

REPLACEMENT PARTS LIST - CONTRACT W535-AC-8131

10-31-36

Progress

Report

Date	Part No.	Part Name and Description	No. of Units	Unit Price	Total
10-31-36	503587	Bearing - reduction gear idler These bearings used in both the front and rear reduction gear housing were scored half way around mostly on the rear half of the bearing. They were replaced with bearings having a 1/4 x 3/32 x 360° annular oil groove as shown on new drawing number 500603 instead of the longitudinal ones used previously. This will provide more oil to this bearing.	2	16.08	32.16
10-31-36	501013	Bushing 1-1/4 I.D. x 1-15/32 O.D. x 1-3/8 shouldered The front end of the accessory shaft bushing had seized on the shaft and had been turning in the housing. This bushing had apparently been working satisfactory but may have failed due to the additional load and vibration it was subjected to during the running at full load. Replaced in the re-bored case, no change.	1	10.26	10.26
10-31-36	503507 503508	Housing, reduction gear, front and rear. Re-bored to accommodate new bushing part number 501013 and new bearings part number 503587. Investigation disclosed that it was possible to assemble these two housings in such a manner that the bearings would not be in perfect alignment. This is due to the fact that continued assembly and dis-assembly has worn the dowels. The key slot was re-machined and ring dowels were added around two of the studs as shown on drawing number 500612. This repair should eliminate the possibility of mis-alignment due to assembly.	1	42.84	42.84

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10-31-36	503509	Key - reduction gear housing. Continued dis-assembly of these housings necessitated the re-machining of this locating key-way thus requiring an oversize key. Replaced with oversize part.	1	12.39	12.39
10-31-36	500612	Dowel - reduction gear housing ring. Continued dis-assembly caused wear in the large circular dowel in the housing. In order to insure perfect alignment when assembled, two hardened ring dowels were added.	2	3.06	6.12
10-31-36	501011	Bushing 1-1/8 I.D. x 1-11/32 O.D. x 1-3/8 shouldered. The turning of the accessory shaft bushing in the housing caused this bushing for the idler gear to go out of line. Replaced with new part, no change.	1	10.26	10.26
10-31-36	501024	Bolt 3/8-24 x 1-1/32 drilled special. Used on propeller shaft to reduction gear. Seven of the eight bolts were broken, either on the head or nut end. One failed on both ends. This necessitated boring the holes for the bolts slightly oversize. To facilitate running, the bolts were replaced with oversize bolts of same design from Continental stock on hand. However they will be completely replaced with a new design having a concentric head as soon as they can be machined.	8	3.21	25.68
10-31-36	500609	Reinforcing plug, small reduction gear idler. Static tests disclosed the fact that the journals on gear number 503559 were deflecting under load. This undoubtedly has been the cause of continued bearing trouble on this shaft. With these plugs pressed in place, static tests were repeated and no deflection was evidenced. New part as per blue print 500609 and assembly drawing 500610.	2	15.66	31.32

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Units

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10-31-36	503559	Gear - reduction gear small idler. The rear journal was dis-colored from running in the scored bearing 503587. Re-machined to take re-inforcing rings and re-ground with re-inforcing rings part number 500609 in place. Re-machined as shown on assembly drawing 500610.	1	23.75	23.75
10-31-36	503565	Shaft - accessory drive This shaft has been re-ground on the end journal several times and is now considerably smaller on this end than originally intended. Small surface cracks running parallel to the shaft are appearing on the surface and it was deemed advisable to replace this with the new part with no change from spare parts on hand.	1	Government property	
10-31-36	503564	Gear, accessory drive shaft, front This gear was in good condition but had been re-worked to fit the re-ground accessory shaft. A new accessory shaft necessitated the use of a new gear. However the plating on this old part will be ground off thus bringing it back into a piece of standard dimensions.	1	Government property	
10-31-36	503691	Magneto A new type DF serial number 00268 was installed in place of the type SC-1 previously used. This new magneto was received on loan from Wright Field.	1	Government property	
10-31-36	503785	Pin - piston ring Pins for the first and second rings in piston No. 1R were broken. Replaced with a tight fitting pin	2	1.14	2.28

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Date	Part No.	Part Name and Description	No. of Units	Unit Price	Total
10-31-36	503787	Spark plug Failure of one of the plugs in the engine necessitated the testing and checking of all of the 24 plugs. To avoid delay a complete new set of B.G. #157 plugs was installed. However all plugs replaced are carefully tested and re-conditioned and will be used as replacements when the necessity arises.	24	1.54	36.96
10-31-36	500611	Bolt - 3/8-24 x 1-1/32 drilled. Special propeller shaft bolts having a concentric head were used to replace part number 501024 bolts which had previously broken off at the heads.	8	3.21	25.68
10-31-36	503566	Shaft - propeller Counterbore remachined to accommodate part number 500611 concentric head bolts. Re-machined one part.	1	6.24	<u>6.24</u>
Total of Replacement Parts List dated 10-31-36					\$265.94

RECAPITULATION

Replacement parts previously reported	\$4,657.39
Total of Replacement Parts List dated 10-31-36	<u>265.94</u>
Total Replacement Parts listed to date 10-31-36	\$4,923.33
Spare Parts Contract W535-AC-8188 P.O. 37-1091 Invoiced 9-16-36	<u>3,372.11</u>
Total Government liability to date, 10-31-36, over and above the amount specified in Article 17, as provided for in paragraph #3d, Item 3 of Article 15, subject contract	\$1,551.22

AIR CORPS INSPECTOR'S CERTIFICATE

I certify that the articles listed on pages one to four inclusive of this report dated 10-31-36 were inspected and accepted by me in the quantities stated, and that

they conform to the contract requirements for articles and parts used in the subject engine, and that the above replacement articles and parts were necessary for the continued operation of the subject engine.

Silas C. Snyder
Inspector's Signature

11-14-36
Date

Procurement Inspector
U. S. Army Air Corps
Title and Rank