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The Model Development Strategy to Maintenance of the 155 Mm-Caesar Canon in order To Keep on Operational Statement of the Field Artillery Force

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Abstract: *The procurement of the 155 mm-Caesar Cannon is a big leap in the regeneration of the Filed-Artillery Army's because in terms of quality, capability and reputation this cannon has a variety of advantages. The phenomenon that occurs in the Field-Artillery force that operate the 155 mm-Caesar cannonat this time is that the maintenance of the cannon is still not optimal due to several factors. Limited human capabilities in several stages of maintenance so that it requires technical guidance from Nexter manufacturer technicians who are still bound by the cooperation agreement for technology transfer and knowledge transfer. The strategy of developing a model of maintenance and maintenance of the 155 mm-Caesar Cannon so that the cannon could last a long time in its use. The research used is qualitative research, which is a type of research that aims to describe, describe, explain and analyze information from research problems through data collection by asking several questions according to research problems The results of the study found that model maintenance and maintenance of the155 mm-Caesar cannon currently by doing Prevent Maintenance before and after carrying out exercises and shooting.*

Keywords: 155 mm-Caesar, Maintenance, Preventive Maintenance, Quality, Nexter

I. INTRODUCTION

The 155 mm-*Caesar*cannon was first operationalized in armed units of the Army's Strategic commando ranks in 2015. The procurement of the 155 mm-Caesar cannon is a big leap in the regeneration of the Army Armed weaponry because in terms of quality, capability and reputation this French-made cannon has a variety of advantages. Some of the advantages possessed include a very long shooting distance of up to 42 km and has high mobility so that it is quite ideal to use in *shoot and scoot* tactics (Christopher, 2011).

In order to keep the weaponry optimally operationalized and realize a long service life (*lifetime warranty*), an effective and sustainable maintenance system (Basri et.al) is needed. , 2017). But in reality, this is not optimal, because various things are still found that affect the process of maintaining the weaponry in the unit. If the maintenance system of the 155 mm-Caesar cannon is not implemented in accordance with the guidelines set by the manufacturer, the operational readiness of the 155 mm-Caesar cannon in the long term will not be optimal so that the potential for disturbances and damage in the firing process is also greater (Kodiklat TNI AD, 2022).

The phenomenon that occurs in the Armed ranks units that operate the 155 mm-Caesar cannonat this time is that the maintenance and maintenance of the French-made cannon is still not optimal due to several factors. Limited human resources capabilities in several stages of maintenance so that it requires technical guidance from *Nexter* manufacturer technicians who are still bound by cooperation agreements for technology transfer and knowledge transfer.

Dependence on *technical assistance* has a variety of impacts, depending on each point of view. On the one hand, of course, producers will not transfer all the technology and knowledge they have for free and everything in the end is related to the trading strategy with profit or profit as the main target pursued by each manufacturer.

Maintenance and maintenance of the 155 mm-Caesar cannonrequires comprehensive efforts from various interested parties so that operational readiness and extensibility of the service life (*lifetime warranty*) can be realized. A

quality and planned and integrated strategy is needed to realize optimal maintenance and maintenance of the 155 mm-Caesar cannon(Hardt et.al. , 2021)

With the right maintenance strategy, it is hoped that the cannon made by the Nexter manufacturer can be operationalized for service in the ranks of the Army's Armed units in the next few decades. The participation of supporting components in the maintenance and maintenance of 155 mm-Caesar cannonis an absolute thing that must be met so that all obstacles that hinder the maintenance process can be resolved together.

To solve the maintenance problems of the 155 mm-Caesar cannon, an optimal model must be developed in the maintenance and maintenance of 155 mm-Caesar cannon that is in accordance with the characteristics of the wearer and the characteristics of the weapon. The concept of a prepentive maintenance model (Vilarinho et.al, 2017). periodic is the right concept to maintain and maintain the 155 mm-Caesar cannon which can be applied continuously.

II. METHODOLOGY

In the object research, it is about the strategy of developing a 155 mm-*Caesar* cannon maintenance and maintenance model, while the research subjects are competent respondents in this research problem. Data collection techniques are a way to obtain research information in the form of data in the form of photos, documents, statements, or symbols (Leavy, 2017). To obtain valid data in this study, the authors used literature study data collection techniques and field studies consisting of observations, interviews, questionnaires, and documentation.

Interviews, which are a way of collecting data that is used to obtain information directly from the source. Interview is the process of obtaining information for research purposes by means of question and answer by meeting face to face between the questioner and the respondent using a tool called an *interview guide* (Soeters et. Al., 2014). In order for the data obtained to be valid and credible, the method of triangulation in testing credibility is interpreted as checking data from various sources in various ways, and various times (Crewell, 2018).

III. RESULTS

The 155 mm-*Caesar* cannon is one of the modern Armed Defense Equipment that has a very large firepower capability because it has a caliber of 155 mm supported by modern weapon systems by integrating various technologies both mechanical, hydraulic and electric so that it has high effectiveness and mobility capabilities. To know more about this cannon, it is necessary to explore the provisions of the technique.

For the maintenance development model strategy, there are several parts or components of 155 mm-Caesar cannon that perlu receive regular maintenance or need preventive maintenance, as for the part of the 155 mm-Caesar cannonthat requires continuous maintenance can be seen in Figure 1 below.

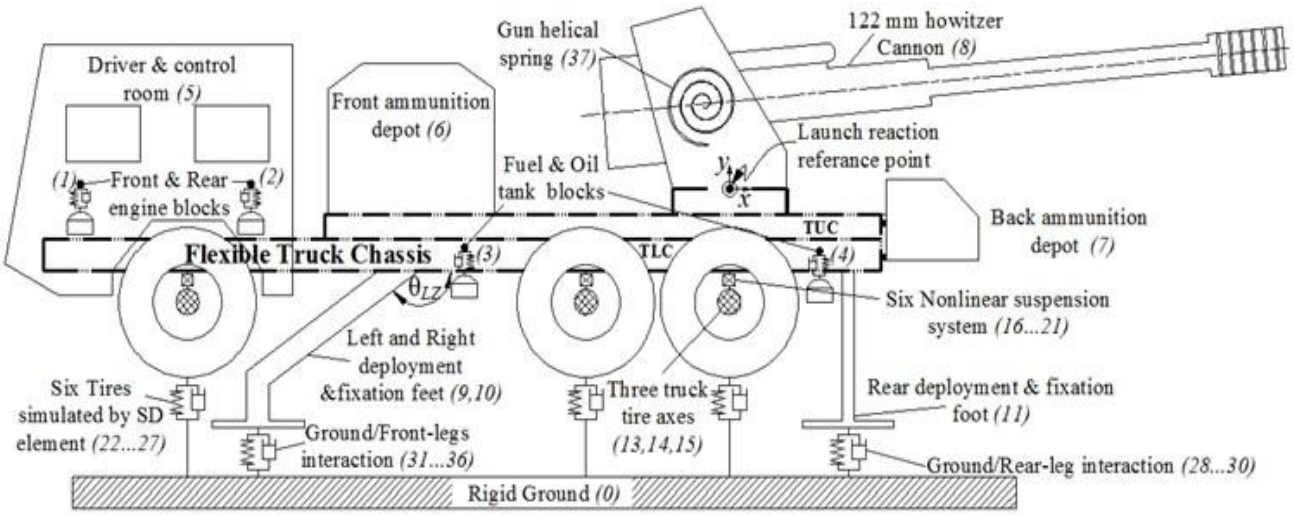

Fig. 1. Part 155 mm-Caesar cannonrequired Preventive Maintenance (Nexter, 2009)

The maintenance and maintenance model of the 155 mm-Caesar cannon. In order to maintain the operational readiness of the Field Artillery Force, the maintenance of the Cannon in the user unit is carried out by each trained member, the maintenance of the cannon carried out by the user unit is only up to the level of 0

(zero), while the greater maintenance is carried out by the Upper Unit according to *the Service Area* up to the central level.

To support voters in a continuous manner. It is carried out that coaches and cadre which can serve this 155 mm cannon although it is very limited, this is because currently the course or education about the 155 mm-Caesar cannon is only limited to introduction. In addition, the training materials obtained by personnel sent abroad are very limited to low-level operational and maintenance levels only.

To get a continuous maintenance strategy model based on the results of interviews with respondents who are experts in their fields, it is modeled with triangulation for preventive maintenance, using a likert scale to determine the weight of the interview results, the results are as follows.

Table 1. 155 mm-Caesar cannonMaintenance and Maintenance Model Development Strategy Data

QUESTION	E	G	GE	NG	VNG	Average
	SCALE					
	5	4	3	2	1	
155 MM/GS cannon capacity according to conditions	14	15	2	0	1	4,28
The 155 MM/GS cannon capacity has met the combat capacity	1	28	2	1	0	3,78
Priority use of the 155 MM/GS cannon according to needs	7	22	3	0	0	4,13
Soldiers prioritize 155 MM/GS cannon users according to needs	14	15	2	1	0	4,31
The use of the 155 MM/GS cannon is adjusted to the regulations	0	29	0	3	0	3,81
Soldiers adjust maintenance and care according to policy	4	25	0	3	0	3,94
Average	24,25 : 6 = 4,042					

The strategy of the 155 mm-Caesar cannonmaintenance and maintenance model seen from the recapitulation table shows that the average value of the interpretation figure is 4,042 to be able to interpret the respondent's opinion, then it is consulted on the following criteria:

Criterion:

$$\frac{Highest\ Weight - Lowest\ Weight}{Number\ of\ Weightings} = \frac{5-1}{5} = \frac{4}{5} = 0{,}8$$

1,00 – 1,80Category Very Not Good (VNG)
1,81 – 2,61Category Not Good (NG)
2,62– 3,42Category Good Enough (GE)
3,43– 4,23Category Good (G)
4,24– 5,00Category Excellent (E)

IV. CONCLUSION

The current model of maintenance and maintenance of 155 mm-Caesar cannonby means of preventive maintenance before and after carrying out training and firing. The special officer responsible for the maintenance and maintenance of the Caesar 155mm cannon to extend the service life, because the personnel who have attended the training better know and understand the maintenance and maintenance problems of the 155 mm-Caesar cannon, this is done so that the cannon can last a long time in its use, which is carried out in the maintenance and maintenance of the

155 mm-Caesar cannonin order to extend the service life because in the absence of management it could not guarantee the operation of the 155 mm-Caesar cannon. The use of the 155 mm-Caesar cannonhas so far been operationalized in accordance with the provisions contained in the manual for the use of the 155 mm-Caesar cannon. In the maintenance and maintenance of the 155 mm-Caesar cannon to extend the service life.

The strategy of developing a model of maintenance and maintenance of the 155mm Caesar Cannon so that the cannon can last a long time in its use, namely the use of the Caesar Cannon so far is very good and there are no obstacles that interfere with the main task. In the maintenance and maintenance of the 155 mm-Caesar cannon to extend the service life. By carrying out regular checks of both weapons and vehicles. In the maintenance and maintenance of the Caesar Cannon there are special officers who have carried out training on the maintenance of the Caesar Cannon. The ideal competence of a Caesar Cannon maintenance and maintenance officer is that the personnel are concerned about the maintenance and maintenance of the Caesar Cannon. The frequency of use of Caesar cannons in educational institutions is more than that of operational units, because almost in every Education there is material about Caesar Cannons. The attention of the institution in overcoming problems in the maintenance and maintenance of the Caesar 155 mm cannon is very large in its role, because every problem in the maintenance of the Institution always provides a solution. If you carry out maintenance and maintenance activities regularly, the condition of the Caesar Cannon will be ideal. So far, supporting facilities in the maintenance and maintenance of the 155 mm-Caesar cannonto extend the service life have been well available. For the availability of support for maintenance and maintenance is inadequate, especially about the availability of spare parts.

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