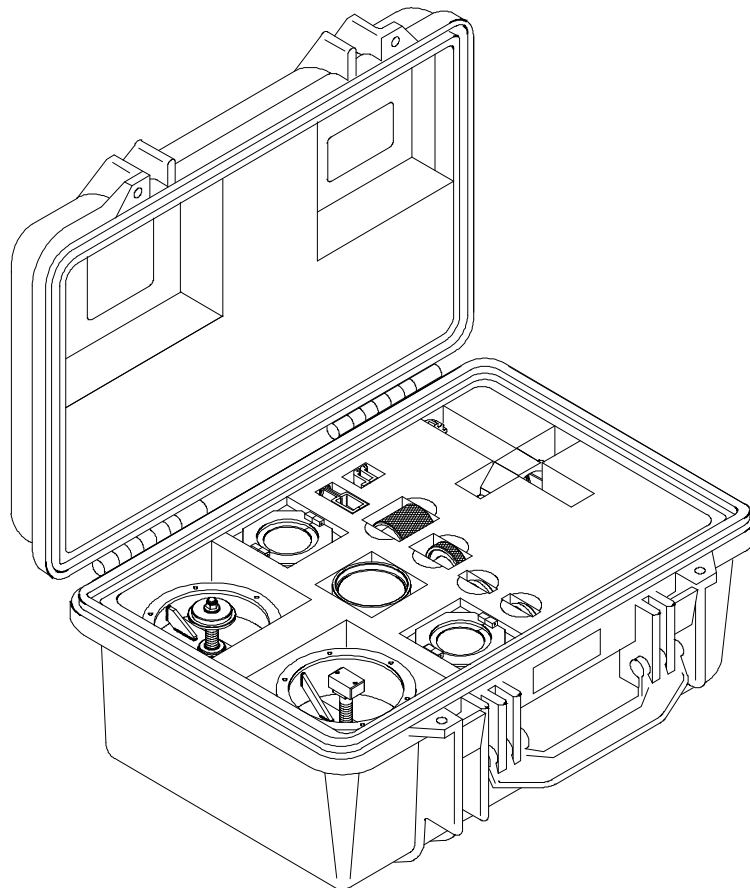


GSE & TOOL MANUAL

TITLE	TOOL KIT, MGB FREEWHEEL REPL. P/N 3G6305G01331
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	GSE & TOOL USE AND MAINTENANCE MANUAL	Manual number: MAN-3G6305G01331 REV. A Pag. 2 of 20
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REVISION HISTORY

REV	CHANGE DESCRIPTION	DATE
A	First issue	16/11/2021

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1. SCOPE

1.1. APPLICABILITY

The contents of this document are meant to provide information on the P/N 3G6305G01331 TOOL KIT, MGB FREEWHEEL REPL.

1.2. OBJECT

The object of this document is to describe the AGE and its components, its main features and it will also provide all needed maintenance requirements to keep in service the P/N 3G6305G01331 TOOL KIT, MGB FREEWHEEL REPL.

1.3. WARNING AND SAFETY INSTRUCTIONS

A number of symbols are used throughout this document to indicate information to which the user should pay attention to. These are indicated below along with the specific meaning.




 Warning	...Indicates a danger that might arise from a product and might result in severe injuries or even death, if no precautions are taken.
 Caution	... Indicates a potentially dangerous situation, which might result injury or damage to the equipment.
 Notice	...Indicates a note providing information to help the reader during the procedure.

Table 1 – Warning Instruction

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2. DOCUMENTS

2.1. APPLICABLE DOCUMENTS

The following table lists the applicable documents

REF	REFERENCE OF DOCUMENT	TITLE
N.A.	N.A.	N.A.

Table 2 – Applicable Documents

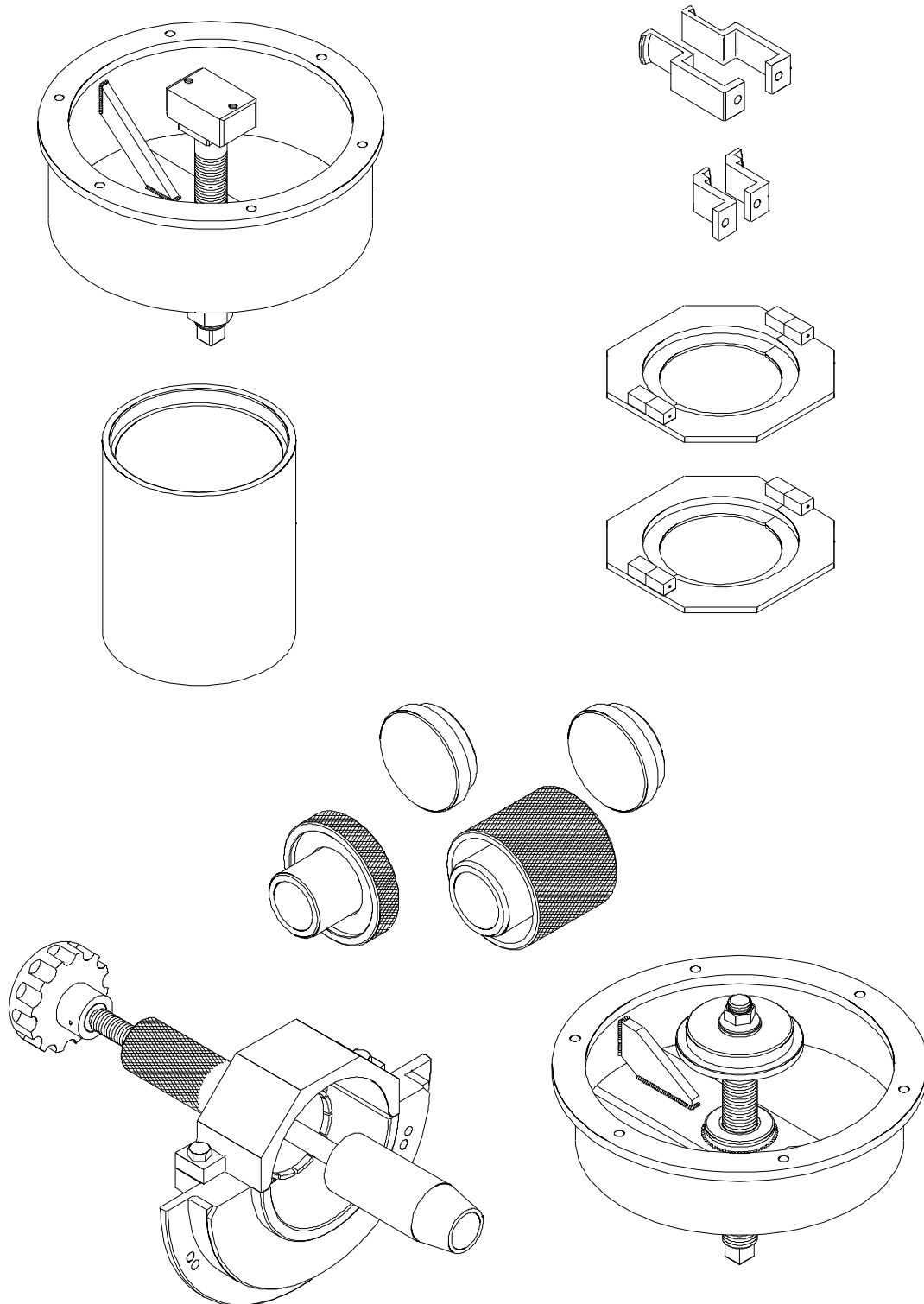
2.2. ACRONYMS USED

The main acronyms used in this document are listed below:

LHD	Leonardo Helicopter Division
HC	Helicopter
P/N	Part Number
S/N	Serial Number
N.A.	Not Applicable
FWD	Forward
MGB	Main Gear Box

3. DESCRIPTION

The function of this tool is to remove and install the freewheel unit from the main gearbox assembly.



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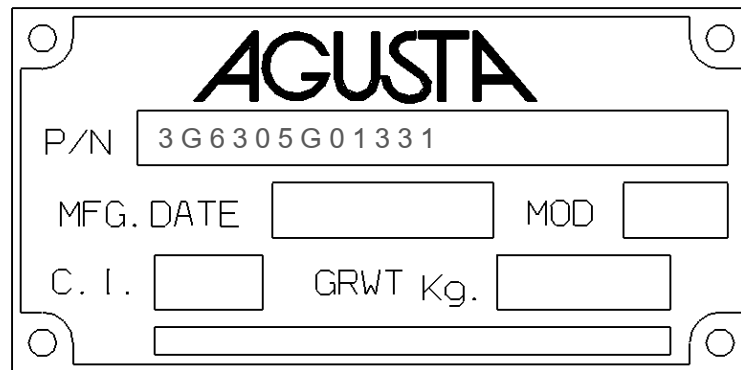
Figure 1 – Tool Kit, MGB Freewheel Repl.

4. TOP ASSEMBLY DRAWINGS

Refer to P/N 3G6305G01331 TOOL KIT, MGB FREEWHEEL REPL.

5. IDENTIFICATION

The tool identification P/N is marked on each case on the LHD identification tag.



AGUSTA

P/N

MFG. DATE MOD

C. I. GRWT Kg.

Figure 2 – LHD Identification tag with P/N



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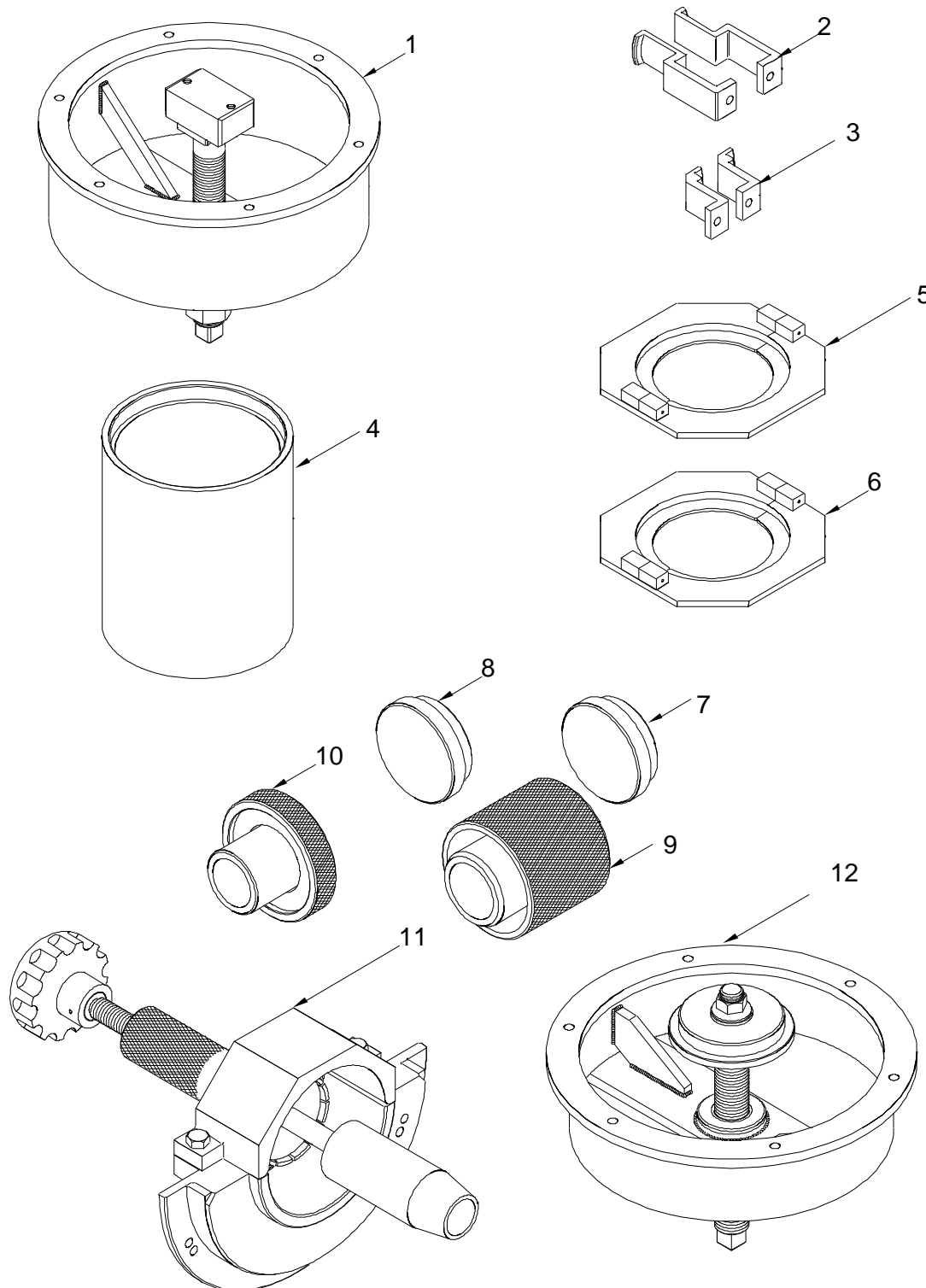
6. OVERALL DIMENSIONS

- Length: 555 mm
- Width: 835 mm
- Height: 325 mm

7. WEIGHT

- Total Weight: 25,5 kg

8. MAIN PARTS



3G6305G01331_2

Figure 3 – Main Parts

The main parts of the Tool Kit, MGB Freewheel Repl. are:

- 1 Reaction clutch inner race rem.
- 2 Puller, clutch inner race removal
- 3 Puller, bearing spacer removal
- 4 Base, clutch inner/outer bearing rem.
- 5 Reaction, clutch inner bearing rem.
- 6 Reaction, clutch outer bearing rem.
- 7 Puller, clutch inner bearing rem.
- 8 Puller, clutch outer bearing rem.
- 9 Pusher, clutch inner bearing instl.
- 10 Pusher, clutch outer bearing instl.
- 11 Pusher, clutch inner race instl.
- 12 Pusher, clutch inner race instl

9. MAIN FEATURES DESCRIPTION

The tool kit is composed of tools collected in one cases.

The kit contains the items that follow:

- Reaction assy, to be used in conjunction with the puller, clutch inner race.
- Puller, clutch inner race, to be used in conjunction with the reaction assy to pull out the clutch inner race.
- Puller, bearing spacer to be used in conjunction with the reaction assy to pull out the bearing spacer.
- Base assy, to be used in conjunction with the inner and outer clutch bearing reaction assy, to remove the inner and outer clutch bearing and the inner and outer clutch bearing pusher.
- Reaction assy, inner and outer clutch bearing removal to be used with the base assy and the inner and outer clutch bearing pusher to remove the inner and outer clutch bearing.
- Pusher, inner and outer clutch bearing removal, to be used in conjunction with the base assy and the inner and outer clutch bearing reaction to remove the inner and outer clutch bearing.
- Pusher assy, inner and outer clutch bearing installation composed of guide and pusher to be used to install the inner and outer clutch bearing.
- Pusher, inner race clutch to be used to align and position the clutch inner race in the gear crown assy.
- Pusher, inner race clutch, used to put in position the clutch inner race until the inner ball bearing touches the shoulder in the gear crown assy.

10. WARNING AND SAFETY NOTES

10.1. WARNING NOTE







 Warning	<p>Use this equipment only for the purpose that it is designed for. Any other use can result in injury or serious material damage to the components.</p>
 Caution	
 Notice	<p>The Manual can never integrally replace the adequate competence of the user.</p>
 Warning	<p>Before and after each use of the equipment is necessary to perform the checks required. Do not operate with a tool damaged or partially completed, or partially assembled.</p>
 Caution	
 Notice	<p>This Manual provides guidelines and instructions of the equipment that are in addition to - but are not intended to replace or modify but only to integrate - any general or specific rule, regulation, decree or law that is in force in the place where the equipment is in use.</p>

Table 3 – Warning Note

10.2. SAFETY NOTES

Remember to wear protective overalls, safety shoes, protective gloves and glasses during all operational and maintenance phases.



Figure 4 – Safety Notes

11. STORAGE

The Tool shall be properly stored to provide protection from external weather conditions, damage and dirty particles.

The Kit shall be stored in the dedicated transportation boxes (part of the Kit).

Ensure that the tool parts are clean before storage.

11.1. LUBRICATION BEFORE STORAGE

N.A.

11.2. STORAGE CONFIGURATION

The tool has no particular storage configuration.

12. MAINTENANCE

NOTE: Correct regular maintenance allows preventing most faults and safeguards of tool performance in time, thereby making it last longer.

Every year carry out regular maintenance on a regular basis as detailed in this manual.

NOTE: Inspection intervals for tool parts placed inside in ready storage is 12 months.

12.1. CLEANING

Before inspection and after each use, carry out the cleaning of the tool components.

12.1.1. SPECIAL TOOLS, FIXTURE AND EQUIPMENT

No special tools, fixture and equipment are required for cleaning.

12.1.2. PART REQUIREMENTS

The parts to clean should be free from the moisture, emulsified water, soaps and metal shavings that can develop of corrosive acids.

They must also be free from wide grease and / or slush deposits.

12.1.3. MANUAL CLEANING

- A. Clean thoroughly all metal surfaces with a clean lint-free cloth (Local supply) moistened with Cleaning Solvent (MIL-PRF-680C, Type II) to do general spot cleaning of large groups areas. For nylon or Teflon surfaces, the use of a biodegradable, water dilutable cleaning compound (MIL-PRF-87937 D, Type II) is required.
- B. Repeat the cleaning process again by means another clean lint-free cloth (Local supply).
- C. Drying.
 - Verify that the solvent should not be trapped in the cavity. Normally, the solvent evaporates at room temperature in a satisfactory manner.

12.2. CHECKS

Before and after each use or at least every year, carry out the check of kit component.

Before each use ensure that the manual is available to the operator, in the event of loss, request a copy to Leonardo Helicopters Division.

The Tool kit shall be submitted to following checks to guarantee the functionality.

All required checks shall be registered on CHECK RECORDS Table. Ref. *TLC_Table 1*

After each use of tool ensure to have registered the number of uses on HISTORICAL USES RECORD Table. Ref. *TLC_Table 2*

The Tool Log Card template contained in the Annex A of this manual can be replaced with any other log card template in use in the plant where the equipment is in use.

12.2.1. SPECIAL TOOLS, FIXTURE AND EQUIPMENT

No special tools, fixture and equipment are required for the checks.

12.2.2. VISUAL EXAMINATION

NOTE: Replace the parts that do not obey the inspection requirements.

Restore the marking of the parts that results damaged or not readable.

All required visual checks are listed on Table 4.

PERIODICITY	CHECK TYPE	COMPONENTS	
BEFORE AND AFTER EVERY USE	VISUAL EXAMINATION	Evidence of impact;	All
	Crushing or stripping	All	
	Cracks	All	
	Dents	All	
	Wear	All	
	Distortions	All	
	Corrosion	All	
	Loose or defective attaching parts (warning flag)	All	
	Unsticking of parts	All glued parts.	
	Damage to the threads	All threaded std parts.	
	Marking	All	
	Damage to the pins and to the shell	N/A	
	Damage to the insulation sleeves and wires	N/A	

Table 4 – Visual Check



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12.2.3. PERIODICAL CHECKS

Not Applicable.

12.2.4. DIMENSIONAL CHECKS

Not Applicable.

12.2.5. SPECIAL CHECKS SUMMARY

Not Applicable.

12.3. REPLACEMENT

All the parts for which it is allowed the components replacement are listed in Paragraph 15.

12.3.1. REPLACEMENT PROCEDURES

The replacement of parts of the kit does not require specific procedures.

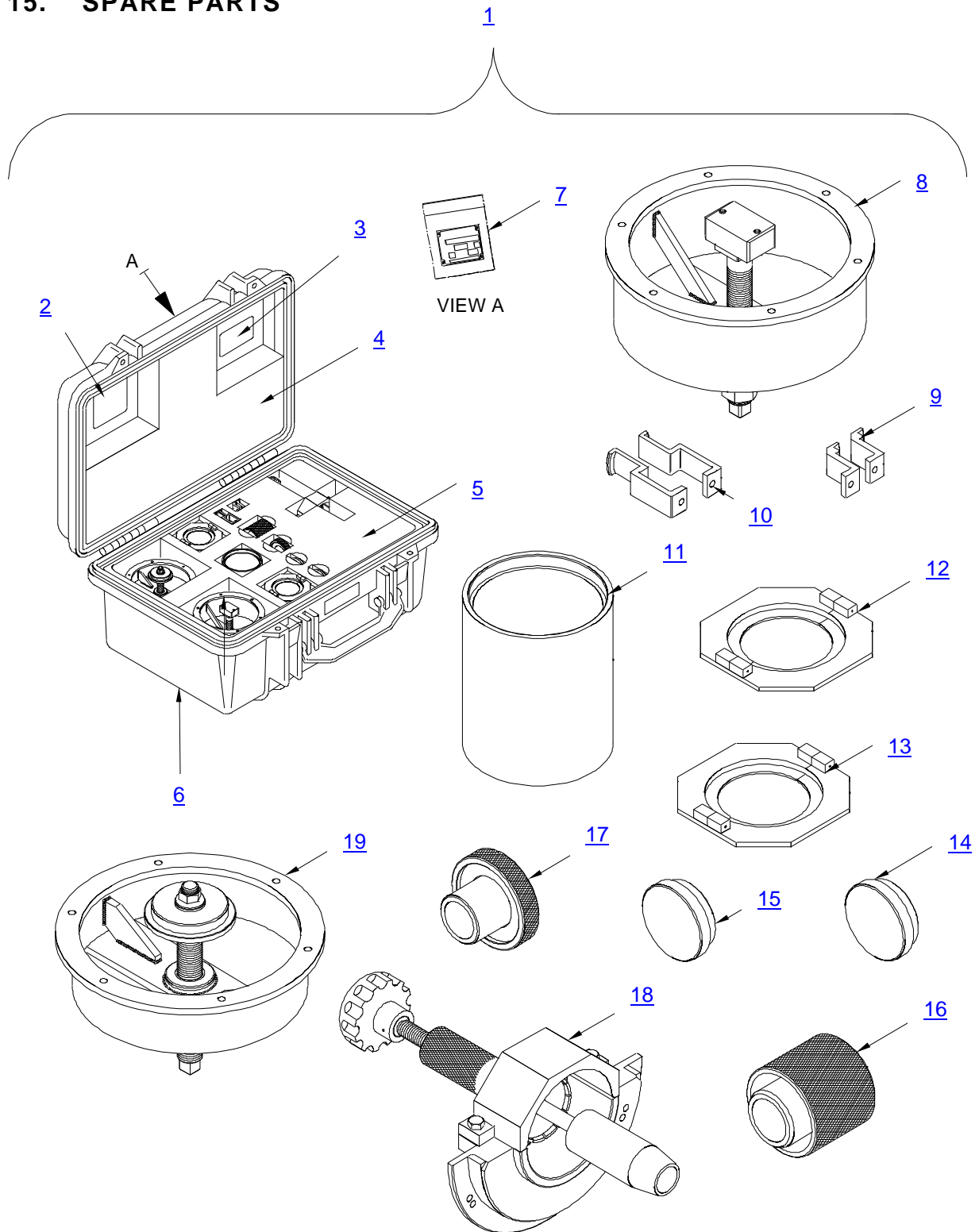
13. CALIBRATION

No Calibration is required.

14. SHELF LIFE

Not Applicable.

15. SPARE PARTS



3G6305G01331_3

Figure 5 – Spare Parts



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ITEM	P/N	DESCRIPTION	Q.TY
1	3G6305G01331	TOOL KIT, MGB FREEWHEEL REPL.	REF.
2	3G0205G00157	NAMEPLATE	1
3	3G0205G00257	NAMEPLATE	1
4	3G6305G23551	UPPER FOAM	1
5	3G6305G23451	LOWER FOAM	1
6	76-30	CASE	1
7	A304A001A1	PLATE, IDENTIFICATION	1
8	3G6305G03031	REACTION ASSY	1
9	3G6305G03351	PULLER	2
10	3G6305G03451	PULLER	2
11	3G6305G03631	BASE ASSY	1
12	3G6305G03731	REACTION ASSY	1
13	3G6305G04031	REACTION ASSY	1
14	3G6305G04351	PULLER	1
15	3G6305G04451	PULLER	1
16	3G6305G04531	PUSHER ASSY	1
17	3G6305G04631	PUSHER ASSY	1
18	3G6305G04731	PUSHER ASSY	1
19	3G6305G05531	PUSHER ASSY	1

Table 5 – Spare Parts

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16. CE MARKING

No CE marking is required for the P/N 3G6305G01331 TOOL KIT, MGB FREEWHEEL REPL..



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ANNEX A

TOOL LOG CARD



TOOL LOG CARD

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TOOL KIT P/N: [1]	TOOL KIT DESCRIPTION: [2]	TOOL KIT S/N: [3]
TOOL P/N: [4]	TOOL S/N: [5]	REMARKS: [6]

Section 1: CHECKS RECORD

[7] N° check	[8] DATE	[9] P/N TO CHECK	[10] CHECK	[11] FREQUENCY	[12] RESULT	[13] NOTE	CERTIFICATION [14]
							STAMP & SIGNATURE [15]
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
FINAL ACCEPTANCE [16]							
STAMP & SIGNATURE [17]						DATE [18]	

TLC_Table 1



TOOL LOG CARD

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TOOL KIT P/N: [1]	TOOL KIT DESCRIPTION: [2]	TOOL KIT S/N: [3]
TOOL P/N: [4]	TOOL S/N: [5]	REMARKS: [6]

Section 2: HISTORICAL USES RECORD

[19] N°USE	[8] DATE	[6] NOTE	[13] CERTIFICATION	[19] N°USE	[8] DATE	[6] NOTE	[13] CERTIFICATION
			[14] STAMP & SIGNATURE				[14] STAMP & SIGNATURE
1				11			
2				12			
3				13			
4				14			
5				15			
6				16			
7				17			
8				18			
9				19			
10				20			

TLC_Table 2

LOG CARD FILLING INSTRUCTIONS

FIELD #	HEADER	NOTE
1	Part number of the tool Kit	
2	Tool Kit denomination	
3	Serial Number of the tool Kit	
4	Part Number of the tool (part of kit)	
5	Serial Number of the tool (if applicable)	
6	Indicate any details of the use	
7	Sequential number of check performed	
8	Date of the activity	
9	PN of tool or component (part of tool) checked/affected by issue	
10	Typology or description of checks /issue	
11	Check frequency	
12	Check result	
13	Check remarks	
14	Performance certification	
15	Stamp and signature of the personnel which performs the check	
16	Section related to the final approval	
17	Stamp and signature of the personnel which performs the final approval	
18	Date on which the final check was made	
19	Sequential number of performed used of the tool	