



Issue Paper (IP)

IP Number: 2023-03

Initial Date: 12/NOV/2023:

Revision / Date: (DD/MMM/YYYY):

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Retroactivity (Y/N): N

Title:	Clarifying the definition of Lubrication and Servicing
Submitter:	MPIG

Applies To:	
MSG-3 Vol 1	X
MSG-3 Vol 2	X
IMPS	

Issue:

The current definition of Lubrication and Servicing in MSG-3 document is either incomplete or ambiguous, thus needs clarification.

Problem:

In MSG-3 document, Appendix A. Glossary, Lubrication & Servicing is defined as follows (Visual check and Discard are listed for reference):

Lubrication and Servicing	Any act of lubricating or servicing for the purpose of maintaining inherent design capabilities.
Visual Check	A visual check is an observation to determine that an item is in its intended state. Does not require quantitative tolerances. This is a failure finding task with obvious pass/fail criteria.
Discard	The removal from service of an item at a specified life limit.

The problem is: The first half of definition is simply repeating the terms and the second half doesn't target to the terms themselves (other task types like FNC may also "for the purpose of maintaining inherent design capabilities"). So, the definition is not precise enough, thus engineers may have different understanding and generate different task types for the same/similar failure causes. Here below are some examples collected from the industry.

SVC vs. VCK

Task Type	Interval	Task Description
SVC	400FH	IDG oil system servicing (replenish as required)
SVC	700FH	CHECK OIL LEVEL OF VARIABLE FREQUENCY GENERATOR (VFG) AND ADD OIL AS REQUIRED



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VCK	700FC	VISUAL CHECK OF SHIMMY DAMPER OIL GAUGE
VCK	14DY	VISUAL CHECK OF PASSENGER/CREW ENTRY DOORS EMERGENCY OPERATION CYLINDER GAS PRESSURE GAUGE TO VERIFY IT IS IN NORMAL RANGE

SVC vs. DIS

Task Type	Interval	Task Description
SVC	6000FC	Replace nose landing gear oil
SVC	4000FC	SERVICING OF MAIN LANDING GEAR SHOCK STRUT(REPLACE HYDRAULIC OIL)
DIS	800FH	Replace the oil in IDG oil system
DIS	1500FH	DISCARD VARIABLE FREQUENCY GENERATOR (VFG) LUBRICATION OIL

In addition to the above confusions, some engineers believe that lubrication is a type of servicing work.

Recommendation (including Implementation):

Define the lubrication and servicing independently and precisely. Here below are the suggestions:

Lubrication and Servicing	Any act of lubricating or servicing for the purpose of maintaining inherent design capabilities. Lubrication is applying a lubricant directly to an item to prevent or reduce friction/corrosion/wear/fretting between moving surfaces.
Servicing	Servicing is work such as draining/replenishing/replacing of consumables (air, fuel, oil, water, etc.) to meet operating conditions or quantity requirements.

The above suggestions are trying to achieve the following goals:

1. The lubrication should be clearly separated from servicing;
2. For task type pair "SVC vs. VCK" examples discussed above, tasks that determine the need for replenishment prior to the actual act of replenishment should not be considered as SVC, but VCK;
3. For task type pair "SVC vs. DIS" examples discussed above, tasks that replace the consumables (such as lubricating oil, hydraulic oil) are recommended to select SVC task type instead of DIS.

It is also recommended to add corresponding notes in Section 2-3-7 as a reminder to analysts.



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Before:

1. Lubrication/Service (All Categories)

QUESTION 5A, 6A, 7A, 8A, 9A: IS A LUBRICATION OR SERVICING TASK APPLICABLE AND EFFECTIVE?

1.1. Applicability Criteria

The replenishment of the consumable must reduce the rate of functional deterioration.

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6. Discard (All Categories)

QUESTION 5D, 6D, 7D, 8E, 9E IS A DISCARD TASK TO AVOID FAILURES OR TO REDUCE THE FAILURE RATE APPLICABLE AND EFFECTIVE?

Discard tasks are normally applied to so-called single celled parts such as cartridges, canisters, cylinders, engine disks, safe-life structural members, etc.

6.1. Applicability Criteria

The item must show functional degradation characteristics at an identifiable age and a large proportion of units must survive to that age.

After:

1. Lubrication/Service (All Categories)

QUESTION 5A, 6A, 7A, 8A, 9A: IS A LUBRICATION OR SERVICING TASK APPLICABLE AND EFFECTIVE?

1.1. Applicability Criteria

The replenishment of the consumable must reduce the rate of functional deterioration.

NOTE: Tasks that determine the need for replenishment of the consumable prior to the actual act of replenishment should not be directly defined as SVC. Instead, task types, such as VCK, that can determine the need for replenishment should be considered first.

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6. Discard (All Categories)



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QUESTION 5D, 6D, 7D, 8E, 9E

IS A DISCARD TASK TO AVOID FAILURES OR TO REDUCE THE FAILURE RATE APPLICABLE AND EFFECTIVE?

Discard tasks are normally applied to so-called single celled parts such as cartridges, canisters, cylinders, engine disks, safe-life structural members, etc.

6.1. Applicability Criteria

The item must show functional degradation characteristics at an identifiable age and a large proportion of units must survive to that age.

NOTE: According to the definition of DIS, replacing the consumables (such as lubricating oil, hydraulic oil) are recommended not to select DIS task type, but SVC.

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IMRBPB Position:

Date:

Position:

Recommendation for Implementation:

Status of the Issue Paper:

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Active

Incorporated in MSG-3 / IMPS (with details)

Archived