TRANSPORT EQUIPMENT FACTORY

"PZL - MIELEC"

APPROVED BY :

CENTRAL ADMINISTRATION
OF CIVIL AVIATION
(CACA)

MANDATORY SERVICE MANUAL
No. E/02 142/91

For aircrafts : PZL M18; M18A; M18AS DROMADER

Subject: Extension of aircraft service life
up to 6000 flying hours.

APPROVED BY.

Deputy Director.
Research and Development

/ - /

APPROVED BY :

CACA District VI

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BIULETYN

№ K/02.142/91
PROD. M18

Dotyczy: Zwiększenia resursu samolotów do 6000 godz.lotu

Subject: Extention of aircraft service life up to 6000 flying hours.

Касается: Увеличения ресурса самолёта до 6000 лётных часов.

Se refiere a: Prolongación de la vida útil de los aviones hasta 6000 horas de vuelo.

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This bulletin contains 21 pages of type -written text plus 4 sketches.

I.PURPOSE

1. This bulletin is aimed at notifying Operators of extension of the preliminary service life from 5,000 fl.hrs to 6,000 fl.hrs on the PZL M18, M18A, M18AS DROMADER aircraft.

2. The extension of service life is based on the following:
   - obtained satisfactory results from airframe structure fatigue test
   - examination and theoretical analysis conducted in accordance with FAR 23 .572 requirements
   - analysis of the technical condition of the airplanes being under operation with the highest number of flown hours since new.
     Substantiation procedures being the basis of service life extension are performed under the supervision of Polish Airworthiness Authority - CACA.

3. Service lives of accessories, parts and rubber elements are described under it.4, Section III of this bulletin.

4. This bulletin cancels all the previously issued bulletins regarding service lives, i.e: E/041/82, E/02.080/85, E/02.109/86, E/02.123/88 and E/02.133/89.

II. APPLICABILITY

1. Aircraft S/N 1Z022-27 and up have entries about the 6,000 fl.hr service life in the documentation made by the aircraft manufacturer.

2. Service life of the M18, M18A and M18AS DROMADER aircraft being under operation, S/N 1Z001-01 thru 1Z022-26, can be extended up to 6,000 flying hours after optimalization of the centerwing design according to provisions of this bulletin.

3. Service life of aircraft which have flown hours since new fewer than 3,000 _ .is to be extended to 3,000 fl.hrs. during the nearest prolongation of the validity of airworthiness certificate, without performing additional procedures.

III. PROCEDURES

1. Periodical and special inspections.

To provide for proper technical condition of the aircraft, the following service work is to be carried out as discussed in the Schedule of Periodical Work and Service Manual, namely:

a) current maintenance (special pre-flight inspection)

b) periodical duties

c) verification inspection after 3,000 fl.hrs.

Frequency of current service, periodical duties, verification inspections and optimalization of centerwing design is specified under it.2, Table No.1

2. Periodical work, verification inspections and design changes within 0 to 6,000 flying hours.

Table No.1

It.	Scope of work and inspections	A/C Flown Hours Since New: 50	100	150	200	250	300	350	400	450	500	1000	2000	3000	4000	5000	6000
1.	Inspections and periodical duties carried out acc. to Schedule of Periodical Work and Service Manual	+	+	+	+	+	+	+	+	+	+	every 50 fl.hrs.					
	after: 50± fl.hrs.								+	+	+	every 100 fl.hrs.					
	100-10 fl.hrs.		+		+		+										
	500-50 fl.hrs.							-			+	/every 500 fl.hrs/					
2.	verification inspection after reaching 3,000±300 fl.hrs. performed per Schedule and Service Manual, Chapter 5													+		+	
3.	Optimalization of centerwing design in the following scope:																
	a) replacement of the centerwing to-fuselage attach (rear) fittings 021.530.00.0													+1			
	b) modification of the connection of 021.200.38.0 centerwing main spar lower flange to the 021.400.40 L/P bracket														+1		
	c) reinforcement of the centerwing rear spar lower flanges															+2	

1) To be conducted not later than 3,000 fl.hrs
2) To be performed not later than 4,500 fl.hrs.

3. CENTERWING DESIGN OPTIMALIZATION

This optimalization consists on the following:

- replacement of D21.530.00.0 fittings for D21.530.00.1 L/P ones on the aircraft S/N 1Z019-30 and down;
- modification of the connection of D21.200.38.0 centerwing main spar lower flange to the D21.400.40 L/P bracket on the aircraft up to S/N 1Z005-13.
- reinforcement of centerwing rear spar lower flanges on the aircraft S/N 1Z022-26 and preceding;

3.1. Replacement of D21.530.00.0 fittings for the D21.530.00.1 L/P on the aircraft S/N 1Z019-30 and down.
Proceed por the following steps:

3.1.1. Remove outer wings.

3.1.2. Remove the centerwing after having disconnected the fuel lines,wires and control system.

3.1.3. Unscrew the bolts attaching D21.530.00.0 fittings to the centerwing at the rear spar.

NOTE : Mark shim washers placed under the fittings so as not to confuse them when re-installing under new fittings.

3.1.4. Put the removed fittings into the 021.573.016988 fixture and basing on them set the fixture adjusters so as to trace the holes for the bolts attaching the fitting to the centerwing.
After setting the fixture adjusters remove the old (reference) fitting and instead of it affix a new one for drilling out. Safeguard the new fitting against displacement using chucks.

3.1.5. Drill four holes of dia. 6 mm. bore then from dia.6 to dia.9.7 and then up to dia 9.9H6 / $^{0,018}_{0}$ / and 10H6 / $^{0,018}_{0}$ / using a reamer . and finally make chamfers of 0.5/45° on either side.

3.1.6. Set shim washers and the bored fitting on the centerwing, securing it in place with two bolts inserted into the holes spaced diagonally , whereas the remaining two holes are to be drilled-out again with a reamer of ø 10H8.
Insert 2 bolts into the enlarged holes, placing 3405A-0,5-10-18 washers under bolt heads. Next, put 3402A-1,5-10-18 washers over bolts and screw on nuts.
Tighten bolts alternately so that uniform screwing can be obtained. Remove two bolts that held the fittings for boring two holes and drill out the remaining two holes with a reamer up to dia. 10H8. Place bolts, washers and nuts. Tighten nuts, screwing the bolts spaced diagonally.

NOTE: 1.Re-boring of holes in fittings and centerwing is aimed at eliminating a slight misaligument of 4 holes of dia.10H8 for bolts 3021A-10-42 /-44/.

2.The a/m:four holes are to be bored with a hand reamer.

3.1.7. Check the fittings for proper assembly.

NOTE: Parts and materials required for the replacement of fittings are listed in specification No.1, while tools and jigs - in specification No.2

3.2. Modification of the D21.400.40 L/P bracket-to-the centerwing main spar lower flange D21.200.38.0 connection on aircraft S/N 1Z005-13 and down.
Follow the sequence of procedures as given below:

3.2.1. To facilitate work at drilling out rivets and boring holes up to dia.7H8,repair peepholes shall be made in D21.550.00.0L/P ribs per Sketch No.2. To this end, proceed as follows:

- dismantle covers of the existing peep-holes
- drill out rivets attaching D21.558/02.L/P angle bars and remove them
- cut out the holes of radius R=25 mm in the ribs.

3.2.2. Unscrew nuts M8 and remove bolts M8 partially from the spar flange /area for a drill and a reamer/.

3.2.3. Remove 2 rivets (3503A-5-26) located symetrically on either side of Rib 5A, view "D", both at the LH and RH aircraft side , in the area shown in Sketch No.3.

NOTE: While unriveting pay attention so as not to damage the flange surface.Centre-drill the head and remove the rivet.

3.2.4. Make sure if there are no cracks on the hole walls.

3.2.5. Enlarge the holes left upon removal of rivets up to the dia .6.5 using a drill, and next up to the dia. 6.8 H8 . with a reamer.

3.2.6. Bore holes up to dia. 7 H8 with a reamer.

NOTE: Hole boring is recommended to be done with ratchet drill-type hand wheels from the wrench set with an extension rod between the reamer and the hand wheel.

3.2.7. Connect the spar flange to the wall with D21.200.01.0R repair bolts as shown in Detail B, Sketch No.3.

3.2.8. Tighten M8 nuts on the bolts in the spar flange.

3.2.9. Rivet the repair cover plate, D21.558/02.0 L/P angle bar and make a peep-hole in the cover plate as shown in Sketch No.2.

3.2.10. Remove chips, bore dust and other contamination.

3.2.11. Damaged area (lack of anti-corrosion protection) and rivet heads and formed rivet heads are to be primed.

3.2.12 It is recommended to protect the lower and upper spar flanges with a layer of temporary protection means or epoxy primer

3.2.13. Parts and materials necessary for the accomplishment of item 3.2 are listed in Specification No.3,while indispensable tools are given in Specification No.4.

3.3. Reinforcement of centerwing rear spar lower flanges (a/c S/N 1Z001-81 thru 1Z022-26).

This reinforcement shall be carried out on the aircraft with flown hours up to 4,500 in accordance with Sketch No.4.
For airplanes on which the reinforcements per it.3.1 and 3.2, and it.9 and 10 of bulletin E/92.123/88 were not introduced, the manufacturer recommends to accomplish all the reinforcements simultaneously because the centerwing will be removed from the airplane, which facilitates performing the reinforcement of lower flanges.

3.3.1. Remove the D10.920.00.3 cover to enable easier access to the centerwing rear spar area.

NOTE : Procedure 3.3.1 shall not be performed if the centerwing is removed from the airplane.

3.3.2. Disconnect, if necessary, the push rods of the flap and airleron control system to facilitate rivetting in the wing trailing edge area between ribs 1B:60L and 4B:60P.

3.3.3. Fit shim inserts and reinforcing cover plates according to dimensions given in Sketch No.4.

3.3.4. Remove the existing rivets in the area where cover plates abut.

3.3.5. Make 2 holes of dia. 8 and 4 holes of dia.4.2 as well as 34 holes of dia.3.5 in each cover plate (by tracing)according to mating elements(holes left upon removal of bolts, screws and rivets).

3.3.6. According to holes in cover plates make holes of dia.4.2 and 3.5 in the shim insert.

NOTE : These holes can be drilled simultaneously when tracing holes in the cover plates.

3.3.7. Make 8 lead holes of dia.3 under rivets of dia 3.5 in each cover plate acc.to spacing given in the sketch.

3.3.8. Attach cover plates and shim inserts to anchor nuts with bolts M8 and screws M4, and drill 8 holes of dia 3.5 according to the lead holes of dia.3 in the cover plates.

3.3.9. Dismount cover plates and inserts. Remove bore dust.

3.3.10. Install bolts M8, washers and nuts, rivet rivets as shown in Sketch No.4.

NOTE: In case of hole battering under rivets of dia.3.5, it is permitted to use approx.10% rivets of dia.4 mm.

3.3.11. Remove bore dust, chips and other contamination from the reinforcement area. Heads and formed rivet heads as well as damaged anti-corrosion protection coatings shall be primed. To protect the spar against corrosion it is advisable to cover it with temporary anti-corrosion protection coating.

3.3.12. Connect the push-rods in the control system, if disconnected.

3.3.13. Due to the increased package by thickness of cover plates, the D21,542.00.0 cover plate shall be installed in this area using sealing compound.
List of parts and materials needed for the accomplishment of this item is given in Specification No.5 herein.
Tools necessary for the reinforcement of rear spar flanges are contained in Specification No.6.

4. SERVICE LIFE OF ACCESSORIES, PARTS AND RUBBER CONDUITS.

4.1. List of accessories with limited service life (Table 4.1)

It.	Name	Type	Service life	Unit	Years
1	2	3	4	5	6
1.	Cylinder temp. thermoelectric meter	2TCT-47F or 2TCT47A7	1000	fl..hrs	4
2.	Tachometer	TE-45	1000	engine operating hours	-
3.	Speed transducer	TE-45	1000	fl.hrs	2
4.	Mixture temp. indicator	TUE-48	3000	engine operating hours	6
5.	Engine unit gauge	UKZ-1	3000	engine operating hours	6
6.	Manifold pressure gauge	MW-16U	2000	fl.hrs	-
7.	Altimeter	WD-10BK or PW-12	3000	fl.hrs	-
8.	Rate-of-climb indicator	WR-10UK or WRm-10	3000	fl.hrs	-
9.	Compass	KI-13AK	2000	fl.hrs	-
10.	Airspeed indicator	PS-06AK	3000	fl.hrs	-
11.	Artificial horizon	GH-07	1500	fl.hrs	-
12.	Converter	EP-17A	3000	fl.hrs	8
13.	Voltage regulator	R-25AM	2000	fl.hrs	-
14.	Radiostation	RS 6102	2000	operating hours	-
15.	Hydraulic pump	1069-111-074	1500	engine operating hours	-
16.	Braking valve	ZLH-2	1500	engine operating hours	4

1	2	3	4	5	6
17.	Air pressure gauge	MA-250M or D77.141.00.0	3000	fl.hrs	10
18.	Pressure gauge	MD-200B	1200	fl.hrs	-
19.	Pitot tube	PVD-6M	3000	fl.hrs	-
20.	Voltammeter	MA-3K	2000	fl.hrs	-
21.	Battery	12-SAM-28	-	-	2
22.	Gyro-compass indicator	GW-01	1000	fl.hrs	-
23.	ADF	ARL-1601	1000	operating hours	-

4.1.1. Accessories which have reached service life limit shall be dismantled and put under laboratory test to prove their compliance with Technical Specifications or replaced for new ones.
Basic parameters to which accesories should correspond are specified in the "List of Parameters of Accessories installed on the M18, M18A, M18AS aircraft", which was sent along with bulletin No. E/02.133/89

4.1.2. The decision of directing accessories to repair shops or their admitting to further operation after reaching service life limit is to be undertaken by the executor of verifying inspection in concurrement with local airworthiness authority on the basis of accessory technical condition and operating compatibility with the Specifications.

4.1.3. Accessories admitted to further operation after overhaul or on the basis of good technical condition and measurement results can have service life extended succesively up to the airframe service life value.

4.1.4. Service lives of accessories not mentioned in Table No.4.1 of this bulletin correspond to the following :

- accessories installed on the airframe have service life equal to the service life of the airframe
- accessories installed on the engine have service life defined in engine documents

After reaching service life limit the a/m accessories are to be operated according to their technical condition and replaced or repaired after detecting mulfunction.

4.2. The allowable storage and operation period of rubber hoses installed on the M18 is 7 years for low pressure systems and 6 years for high pressure systems. The above depends on good technical condition of the hose, which can be evaluated for service life extension only after inspection and tightness test conducted per recommendations given in Repair Manual.

4.3. Tires and Inner Tubes - their service life is established to 6 years including storage period. Thereafter they should undergo a thorough technical examination to determine their qualification for further operation on the airplane.
The evaluation shall be made per instructions in Repair Manual.

4.4. The remaining rubber parts installed on the airframe (apart from those ones constituting the part of the end products) are to be replaced if excessive wear, cracks or other visible damage are found.

IV. REVISIONS TO DESCRIPTIVE-OPERATIONAL DOCUMENTATION.

"The PZL M18 DROMADER AIRPLANE DESCRIPTION AND SERVICE MANUAL" issued on December 1979 should be updated on the basis of pages sent along with bulletins No. E/02.123/88 and E/02.133/89. If it was not updated, the following pages shall be ordered at Operator's cost depending on language version.

LANGUAGE VERSION :

- Polish	p. 0-2i; 0-3; 0-5; 5-13; 5-14; issue date: Nov.10'89 and p.5-14a; 5-14b issue date: Oct. 10'88.
- English	p. 0-2m; 0-3; 0-5; 5-13; 5-14 issue date: Oct.11'89 and p. 5-14a; 5-14b issue date Oct.10'88
- Russian	p. 0-2 ; 0-3; 0-5; 5-13; 5-14 issue date: Nov.10'89 and p.5-14a; 5-14b issue date: Oct.10'88
- Spanish	p. 0-2i; 0-3; 0-5; 5-15; 5-16 issue date: Nov.10'89 and p. 5-16a; 5-16b; issue date: Oct.10'88
- English (acc.to FAA requirements)	p. 0-2n; 0-3; 0-5; 0-7; 5-14 issue date: Oct.11'89 p.5-14a; 5-14b; 8-11; 8-12; issue date: Oct. 10'88 and p. 8-1; 8-2; 8-3; 8-9; 8-10; issue date: Nov.11'89
- English (Brazilian Service Manual and Schedule of Periodical Work issued on June 1989)	p. 0-2m; 0-3; 0-5; 0-7; 5-13; 5-14; 8-7; 8-8; 8-9; 8-10 issue date: Oct.11'89 p. 5-14a; 5-14b issue date: Oct.10'88

V. LIST OF TOOLS AND MATERIALS REQUIRED.

1. Specifications

SPECIFICATION No.1

Parts and materials necessary for the replacement of 021.530.00.0 fittings(it. 3.1 Section III, on a/c S/N 1Z019-30 and down).

It.	Part or STD No.	Name	Q-ty per a/c	Notes
1.	021.530.00.1 L	Fitting	1	without 4 holes of dia. 10 in. the fitting mount
2.	021.530.00.1 L	Fitting	1	
3.	3021A-10-42	Bolt	4	
4.	3021A-10-44	Bolt	4	
5.	3405A-0,5-10-18	Washer	8	
6.	3402A-1,5-10-18	Washer	8	
7.	3373A-10	Nut	8	
		Primer	-	provided by Operator

NOTE: Parts it 1,2 and 7 were specified in bulletin No. E/02.123/88 and they shall not be ordered if they were delivered earlier.

SPECIFICATION No.2

Tools and jigs indispensable for the replacement of fittings (it.3.1, Section III of this bulletin)

It.	Part or Std No.	Name	Q-ty per a/c	Notes
1.		Driller	1	provided by Operator himself
2.		Drill ø 6	1	
3.		Drill ø 9,7	1	
4.		Chucking reamer ø 9,9H8	1	
5.		Chucking reamer ø 10 H8	1	
6.		Plug gauge ø 10H8	1	
7.		Hand reamer ø 10 H8	1	
8.	021.573/016988	Fixture	1	delivered by WSK "PZL--Mielec" at Operator's cost.

1/ It.8 is supplied by WSK "PZL-Mielec" - 1 p.c. for each Operator upon placing an order (See Notes to it. 3.5.2).

SPECIFICATION No. 3

Parts and materials needed for modification of the D21.400.40 L/P bracket-to-the centerwing main spar lower flange (D21.200.38.0) connection on the aircraft S/N IZ005-13 and down.
See it. 3.2, Section III.

It.	Dwg or Std No.	Name	Q-ty per a/c	Notes
1.	Material K-PA7 ø 1,2x250x320	Cover plate	2	for the repair peep-hole
2.	3501A-3,5-11	Rivet	16	
3.	3501A-3-9	Rivet	42	
4.	3558A-3-7	Rivet	120	
5.	3549A-2,6-9	Rivet	44	
6.	D21.200.01.0. R	Bolt	4	for the spar flange reinforcement provided by Operator
7.	3374A-6	Nut	4	
8.	3402A-0,8-6-12	Washer	8	
		Epoxy primer		

SPECIFICATION No. 4

Tools required for the modification of the D21,400.40 L/P bracket-to-the centerwing main spar lower flange (D21.200.38.0) connection on the a/c S/N IZ005-13 and preceding. Tools delivered by Operator. (See it. 3.2, Section III.).

It.	Tool design	Name	Q-ty per a/c	Notes
1.		Driller	1	
2.		Drill ø 6.5	1	
3.		Drill ø 6.8	1	
4.		Hand mandrel reamer ø 6,8 H8	1	
5.		Hand mandrel reamer ø 7H8	1	

6	ED01.600.00.1 K ED01.160.00.0 K	Airframe Service Tool Kit	1 set.	
7		Snips	1	
8		Pneumatic drill	1	
9		Support	1	
10		Slide caliper	1	
11		Handwheel with ratchet drill	1	

SPECIFICATION No. 5

Parts and materials necessary for the reinforcement of the centerwing rear spar lower flange on the a/c S/N 1Z022-26 and down (it.3.3, Section III).

It.	Dwg or Std No.	Name	Q-ty per a/c	Notes
1.	D21.500.31.0	Reinforcing cover plate	2	
2.	D21.500.32.0	Shim insert	2	
3.	3024A-8-24	Bolt	2	
4.	3027A-8-26	Bolt	2	
5.	3374A-8	Nut	4	
6.	3402A-0,8-8-14	Washer	2	
7.	3402A-3-8-14	Washer	2	
8.	3558A-3,5-12	Rivet	16	
9.	3558A-3,5-13	Rivet	44	
10.	3558A-3,5-14	Rivet	2	
11.	3558A-3,5-16	Rivet	2	
12.	3558A-3,5-17	Rivet	2	
13.	3547A-3,5-12	Rivet	16	
14.	3547A-3,5-13	Rivet	4	
15.	3558A-4-13	Rivet	4	the repair rivets in case of hole battering
16.	3558A-4-14	Rivet	6	
17.	3558A-4-15	Rivet	2	
18.	3558A-4-18	Rivet	2	
19.	3547A-4-13	Rivet	4	
20.	3547A-4-14	Rivet	4	
21.	3175A-4-16	Screw	8	
	Materials :			
	a)	Epoxy primer		can be replaced by materials available at Operator's Delivered by Operator
	b)	Epoxy enamel		
	c)	Sealing compound		

SPECIFICATION No.6

Tools needed for the reinforcement of the centerwing rear spar lower flanges on the a/c S/N 1Z022-26 and down. Tools supplied by an Operator (see it.3.3, Section III herein).

It.	Designation	Name	Q-ty per a/c	Notes
1.		Driller	1	
2.		Drills ø 3,6; ø 4,1;-6; 8,0	1 set.	
3.		Shears	1	
4.		Brush	1	

VI. AVAILABILITY OF PARTS

1. Parts specified under Specification No's 1, 3 and 5 are to be delivered by WSK "PZL-Mielec at Operator's cost upon receipt of an order on dates agreed-upon between parties.

2. Tools listed in Specification No's 2, 4 and 6 shall be provided by Operator by his own resources, except the 021.573/016988 fixture.
   This fixture shall be supplied by WSK "PZL-Mielec"on the basis of a separate order placed by an Operator.

VII. EXECUTOR

1. Verification inspection after 3.000^{+300} fl.hrs and optimalization of the centerwing design per it.3, Section III can be performed by an Operator by his own resources and at a facility accredited by Airworthiness Authority of the Operator's country.

2. Due to high cost of the fixture it is suggested that, in case of small quantity of airplanes, the replacement of the fitting be commissioned to WSK "PZL-Mielec" Service Team that has this fixture included in its own service kit.

3. The 3,000^{+300} flying hour verification inspection and centerwing design optimalization acc.to it.3.1, 3.2 and 3.3, Section III (with the delivery of parts for optimalization) can be conducted by MSK "PZL-MIELEC" Service Team at Operator's cost upon placement of an order.
The inspection can be also used for training the Operator's personnel and for implementing modifications by Operator's own resources.

4. The bulletin is to be accomplished by Operator's Service Division at its cost and by own resources upon approval by local Airworthiness Authority.

VIII. FINAL REMARKS

1. On the M18, M18A, M18AS DROMADER aircraft that will reach service life of 3,000^{+300} flown hours should undergo a verification inspection. Scope and inspection procedures are given in the "PZL M18 DROMADER Airplane Description and Service Manual".
On aircraft S/N 12022-26 and down, after accomplishing provisions of this bulletin make entries in the relevant documents, changing service life to 6,000 fl.hrs.

2. On aircraft where D21.530.00.0 fittings were replaced and the centerwing main spar lower flange D21.200.38.0 connection was modified per bulletin No. E/02.123/88, it. 10, prior to reaching 4,500 fl.hrs. service life the reinforcement of the centerwing rear spar lower flanges shall be made during the 500-hour periodical work and the service life changed to 6,000 fl.hrs.

3. On aircraft with exceeded 4,500 fl.hrs where rear spar flanges were not reinforced, such a reinforcement is to be performed during the nearest 50-hour periodical work in accordance with it.3.3 of this bulletin and service life changed to 6,000 fl.hrs. in relevant aircraft documentation.

4. On aircraft where the centerwing was replaced, the design optimalization per it. 3 instructions shall be conducted according to the actual number of centerwing flying hours.

5. Make records of the bulletin accomplishment in the Aircraft Log Book.

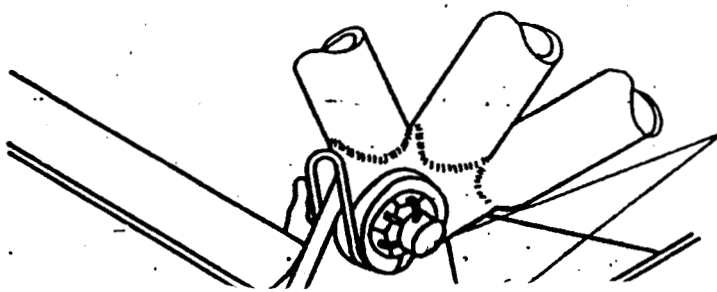
6. Familiarize the M18 flight-technical personnel with the provisions of this bulletin.

Signature of the approving authorities are contained in the Polish Bulletin No. E/02.142/91.

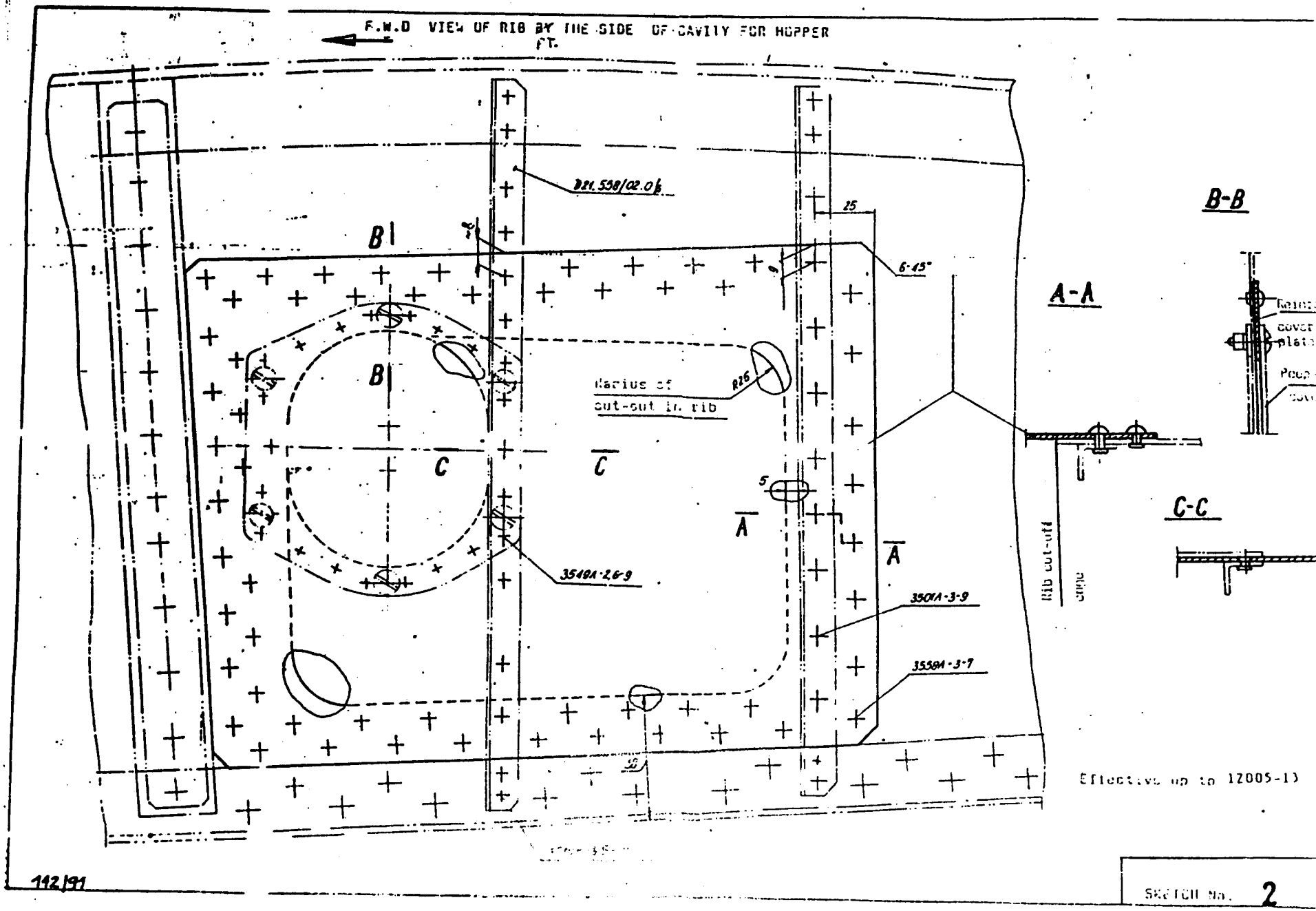
This is a tue translation from the original Polish Bulletin No. E/02.142/91.

Translated by:
Nov.7'91
D.Kurdyla
.....
(sign., date)

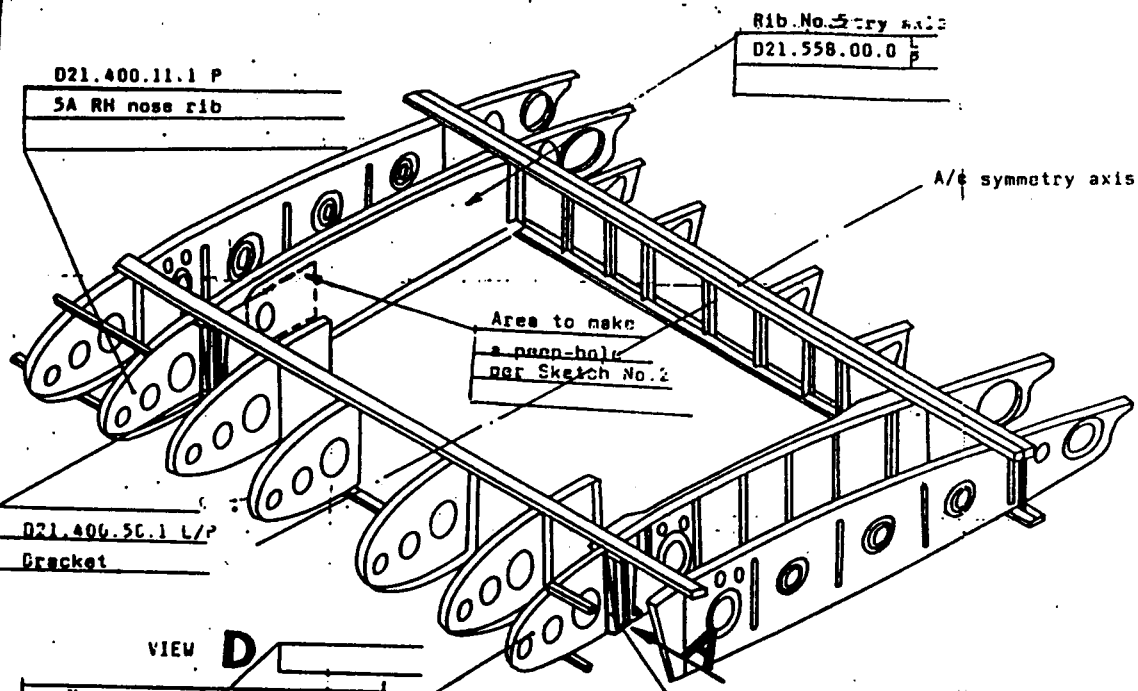
VIEW OF REAR CENTERWING ATTACHMENT FITTING



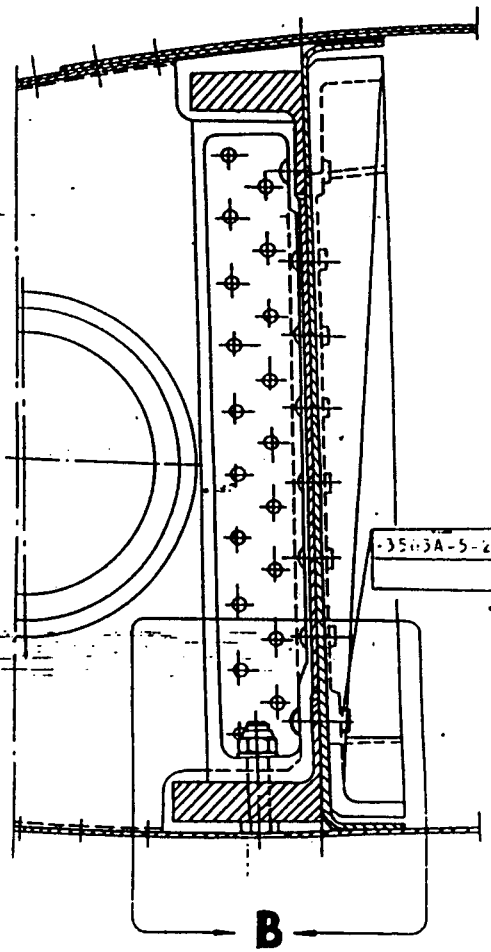
3021A-10-44 Bolt


F.W.D VIEW OF RIB BY THE SIDE OF CAVITY FOR HOPPER
FT.
B221.538/02.0
25
6-15°
B-B
A-A
B
B
Radius of
cut-out in rib
R26
C
C
A
A
5
3549A-26-9
3501A-3-9
3558A-3-7
C-C
Rib cut-out
Effective up to 12005-13
142/91
SKETCH No. 2

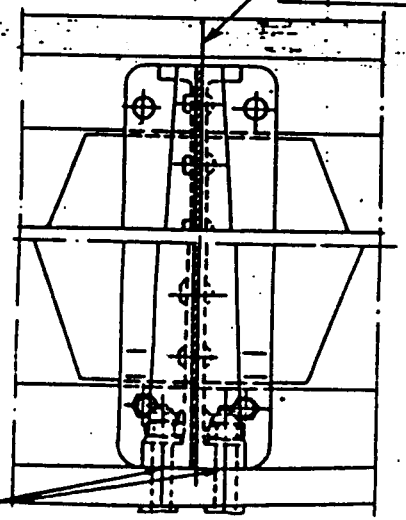
VIEW OF THE CENTRAL SECTION OF CENTERWING



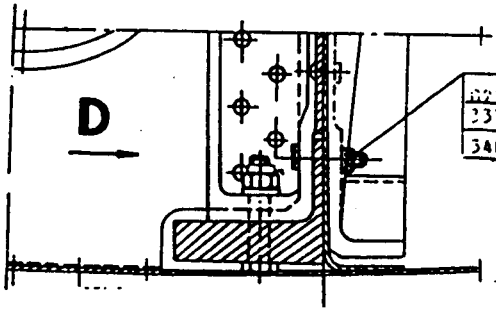
VIEW **A** BEFORE CHANGE



VIEW **D**



DETAIL **B** AFTER CHANGE



The bracket mount should rest against spar flange

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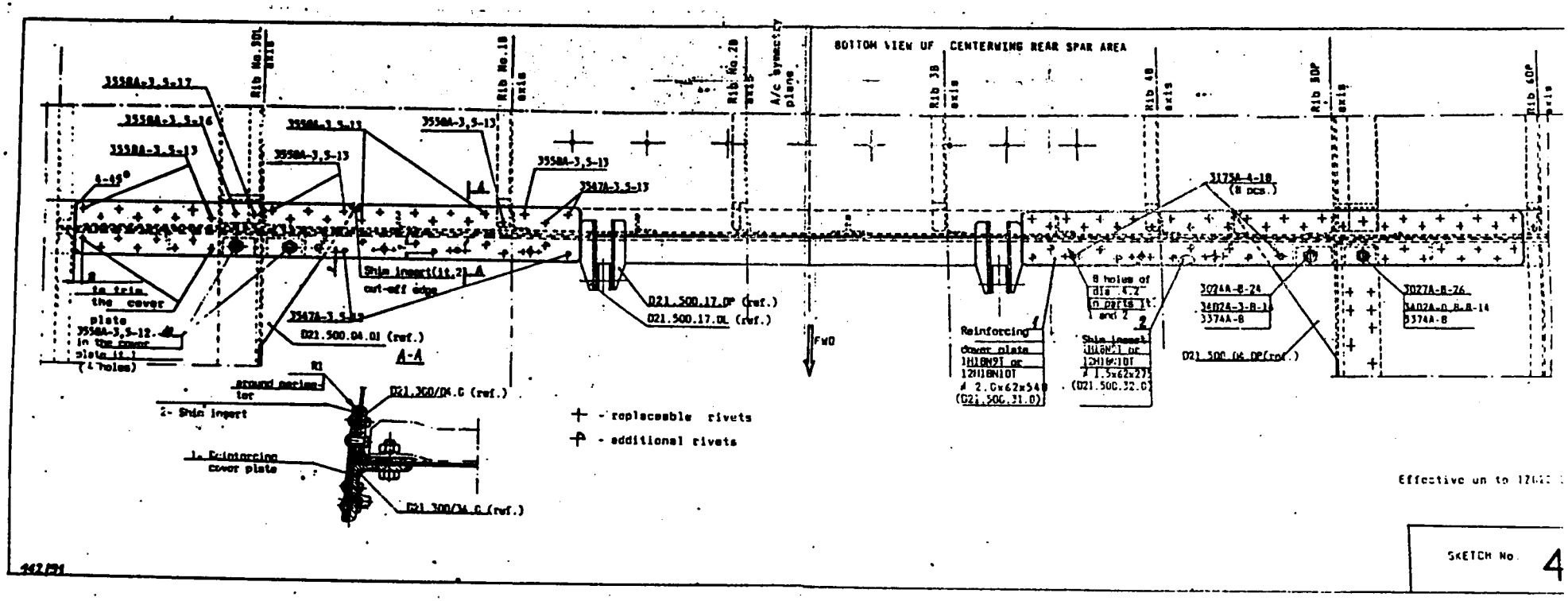
Effective up to 1Z005-13

SKETCH No. **3**


BOTTOM VIEW OF CENTERWING REAR SPAR AREA
Rib No.3DL axis
Rib No.1B axis
Rib No.2B axis
A/c symmetry plane
Rib 3B axis
Rib 4B axis
Rib 8DP axis
Rib 6DP axis
3558A-3,5-17
3558A-3,5-16
3558A-3,5-13
3558A-3,5-13
3558A-3,5-13
3558A-3,5-13
3558A-3,5-13
3558A-3,5-13
3547A-3,5-13
4-45°
Shim insert(11.2) A
cut-off edge
3547A-3,5-13
D21.500.04.01 (ref.)
A-A
D21.500.17.DP (ref.)
D21.500.17.DL (ref.)
FWD
3175A-4-18
(8 pcs.)
8 holes of
dia 4.2
in parts 1
and 2
3024A-8-24
3402A-3-8-14
3374A-8
3027A-8-24
3402A-3-8-14
3374A-8
D21.500.06.DP(ref.)
Reinforcing
cover plate
1H18N2T or
12H18N10T
2.0x62x540
(D21.500.31.0)
Shim insert
1H18N1T or
12H18N10T
1.5x62x275
(D21.500.32.0)
to trim the cover plate 3558A-3,5-12.4 in the cover plate it (4 holes)
R1
ground section-ter
D21.300/04.0 (ref.)
2- Shim insert
1- Reinforcing cover plate
D21.300/04.0 (ref.)
+ - replaceable rivets
+ - additional rivets
Effective up to 17

SKETCH No. 4