

Temporary Maintenance Instruction TMI 139-558 Rev B

IGB INPUT SLIDING ADAPTOR - MAINTENANCE PROCEDURES

All AW139 Helicopters

The technical content of this document is approved under the authority of DOA nr. EASA.21J.005.

The present TMI will be evaluated for its introduction in the standard set of Technical Publication.

If no further notice is received, the present document expires on: August 28th 2023

2022-08-28

Introduction

This TMI provides the instructions and requirements to perform the removal or replacement of IGB Input Sliding Adaptor and to perform the dimensions check of the Input Sliding Adaptor Ring.

The following procedures contained in this TMI update and supersede the contents of the following Data Modules:

ANNEX	DATA MODULE CODE	DATA MODULE TITLE
Annex 1	39-A-65-21-01-01A-242A-A	Input sliding adaptor (intermediate gearbox) - Grease
Annex 2	39-A-65-21-01-01A-920A-A	Input sliding adaptor (intermediate gearbox) - Replacement
Annex 3	39-A-65-21-01-01A-361A-A	Input sliding adaptor ring (intermediate gearbox) - Dimensions check

The Annex 3, Input sliding adaptor ring (intermediate gearbox) - Dimensions check, has been revised to take thickness measurements on three sections along the half rings radius, modify the minimum thickness reference value to 4.805 mm and remove the requirement to measure also the inner dia. ID.

The content of this TMI will be endorsed within the applicable Maintenance Manual at the earliest opportunity.

Input sliding adaptor (intermediate gearbox) - Grease

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Table 1 References

Data Module	Title
39-A-00-00-00-00A-02AA-D	Maintenance publication - List of effectivity codes
39-A-00-20-00-00A-120A-A	Helicopter safety - Pre-operation (make helicopter safe for maintenance)
39-A-00-60-00-00A-010A-A	Critical parts - General data
39-A-65-11-05-00A-520A-A	Number 2 flexible coupling - Remove procedure
39-A-65-11-05-00A-720A-A	Number 2 flexible coupling - Install procedure
39-A-65-11-06-00A-520A-A	Number 3 flexible coupling - Remove procedure
39-A-65-11-06-00A-720A-A	Number 3 flexible coupling - Install procedure
39-A-65-21-01-01A-361A-A	Input sliding adaptor ring (intermediate gearbox) - Dimensions check

Table 1 References

Data Module	Title
39-B-65-11-05-00A-520A-A	Number 2 flexible coupling - Remove procedure
39-B-65-11-05-00A-720A-A	Number 2 flexible coupling - Install procedure
39-B-65-11-06-00A-520A-A	Number 3 flexible coupling - Remove procedure
39-B-65-11-06-00A-720A-A	Number 3 flexible coupling - Install procedure

Table 2 Access points

Access Panel / Door Id	Data Module
No Access Point	

Table 3 Zones

Access Panel / Door Id	Data Module
No Zones	

Preliminary Requirements

Required Conditions

Table 4 Required Conditions

Conditions	Data Module/Technical Publication
The helicopter must be safe for maintenance	39-A-00-20-00-00A-120A-A
The access door 360BL must be opened	39-A-06-41-00-00A-010A-A

Support Equipment

Table 5 Support Equipment

Nomenclature	Identification No.	Qty
Platform, right	GG-02-00	1

Supplies

Table 6 Supplies

Nomenclature	Identification No.	Qty
Lint-free cloth	C011	AR
Cleaning solvent	C010	AR
Grease	C328	AR
Oil	C007	AR

Spares

Table 7 Spares

Nomenclature	Identification No.	Qty
Packing, preformed	65-21-00-01 -002	1
Packing, preformed	65-21-00-01 -009	1
Half ring	65-21-00-01 -009H	2
Ring	65-21-00-01 -009S	1

Safety Conditions

WARNING

The materials that follow are dangerous. Before you do this procedure, make sure that you know all the safety precautions and first aid instructions for these materials:

- [Cleaning solvent \(C010\)](#)
- [Grease \(C328\)](#)
- [Oil \(C007\)](#).

CAUTION

This component is a critical part. Be careful when you do work on this component after removal from the helicopter. A damage to the component can occur if you are not careful.

Before you install the component on the helicopter, examine it for signs of structural damage. Refer to [39-A-00-60-00-00A-010A-A](#).

Procedure

Note

To know the meaning of the effectivity code (or codes) shown in this data module, refer to [39-A-00-00-00-00A-02AA-D](#)

- 1 Put the [Platform, right \(GG-02-00\)](#) adjacent to the right side of the tail section.

-
- 2 Remove the Number 3 flexible coupling. Refer to the data modules that follow:
 - (Helicopters [7A]) [39-A-65-11-06-00A-520A-A](#)
 - (Helicopters [A3]) [39-B-65-11-06-00A-520A-A](#).

 - 3 Remove the Number 2 flexible coupling. Refer to the data modules that follow:
 - (Helicopters [7A]) [39-A-65-11-05-00A-520A-A](#)
 - (Helicopters [A3]) [39-B-65-11-05-00A-520A-A](#).

 - 4 Carefully, remove the input sliding adaptor (4, [Figure 1](#)) from the intermediate gearbox (1).

 - 5 Remove the packings (2) and (3) from the input sliding adaptor (4). Discard the packings.

 - 6 If installed, remove the ring (6) that safety the two half rings (5) to the input sliding adaptor (4). Discard the ring.

 - 7 If installed, remove the two half rings (5) from the input sliding adaptor (4).

 - 8 Do a visual inspection of the two half rings (5), if damaged discard the half rings. Light fretting signs on outer diameter faces of them are permitted.

 - 9 Do the dimensions check of the two half rings (5). Refer to [39-A-65-21-01-01A-361A-A](#) (See Annex 3 of of this TMI). If the dimensions of the two half rings (5) do not obey the given limits, discard them.

 - 10 Clean the input sliding adaptor (4) with the [Lint-free cloth \(C011\)](#) and the [Cleaning solvent \(C010\)](#) .

 - 11 Remove the remaining grease from the inner splines of the input pinion (7) with the [Lint-free cloth \(C011\)](#) .

 - 12 Lubricate the inner splines of the input pinion (7) with the [Grease \(C328\)](#) .

 - 13 If discarded, install the two new [Half ring \(65-21-00-01 -009H\)](#) (5) on the relative groove of the input sliding adaptor (4). If removed only, install the two half rings (5) on the relative groove of the input sliding adaptor (4).

 - 14 Safety the two half rings (5) to the input sliding adaptor (4) with the new [Ring \(65-21-00-01 -009S\)](#) (6).

 - 15 Lubricate the two half rings (5) with the [Grease \(C328\)](#) .

 - 16 Install the new [Packing, preformed \(65-21-00-01 -002 \)](#) (2) and [Packing, preformed \(65-21-00-01 -009 \)](#) (3) on the input sliding adaptor (4).

 - 17 Lubricate the packings (2) and (3) with the [Oil \(C007\)](#) .

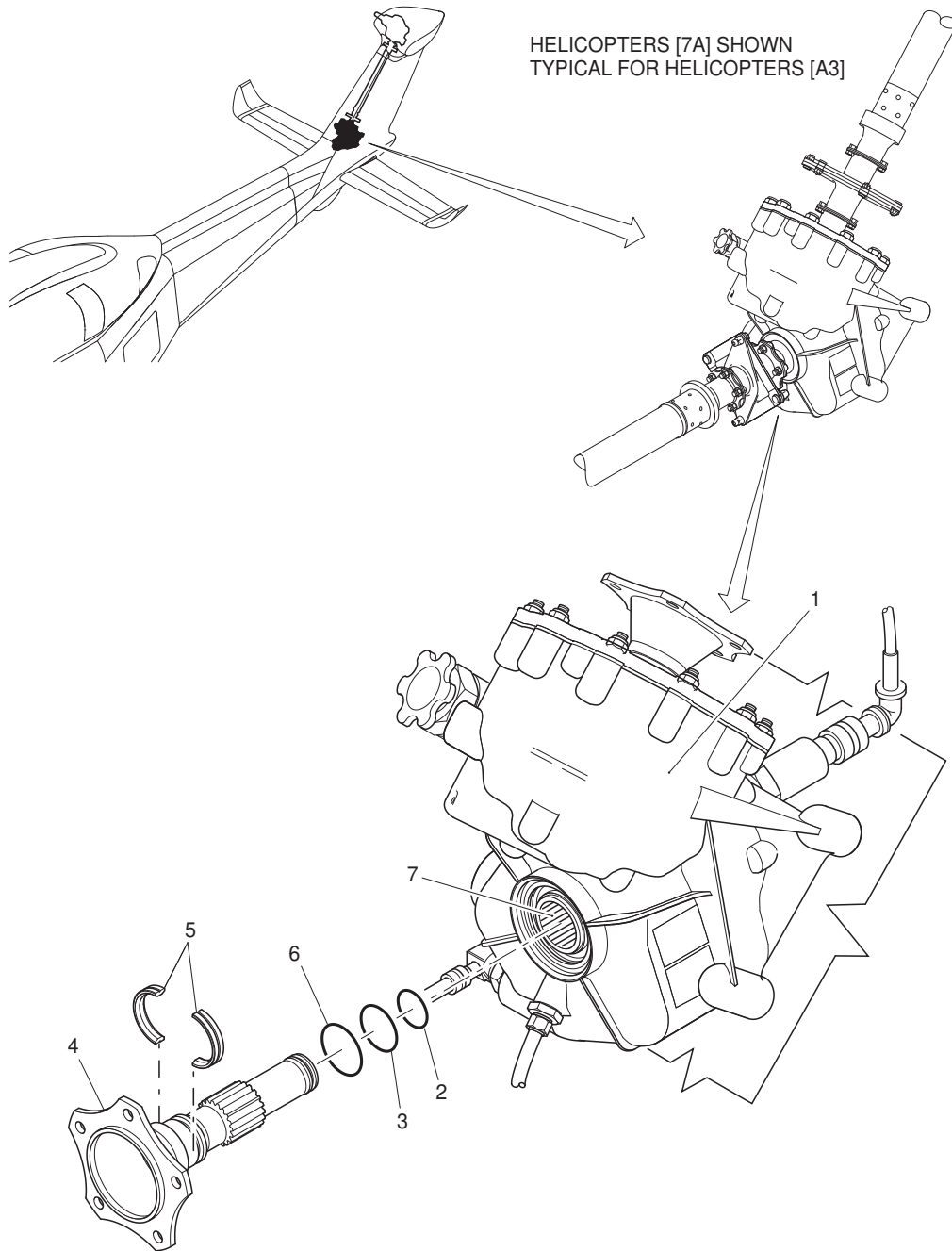
 - 18 Lubricate the splines and the surface between the two packings of the input sliding adaptor (4) with the [Grease \(C328\)](#) .

 - 19 Put the input sliding adaptor (4) in its seat of the intermediate gearbox (1). Make sure that you align the splines of the input sliding adaptor (4) with the grooves of the input pinion (7).
-

- 20 Carefully, push the input sliding adaptor (4) in the intermediate gearbox (1) until it stops.
- 21 Install the Number 3 flexible coupling. Refer to the data modules that follow:
 - (Helicopters [7A]) [39-A-65-11-06-00A-720A-A](#)
 - (Helicopters [A3]) [39-B-65-11-06-00A-720A-A](#).
- 22 Install the Number 2 flexible coupling. Refer to the data modules that follow:
 - (Helicopters [7A]) [39-A-65-11-05-00A-720A-A](#)
 - (Helicopters [A3]) [39-B-65-11-05-00A-720A-A](#).

Requirements After Job Completion

- 1 Remove all the tools and the other items from the work area. Make sure that the work area is clean.
- 2 Close the access door 360BL. Refer to [39-A-06-41-00-00A-010A-A](#)
- 3 Remove the platform from the right side of the tail section.



ICN-39-A-652101-G-00001-12509-A-004-01

Figure 1 Input sliding adaptor (intermediate gearbox) - Grease

End of Data Module

Input sliding adaptor (intermediate gearbox) - Replacement

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References

Table 1 References

Data Module	Title
39-A-00-00-00-00A-02AA-D	Maintenance publication - List of effectivity codes
39-A-00-20-00-00A-120A-A	Helicopter safety - Pre-operation (make helicopter safe for maintenance)
39-A-00-60-00-00A-010A-A	Critical parts - General data
39-A-65-11-05-00A-520A-A	Number 2 flexible coupling - Remove procedure
39-A-65-11-05-00A-720A-A	Number 2 flexible coupling - Install procedure
39-A-65-11-06-00A-520A-A	Number 3 flexible coupling - Remove procedure
39-A-65-11-06-00A-720A-A	Number 3 flexible coupling - Install procedure
39-A-65-21-01-01A-361A-A	Input sliding adaptor ring (intermediate gearbox) - Dimensions check

Table 1 References

Data Module	Title
39-B-65-11-05-00A-520A-A	Number 2 flexible coupling - Remove procedure
39-B-65-11-05-00A-720A-A	Number 2 flexible coupling - Install procedure
39-B-65-11-06-00A-520A-A	Number 3 flexible coupling - Remove procedure
39-B-65-11-06-00A-720A-A	Number 3 flexible coupling - Install procedure

Table 2 Access points

Access Panel / Door Id	Data Module
No Access Point	

Table 3 Zones

Access Panel / Door Id	Data Module
No Zones	

Preliminary Requirements

Required Conditions

Table 4 Required Conditions

Conditions	Data Module/Technical Publication
The helicopter must be safe for maintenance	39-A-00-20-00-00A-120A-A
The access door 360BL must be opened	39-A-06-41-00-00A-010A-A

Support Equipment

Table 5 Support Equipment

Nomenclature	Identification No.	Qty
Platform, right	GG-02-00	1

Supplies

Table 6 Supplies

Nomenclature	Identification No.	Qty
Lint-free cloth	C011	AR
Cleaning solvent	C010	AR
Grease	C328	AR
Oil	C007	AR

Spares

Table 7 Spares

Nomenclature	Identification No.	Qty
Sliding adaptor	65-21-00-01 -008	AR
Packing, preformed	65-21-00-01 -002	1
Packing, preformed	65-21-00-01 -009	1
Half ring	65-21-00-01 -009H	2
Ring	65-21-00-01 -009S	1

Safety Conditions

WARNING

The materials that follow are dangerous. Before you do this procedure, make sure that you know all the safety precautions and first aid instructions for these materials:

- **Cleaning solvent (C010)**
- **Grease (C328)** .

CAUTION

This component is a critical part. Be careful when you do work on this component after removal from the helicopter. A damage to the component can occur if you are not careful.

Before you install the component on the helicopter, examine it for signs of structural damage. Refer to [39-A-00-60-00-00A-010A-A](#).

Procedure

Note

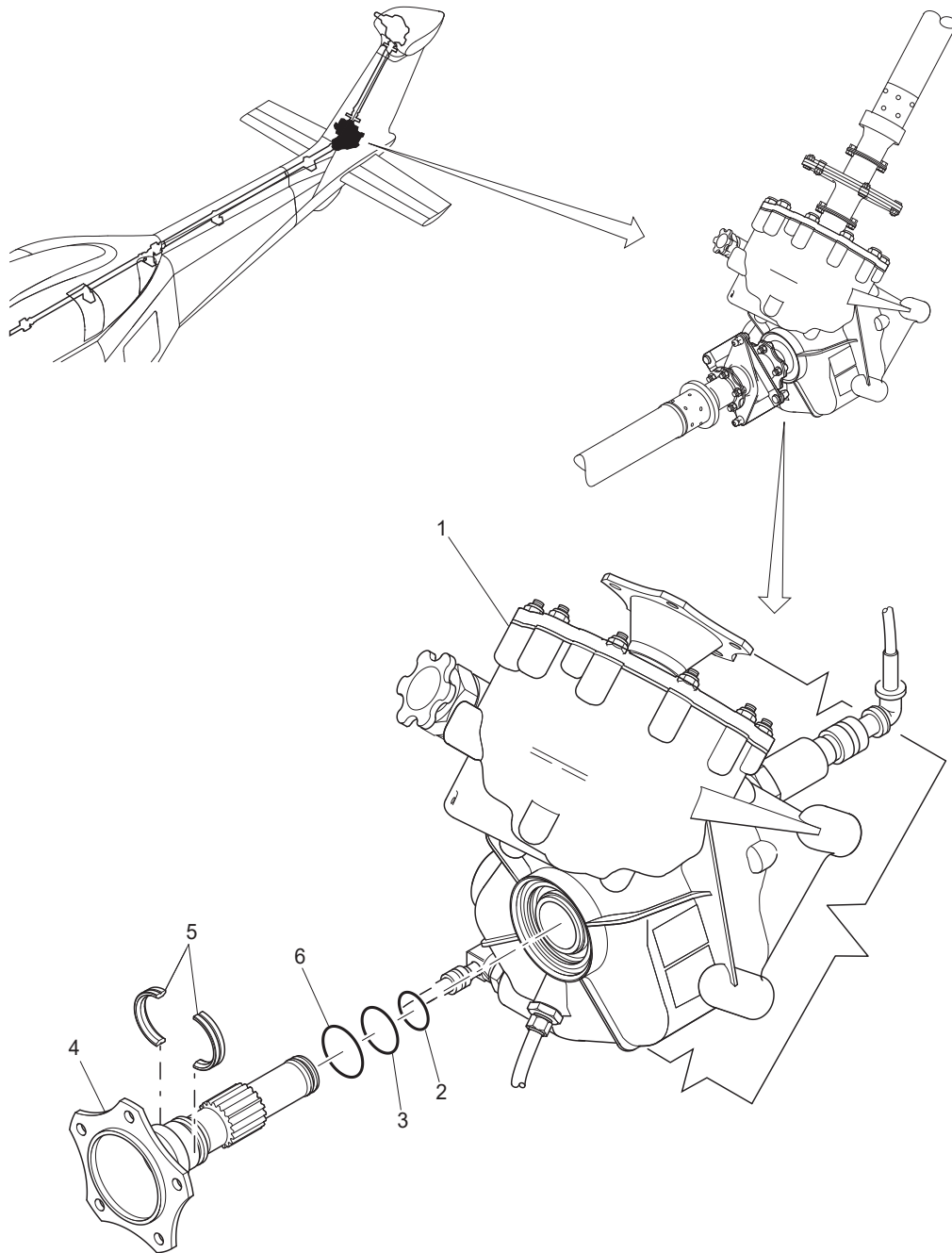
To know the meaning of the effectivity code (or codes) shown in this data module, refer to [39-A-00-00-00-00A-02AA-D](#).

- 1 During this procedure, you must put/remove the applicable plugs on the component ports. Do this immediately after/before you remove/install each item.
- 2 Put the [Platform, right \(GG-02-00\)](#) adjacent to the right side of the tail section.
- 3 Remove the Number 3 flexible coupling. Refer to the data modules that follow:
 - (Helicopters [7A]) [39-A-65-11-06-00A-520A-A](#)
 - (Helicopters [A3]) [39-B-65-11-06-00A-520A-A](#).
- 4 Remove the Number 2 flexible coupling. Refer to the data modules that follow:
 - (Helicopters [7A]) [39-A-65-11-05-00A-520A-A](#)
 - (Helicopters [A3]) [39-B-65-11-05-00A-520A-A](#).
- 5 Carefully, remove the input sliding adaptor (4, [Figure 1](#)) from the intermediate gearbox (1).
- 6 Remove the packings (2) and (3) from the input sliding adaptor (4). Discard the packings.
- 7 If installed, remove the ring (6) that safety the two half rings (5) to the input sliding adaptor (4). Discard the ring.
- 8 If installed, remove the two half rings (5) from the input sliding adaptor (4).
- 9 Do a visual inspection of the two half rings (5), if damaged discard the half rings. Light fretting signs on outer diameter of them are permitted.
- 10 Do the dimensions check of the two half rings (5). Refer to [39-A-65-21-01-01A-361A-A](#)(See Annex 3 of this TMI) of the two half rings (5) do not obey the given limits, discard them.
- 11 Clean the input sliding adaptor (4) with the [Lint-free cloth \(C011\)](#) and the [Cleaning solvent \(C010\)](#) .
- 12 If discarded, install the two new [Half ring \(65-21-00-01 -009H\)](#) (5) on the relative groove of the input sliding adaptor (4). If removed only, install the two half rings (5) on the relative groove of the input sliding adaptor (4).
- 13 Safety the two half rings (5) to the input sliding adaptor (4) with the new [Ring \(65-21-00-01 -009S\)](#) (6).
- 14 Lubricate the two half rings (5) with the [Grease \(C328\)](#) .
- 15 Install the new [Packing, preformed \(65-21-00-01 -002 \)](#) (2) and [Packing, preformed \(65-21-00-01 -009 \)](#) (3) on the related groove of the input sliding adaptor (4).
- 16 Lubricate the packings (2) and (3) with the [Oil \(C007\)](#) .
- 17 Lubricate the housing of the input sliding adaptor (4) in the intermediate gearbox (1) with the [Grease \(C328\)](#) .
- 18 Put the input sliding adaptor (4) in its position on the intermediate gearbox (1).

- 19 Carefully, push the input sliding adaptor (4) in the intermediate gearbox (1) fully until it stops.
- 20 Install the Number 3 flexible coupling. Refer to the data modules that follow:
 - (Helicopters [7A]) [39-A-65-11-06-00A-720A-A](#)
 - (Helicopters [A3]) [39-B-65-11-06-00A-720A-A](#).
- 21 Install the Number 2 flexible coupling. Refer to the data modules that follow:
 - (Helicopters [7A]) [39-A-65-11-05-00A-720A-A](#)
 - (Helicopters [A3]) [39-B-65-11-05-00A-720A-A](#).

Requirements After Job Completion

- 1 Remove all the tools and the other items from the work area. Make sure that the work area is clean.
- 2 Close the access door 360BL. Refer to [39-A-06-41-00-00A-010A-A](#)
- 3 Remove the platform from the right side of the tail section.



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Figure 1 Input sliding adaptor (intermediate gearbox) - Replacement

End of Data Module

Input sliding adaptor ring (intermediate gearbox) - Dimensions check

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References

Table 1 References

Data Module	Title
39-A-00-00-00-00A-02AA-D	Maintenance publication - List of effectivity codes
39-A-00-20-00-00A-120A-A	Helicopter safety - Pre-operation (make helicopter safe for maintenance)
39-A-65-11-02-00A-520A-A	Number 2 drive shaft - Remove procedure
39-A-65-11-02-00A-720A-A	Number 2 drive shaft - Install procedure
39-A-65-21-01-01A-920A-A	Input sliding adaptor (intermediate gearbox) - Replacement
39-B-65-11-02-00A-520A-A	Number 2 drive shaft - Remove procedure

Table 1 References

Data Module	Title
39-B-65-11-02-00A-720A-A	Number 2 drive shaft - Install procedure

Table 2 Access points

Access Panel / Door Id	Data Module
No Access Point	

Table 3 Zones

Access Panel / Door Id	Data Module
No Zones	

Preliminary Requirements

Required Conditions

Table 4 Required Conditions

Conditions	Data Module/Technical Publication
The helicopter must be safe for maintenance	39-A-00-20-00-00A-120A-A
The access panels/doors 360CL and 360BL must be removed/ opened	39-A-06-41-00-00A-010A-A
(Helicopters [7A]) The Number 2 drive shaft must be removed	39-A-65-11-02-00A-520A-A
(Helicopters [A3]) The Number 2 drive shaft must be removed	39-B-65-11-02-00A-520A-A
The input sliding adaptor (intermediate gearbox) must be removed	39-A-65-21-01-01A-920A-A

Support Equipment

Table 5 Support Equipment

Nomenclature
No Support Equipment

Supplies

Table 6 Supplies

Nomenclature	Identification No.	Qty
Lint-free cloth	C011	AR
Cleaning solvent	C010	AR

Spares

Table 7 Spares

Nomenclature
No Spares

Safety Conditions

WARNING

The **Cleaning solvent (C010)** is a dangerous material. Before you do this procedure, make sure that you know all the safety precautions and first aid instructions for the solvent.

Procedure

Note

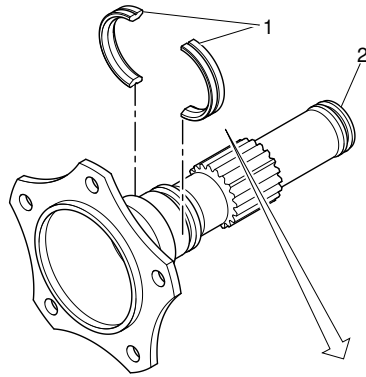
1. To know the meaning of the effectivity code (or codes) shown in this data module, refer to [39-A-00-00-00-00A-02AA-D](#).
2. The input sliding-adaptor ring is referred to in this procedure as the two half rings.

- 1 Make sure that the ring (that safety the two half rings) and the two half rings (1, [Figure 1](#)) are removed from the input sliding adaptor (2). Refer to [39-A-65-21-01-01A-920A-A](#).
- 2 Put the two half rings (1) on an applicable clean work table.
- 3 Carefully clean the two half rings (1) with the [Lint-free cloth \(C011\)](#) and the [Cleaning solvent \(C010\)](#) .
- 4 Do a visual check on the outer diameter surface of the two half rings (1) to find damage. Light fretting signs are permitted.
- 5 Measure the thickness of the two half rings (1) in three positions along their circumference (ref. A of [Figure 1](#)). Record the three found values and then, calculate the average of these recorded values.
- 6 Compare the average value to the permitted given dimension (A) shown in the table of [Figure 1](#).

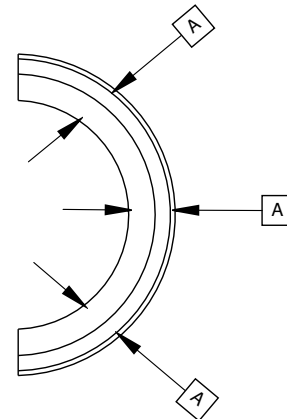
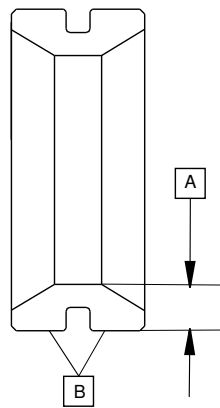
- 7 Discard the two half rings (1) if you find them damaged or that the found **average** dimension is not in the given limits.

Requirements After Job Completion

- 1 Remove all the tools and the other items from the work area. Make sure that the work area is clean.
- 2 Install the access doors 360CL and 360BL. Refer to [39-A-06-41-00-00A-010A-A](#)
- 3 Install the input sliding adaptor. Refer to [39-A-65-21-01-01A-920A-A](#)
- 4 (Helicopters [7A]) Install the Number 2 drive shaft. Refer to [39-A-65-11-02-00A-720A-A](#)
- 5 (Helicopters [A3]) Install the Number 2 drive shaft. Refer to [39-B-65-11-02-00A-720A-A](#)



INPUT SLIDING ADAPTOR RING
P/N 3T6521A07551



REF	DESCRIPTION	NOMINAL DIMENSION (mm / in)		PERMITTED DIMENSION (mm / in)
		MINIMUM	MAXIMUM	
A	Thickness	4.855 / 0.1911	4.870 / 0.1917	4.805 / 0.1892
B	Outer dia surface [1]			

[1] Light fretting is permitted

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Figure 1 Input sliding adaptor ring (intermediate gearbox) - Dimensions check

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