

A.L.63, Dec. 72

GROUP G SYSTEMS

LIST OF CONTENTS

Repair
FUEL SYSTEM Leaflet No.

<i>Rectification of bowed top member of</i>				
<i>230 gallon drop tank</i> <i>G.1/1</i>				
◀	<i>Repair to nose shell diaphragm of</i>			
<i>230 gallon drop tank</i> <i>G.1/2</i>				
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Rectification of bowed top member of 230 gallon drop tank

1. Where the top member of the 230 gallon drop tank is bowed after application of more than the limitation of +7g, it permits rocking of the tank on the pylon, this is not considered acceptable and may be rectified as shown in this leaflet. The following repair drawing is included with this leaflet:-

RD.442 - REPAIR TO BOWED TOP MEMBER OF 230 GALLON DROP TANK.

2. Check each tank on the aircraft for the following:-

- (1) Rocking of tank on pylon, if the pylon shows any signs of loose rivets or deformation or wrinkles in the skin it is to be removed and discarded.
- (2) Signs of tank skin wrinkling and/or buckling, especially in the vicinity of the well for the top member. Deformation may be slight and difficult to see at the forward edge of the well.
- (3) Where the tank rocks on the pylon, and/or the skin is wrinkled or buckled it is to be removed.

Note

Before removal of the tank the aircraft should be de-fuelled. When the tank has been removed the valves in the pylon

SYSTEMS

FUEL SYSTEM

must be opened until the last drops of fuel emerge. This will stop fuel flowing over the Double Bond Cream on the top member as the tank is crutched to the pylon.

- (4) Tanks with wrinkled or buckled skins are to be rejected, this applies even to slight deformation of the skin.
- (5) Where no skin deformation is present check the bow of the top member with a straight edge approximately 36 in. long.
- (6) Any tank with less than 0.015 in. bow is acceptable.
- (7) Any tank with more than 0.050 in. bow is to be rejected.
- (8) Where the top member is bowed between 0.015 and 0.050 in. the tank is to be treated as shown in this leaflet. No tank previously treated with Double Bond Cream is to be treated again. These may be identified by the untreated portions, approximately 0.050 in. lower than the surrounding portions, as shown in RD.442, and the attachment bolt holes being completely covered.
3. The recommended sequence of operations is as follows:-
- (1) Clean off sole plate of pylon removing all traces of fuel and loose paint. Apply masking tape in the apertures in the pylon sole plate for release unit and fuel and air valves and also the cutaway in the front end of the sole plate and the spigot bushes. The masking tape is to extend to the face of the sole plate but is not to project.
- (2) Apply release agent 33H/146 to the unmasked portions of the sole plate, ensuring that the edge all round is also covered, and allow to dry.
- (3) Remove the adaptors A.206906/1 (26FX/10501) for fuel and air connections from the tank, by using a rod through the holes provided to unscrew them, taking care to retain the bonded seals.
- (4) With the aid of a template mark off areas of the tank top member which are not to be treated with Double Bond, as shown in RD.442.
- (5) Abrade top member surface to remove chromate treatment down to bare metal except from areas defined above. Use of coarse emery cloth or a section of hacksaw blade is recommended.
- (6) Clean surface with M.E.K. (33C/1322).
- (7) Apply masking tape around the top member edge and the adjacent well

RESTRICTED

in the tank. Apply masking tape over the areas marked off in (4) above.

- (8) Mix Double Bond Cream on clean surface in accordance with enclosed instructions. With the aid of a spatula, apply an even coat approx. 0.050 in. thick of Double Bond Cream over the surface except for the areas defined above.
- (9) Offer up tank to pylon and, after engaging the release unit, crutch the tank until surplus Double Bond Cream is squeezed out. Remove the surplus cream and tighten the release unit again. Repeat these operations removing surplus cream at each stage until the full crutching torque load is reached.
- (10) Leave tank and pylon for 12 hours.

(11) Remove tank from pylon. Remove all masking tape from pylon and tank and remove surplus cream.

(12) Check that build up of cream does not exceed 0.070 in.

(13) Leave tank for further 24 hours to complete cure.

(14) Cover all areas of the top member from which finish has been removed, with Seaplane Varnish BSS.2.X.17 (Ref.33B/9428868) ensuring coverage at the edge of the Double Bond Cream.

(15) Replace fuel and air connection adaptors and seals removed in (3) above.

are to be used as a pair.

Where this Instruction is complied with in ambient temperatures of over 90°F the following points should be noted.

The pot life after mixing is reduced in proportion to rise in temperature. This can be helped by chilling (not freezing) before mixing.

Application should not be made to a tank which has been exposed to sun temperature as the heat of the tank will accelerate the curing which will already be reduced to one hour if the ambient temperature is 120°F.

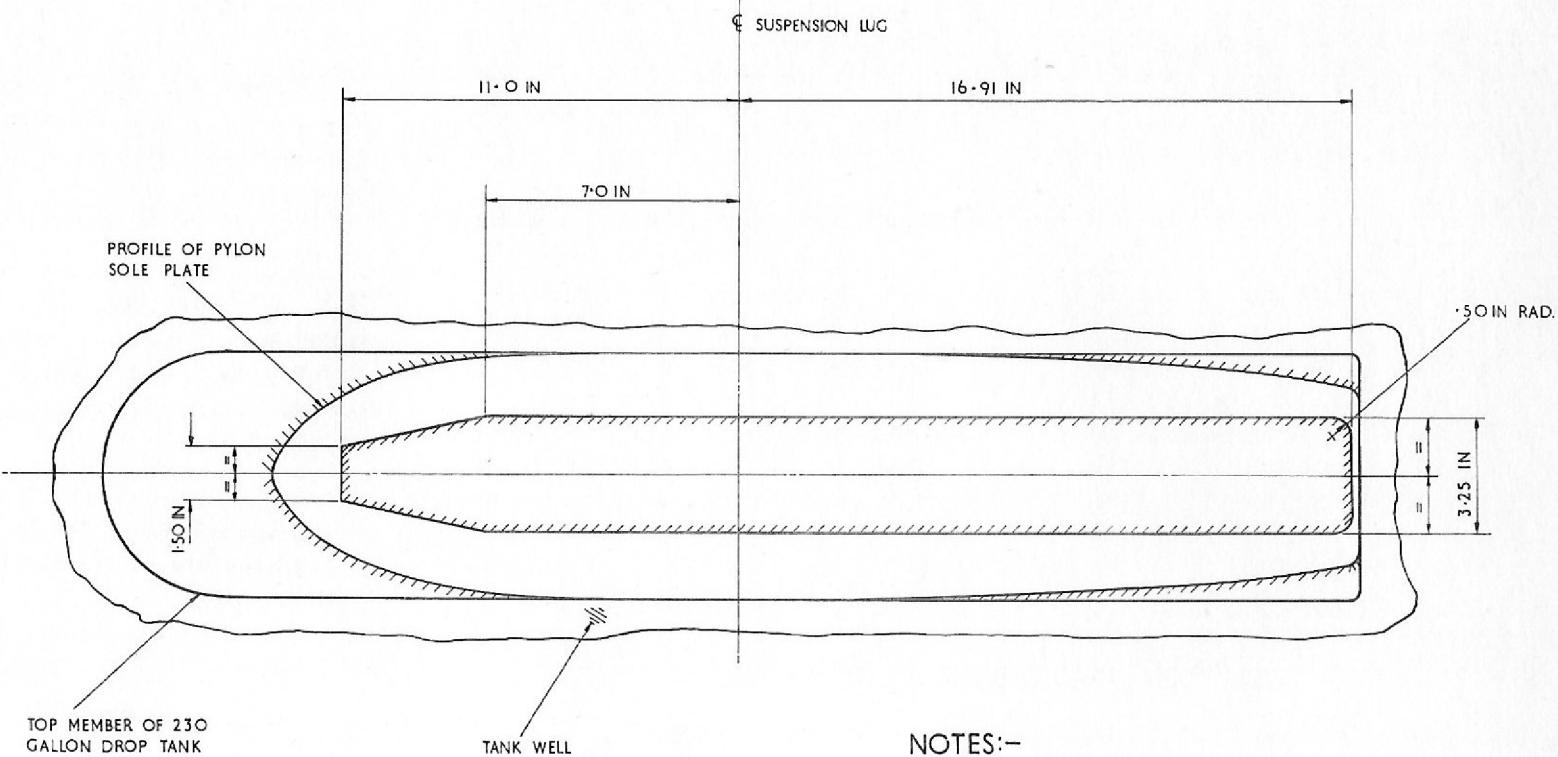
Reference should also be made to the Instructions issued by the Manufacturers with each pack.

4. The following repair materials will be required:-

Ref. No.	Part No.	Description	Size	Specification	Remarks
33H/237	-	Hermetal Double Bond cream	Pack	D.T.D.900/4572	One pack will treat approx. Two tanks Parts A and B 50/50 mix by volume Double Bond Putty Grade is not suitable and is not to be used.
33H/146	-	Double bond coat	-		
33C/1322		release relay			
33B/9428868	-	M.E.K.			
		Seaplane varnish	-	B.S.S. 2.X.17	

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TYPE: HUNTER MK. 4,5,9,10 & 11.	UNIT: 230 GALL. DROP TANK	DATE: 12-11-64	APPD.	H.S.A. LTD.
ISSUE: NO 1		DRAWN: J. TRETHOWAN		



NOTES:-

1. HATCHED LINES INDICATE EDGES OF AREAS NOT TO BE TREATED WITH DOUBLE BOND CREAM
2. TANKS WITH WRINKLED OR BUCKLED SKINS ARE TO BE REJECTED. THIS APPLIES TO EVEN SLIGHT DEFORMATION OF THE SKIN
3. NO TANK WITH THE TOP MEMBER BOWED MORE THAN 0.50 IN. IS TO BE TREATED

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REPAIR TO BOWED TOP MEMBER OF 230 GALL. DROP TANK

RD. 442

SYSTEMS

FUEL SYSTEM

Repair to 230 gallon drop tank

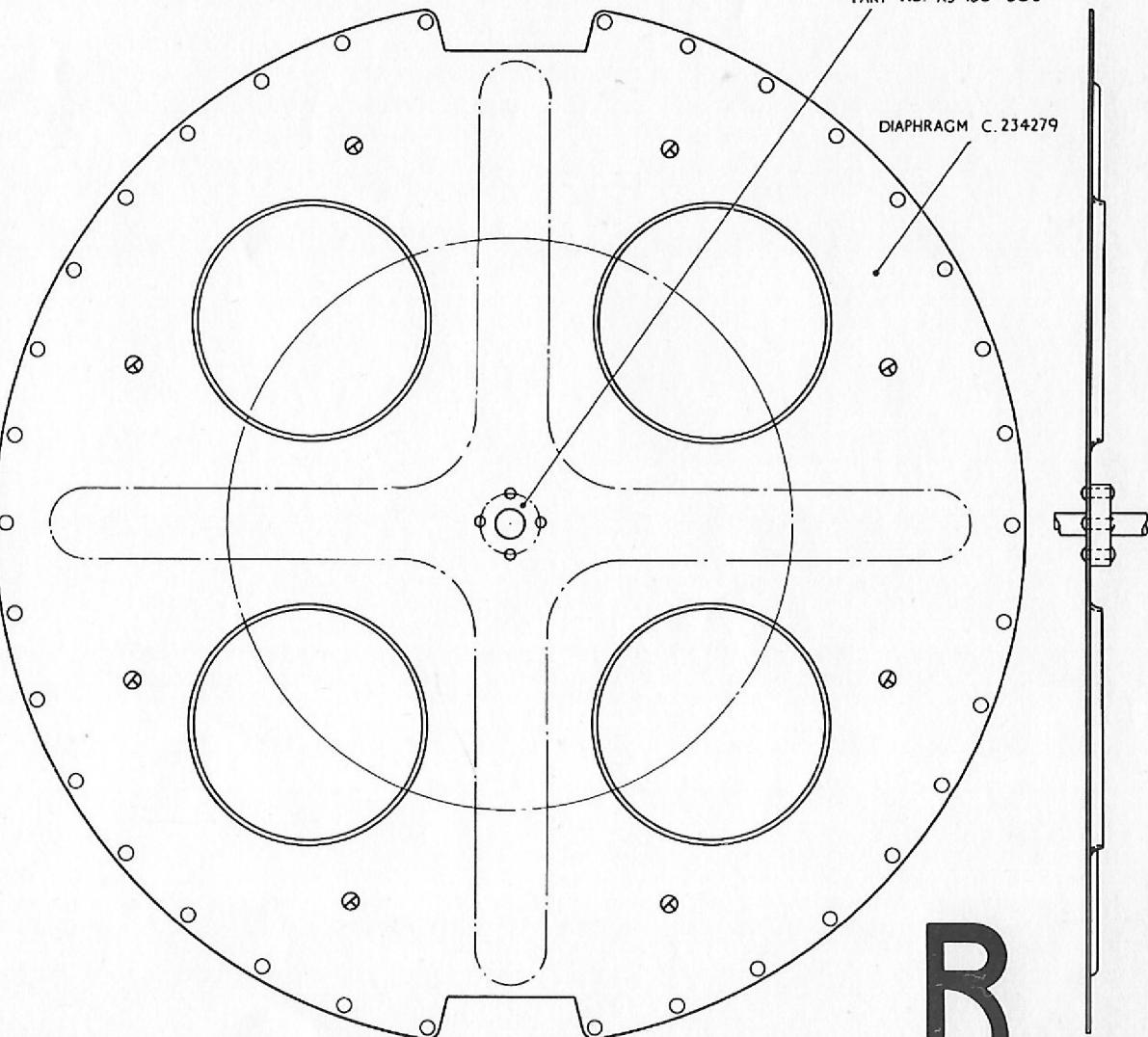
Where a case has occurred of detachment of the bush Pt. No. F.224416 from diaphragm Pt. No. C.234279 in the nose shell of a 230 gallon drop tank due to failure of the two aluminium 1/8 in. dia. snap head rivets securing the bush to the diaphragm, repair may be effected as follows.

- (1) Remove the nose cone, drill out and remove the sheared rivets.
- (2) Mark off and drill two additional pilot holes at 90 deg. to the existing holes on the same radius.
- (3) Position the bush on the diaphragm so that the original holes are located, clamp in position and drill out all four holes in both bush and diaphragm using a Morse No.20 drill.
- (4) Clean the hole edges as necessary, insert four aluminium 5/32 in. dia. x 1/2 in. snap head rivets and rivet in position.
- (5) Clean away swarf and cuttings and replace the nose shell.

Note . . .

New bushes Part No. F.224416 are delivered drilled Morse No.30.

DRILL TWO ADDITIONAL DIAMETRICALLY OPPOSED PILOT HOLES IN BUSH PART No.224416 AT A SIMILAR RADIUS TO THE TWO EXISTING HOLES. OPEN UP ALL HOLES MORSE No.20 THROUGH BUSH AND DIAPHRAGM AND RIVET BUSH IN POSITION WITH SNAP HEAD RIVETS 5/32 IN. DIA. X 1/2 IN. LENGTH PART No. AS 156-508



REPAIR TO 230 GALLON DROP TANK NOSE SHELL DIAPHRAGM

RD 446



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