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Design of Treker Aids for Throtle Lever Stuck on Cessna 172S Aircraft

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Abstract: One of the components in the aircraft, especially the Cessna 172S, is the throttle. One of the components in the aircraft, especially the Cessna 172S, is the throttle. The throttle is a device on a Cessna type 172S training aircraft that is used to increase the amount of air used during combustion. If the throttle and mixture have not been lubricated or adjusted for a long time, it will get stuck in the gasket and rubber support in the throttle and mixture housing, which can disrupt the movement or flexibility of the throttle. To help overcome difficult throttle adjustments, special tools are needed in the form of a tracker. The existence of representative and useful tools to make things easier and save costs is really needed, therefore research to create work aids currently needs to be increased. This research aims to design a Tracker Aid for the Stuck Throtle Lever on the Cessna 172S Airplane to make it easier for Cessna 172S aircraft technicians to adjust the stuck throttle.

Keywords: cessna 172s, Throtle, Trecker

I. INTRODUCTION

In the world of aviation, safety, comfort and aviation security are highly accountable. For this reason, equipment and tools are needed that support the safety and security of the aircraft as well as regular maintenance [1]. One of the components on an airplane, especially a Cessna 172s, is the throttle. The throttle is a device on the Cessna 172s training aircraft which is used to increase the amount of air used during combustion in the cabin. In a Cessna aircraft there are 2 important parts, namely the throttle and mixture, the use of these 2 objects is very influential for combustion so that it starts the engine and regulates the RPM while flying. If the throttle and mixture are not lubricated or adjusted for a long time, it will get stuck in the gasket and rubber support in the throttle and mixture housing, so it can interfere with movement or flexibility of the throttle.

To help overcome the difficulty of adjusting the throttle, special tools are needed in the form of a tracker. The treker is a special tool for technicians in the automotive world. One of the uses of the treker is as a special key to loosen or tighten the torque of a number of vehicle components that cannot be reached with an ordinary key. Therefore, the tracker was specifically designed specifically for special needs whose existence is very important. This tool is useful for loosening and tightening components that are prone to slipping. The tracker can be used with a pull or push system depending on the type of tracker and also the type of work being done [2],[3].

The existence of representative and useful tools to make things easier and save costs is really needed, therefore research to create work aids currently needs to be increased [4],[5]. The automotive world has begun to develop in techniques and methods of maintenance and repair, even to make some mechanic/technician jobs easier, a special service tool (SST) is used so that the time and energy required becomes more efficient. [6],[7],[8]. This research aims to design a Tracker Aid for Throtle Stuck on a Cessna 172s Airplane to make it easier for Cessna 172s aircraft technicians to adjust the stuck throttle.

II. RESEARCH METHOD

2.1 Research Framework

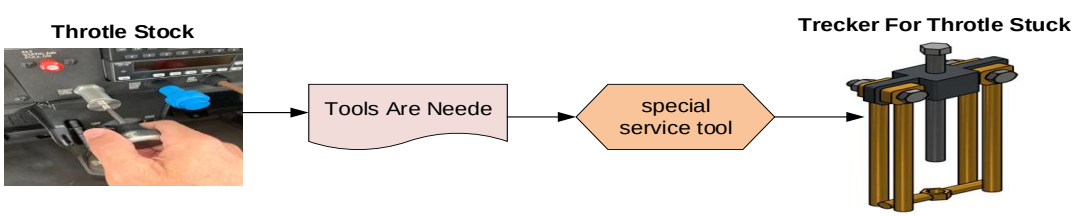

Figure 1: frame of mind

The throttle is a lever to regulate the power produced by the engine on the Cessna 172s aircraft. There are problems that often occur with the throttle, namely that it is difficult to pull or jams occur on the throttle, so that the power adjustment of the Cessna 172s aircraft has difficulty. [9], [10], 11], [12][13]. To make things easier when a stuck throttle occurs, a tool is needed. The tool that will be designed in this research is a special service tool in the form of a tracker for stuck throttle.

2.2 Tool Design

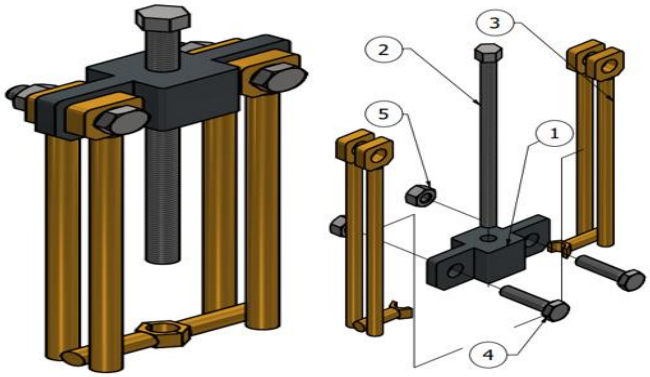

Figure 3: Costum Trecker

Table 1 Trecker Costume Material

Part List		
Item	Amount	Part Number
1	1	Custum Housing
2	1	AS Drat M6X100
3	2	Custom Tarikan
4	2	Baut M8X25
5	2	Mur M6

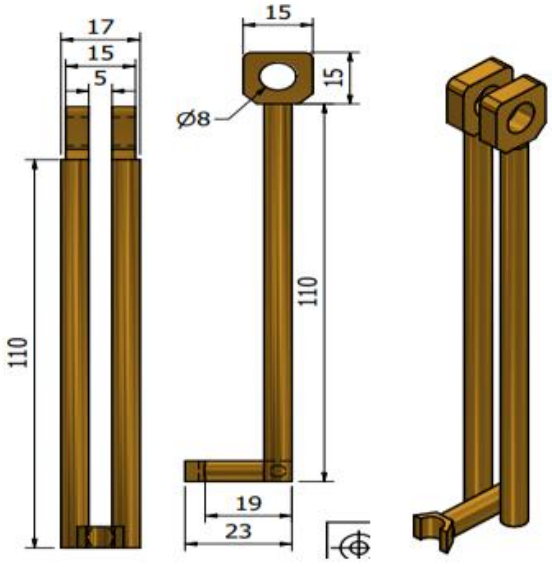

Figure 4: Custom dimensions of pull

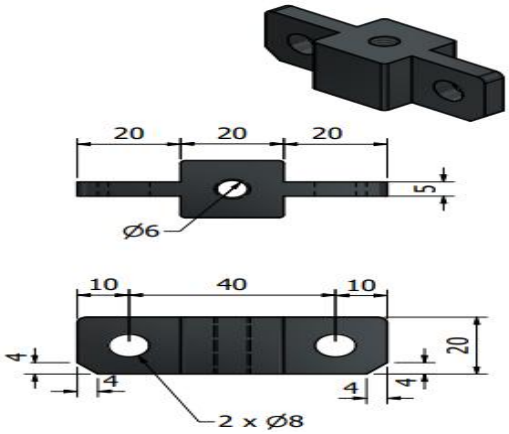

Figure 5: Custom Housing Dimensions

III. RESULT AND DISCUSSION

3.1 Research Results

This research produces a design tool in the form of a trecker to make it easier to adjust the throttle stock. The resulting tools from this design can make it easier for Cessna aircraft technicians to adjust the throttle stock. The results of the design of this tool can be seen in the image below.


Figure 6: tracker for stuck throttle

3.2 Discussion

The problem with the Cessna 172s aircraft is that the throttle frequently occurs. This research resulted in a trecker design for stuck throttle to make things easier for Cessna 172s aircraft technicians. A tractor is a work aid used by workers, especially technicians in a workshop or industrial factory [14], [15]. A tractor is a tool that can be used for special needs in carrying out repairs on machines, vehicles and other components. The tracker can be used with a pull or push system depending on the type of tracker and also the type of work being done. The design of the tool is shown in Figure 6.

IV. CONCLUSION

The problem with the Cessna 172s aircraft is that the throttle frequently occurs. This research resulted in a trecker design for stuck throttle to make things easier for Cessna 172s aircraft technicians. The design of the tool is shown in Figure 6.This research resulted in the design of a Tracker Aid for Throtle Stuck on a Cessna 172s Airplane to make it easier for Cessna 172s aircraft technicians to adjust the stuck throttle.

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Hopefully this research can be useful for readers and can be applied to problems that exist in the use of Cessna aircraft.

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