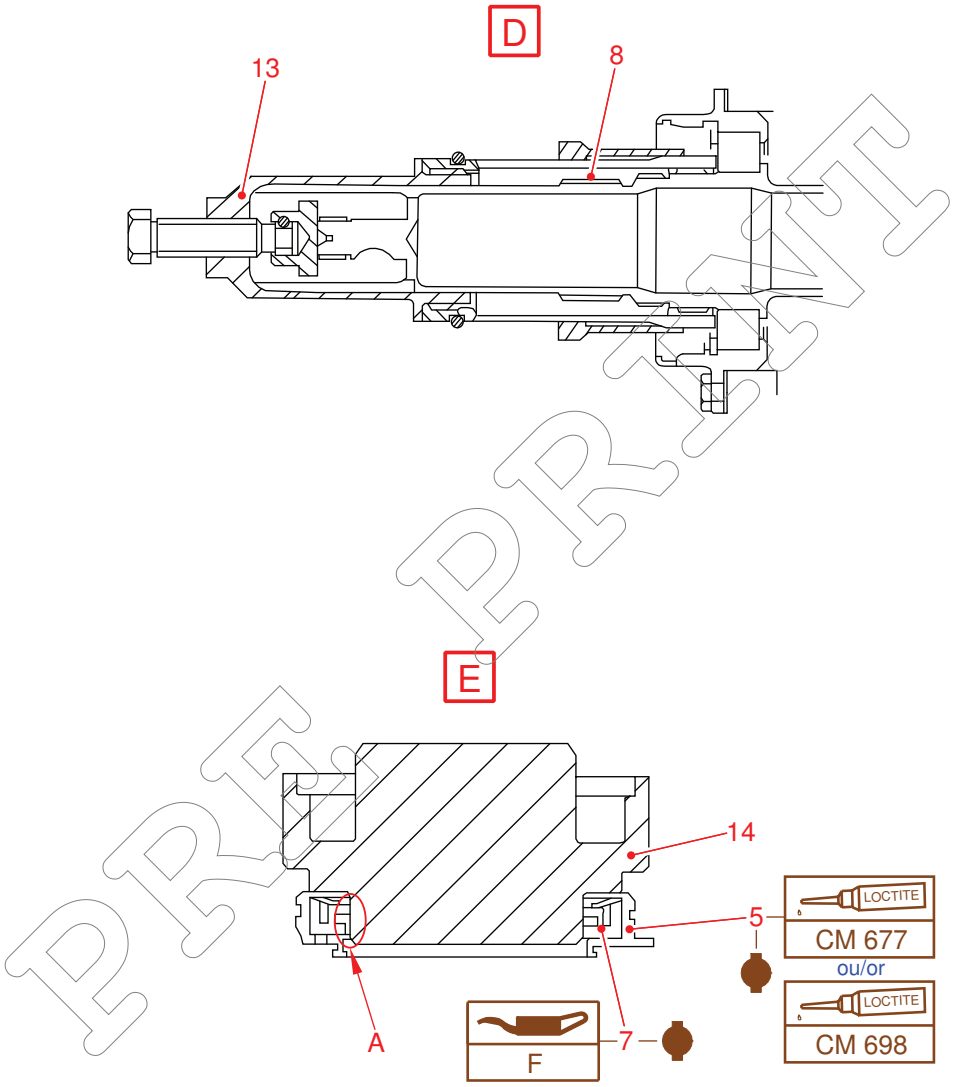
(1) Install the rotor brake disc as per sub-task 63-23-01-421-001 of task 63-23-01-061.



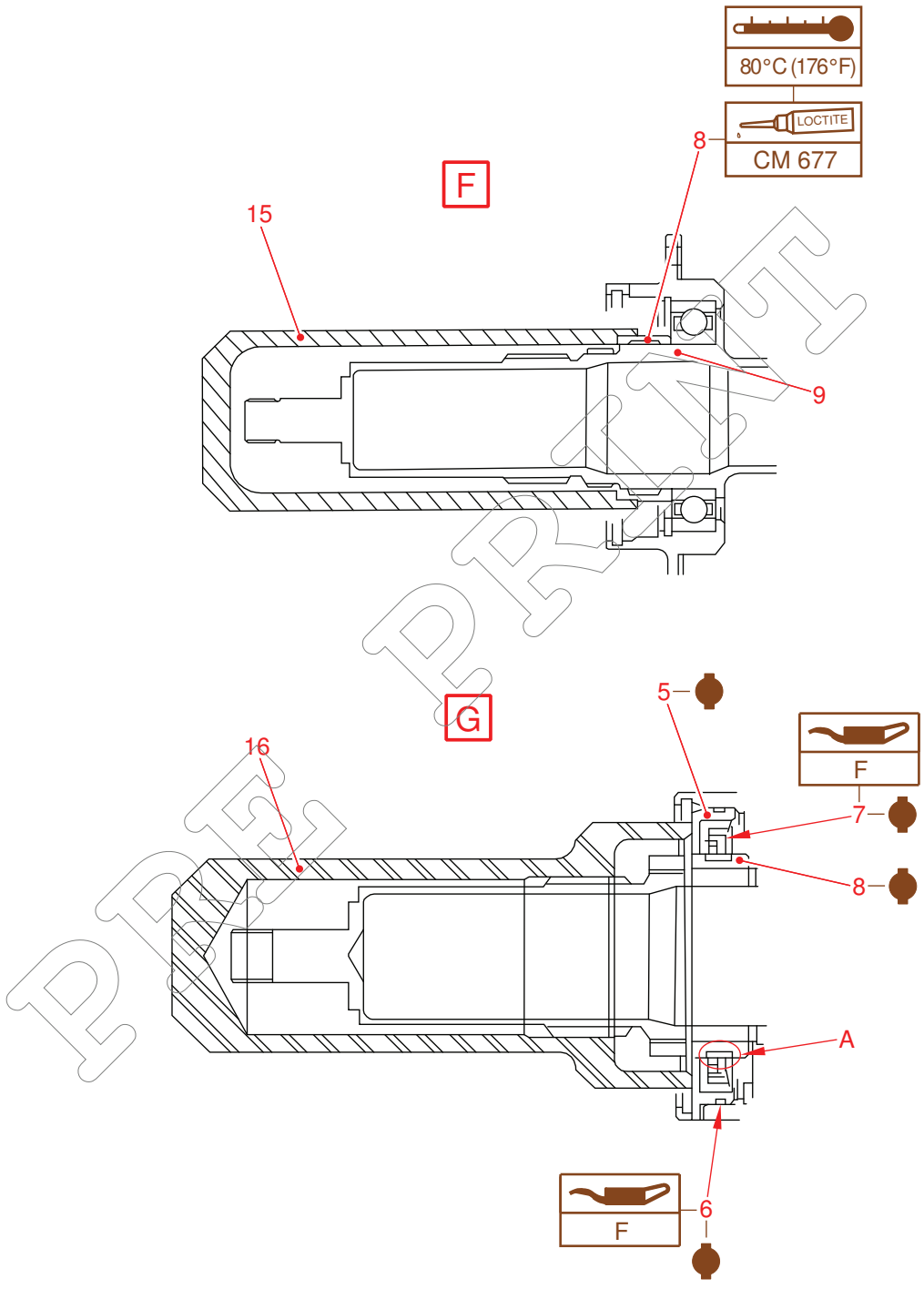
Fan Power Take-off
Figure 1 (Sheet 1)



Fan Power Take-off
Figure 1 (Sheet 2)



Fan Power Take-off
Figure 1 (Sheet 3)



Fan Power Take-off
Figure 1 (Sheet 4)

END OF MODULE