



WARPAINT SERIES No. 48

WESTLAND

LYSANDER

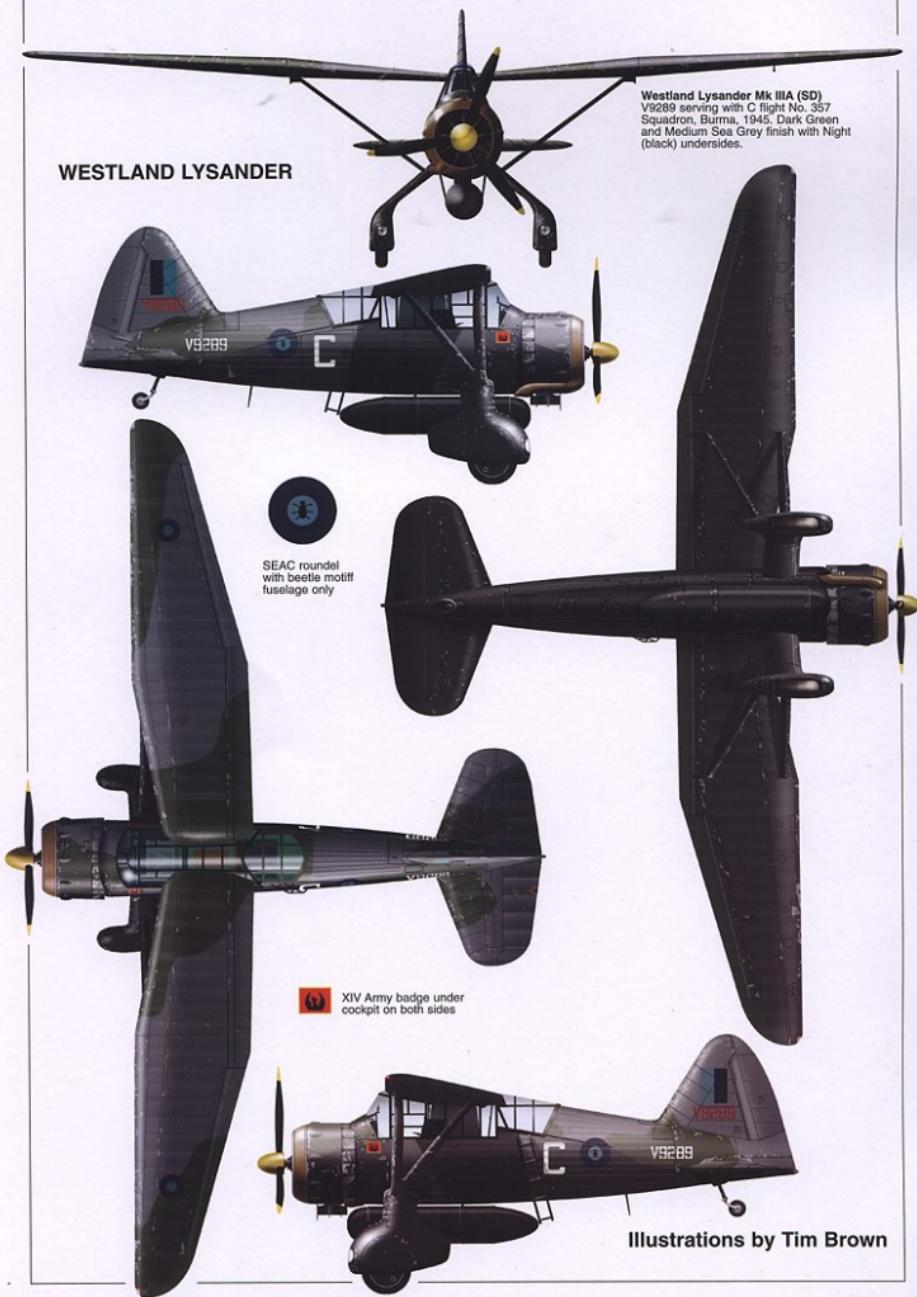
BY ALAN W.HALL

No.309 Polish Squadron Lysander Mk.IIIa V9441:AR-A was rebuilt by the Strathallan Collection in Scotland and then by the Shuttleworth Collection in England. It spent much of its time in the north. It eventually went to the Shuttleworth Collection and was rebuilt as a special duties aircraft of No.161 Squadron. (A.W.Hall)

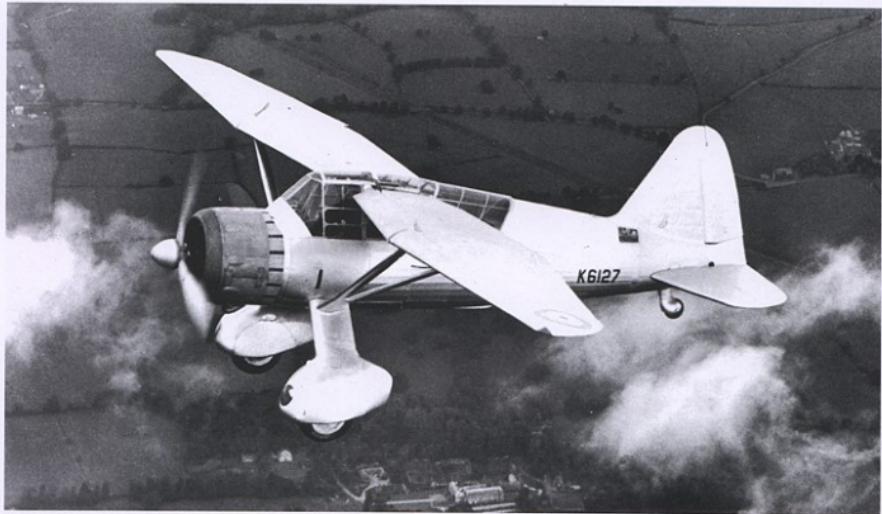


WESTLAND LYSANDER

Westland Lysander Mk IIIA (SD)
V9289 serving with C flight No. 357
Squadron, Burma, 1945. Dark Green
and Medium Sea Grey finish with Night
(black) undersides.



Illustrations by Tim Brown



One of the few airborne pictures of the Lysander prototype K6127. Judging by the configuration of the rear cockpit it would appear that this picture was taken early after the aircraft's first flight. (Aeroplane)

WESTLAND

By Alan W.Hall

WITH ADDITIONAL MATERIAL BY ANDREW THOMAS

THE Westland Lysander was yet another throwback to World War I when aircraft were used for artillery spotting and reconnaissance over the enemy's lines. With the failure of the planners at Air Ministry to move away from the end of the previous war, aircraft types were ordered that by the start of World War 2 retained the outdated methods and philosophies engendered by trench warfare. Aircraft such as the Battle light bomber and the Defiant fighter were but two which suffered from these faults and lack of advanced thinking that by the time they went into service were outmoded. By the late thirties there were movements towards better fighter and bomber aircraft of monoplane construction but the requirements of the army held sway as far as reconnaissance was concerned.

Biplanes ruled. The Hawker Hector and Audax were the last of those that complied with what the army thought it needed. Trench warfare mentality still existed and pre-war exercises showed that the troops on the ground needed a secure communications system with their airborne colleagues that was better than the antiquated and

The prototype Lysander K6127 in its final form before production was initiated. The rear canopy has been modified and a variable incidence tailplane fitted. (Westland)

LYSANDER

bulky high frequency ground-to-air wireless sets that existed.

Messages written on signal forms and then suspended on a wire between two ground-based poles ensured that it was possible to request spotting for an artillery shoot as the aircraft flew low over the designated area. By means of a long pole-like structure lowered from the fuselage underside the message was caught, reeled in and the aircraft set off to do its job in almost complete secrecy, later using radio to correct the aim of the guns.

With the coming of Britain's re-armament in the late 1930s it was soon realised that the biplane no longer stood a chance against

anti-aircraft artillery and modern fighter aircraft that the potential enemy, Germany, was acquiring at a prodigious rate albeit that the Luftwaffe had it own spotting aircraft in the Henschel Hs 126. This closely followed the design put forward by Yeovil-based Westland aircraft for the same purpose. Nobody on the British and French side envisaged the blitzkrieg tactics of the Wehrmacht in Poland, Scandinavia and the subjugation of the French and the Low Countries after 10 May 1940.

Westland's design brought a number of new ideas but persisted in being fitted with a message hook under the rear fuselage. It did however have two real advantages over





The Lysander prototype, K6127, in an all-silver finish and given the large black figure '6' on the fuselage, was exhibited in the New Types aircraft park at the SBAC show at Hatfield on 25 July 1936.



Above: Lysander K6128, the second prototype, seen at Yeovil, armed with small bombs on the undercarriage stubs. Like the first prototype it remained in an all-silver finish. (IWM) Below: Pilots and ground crew examining one of the first Lysanders, L4705, to be delivered to No. 2 Squadron at Hawkinge. (J.D.Oughton via Andrew Thomas)



its biplane predecessors. It had a high lift wing, which allowed very short take-offs and landings, mounted above the cockpit which provided the pilot and observer with excellent air-to-ground visibility. It had stubs on the fixed heavy duty undercarriage for the carriage of bombs and was armed with two forward firing .303 machine guns and another in the rear cockpit.

EARLY BEGINNINGS

Westlands had been experimenting with a number of tailless aircraft designs in the Pterodactyl series and although not adopted for the RAF, provided a lot of information on high winged, highly manoeuvrable aircraft with excellent short field capabilities.

With the urgent need for an Audax replacement the Air Ministry issued Specification A.39/34 in April 1935. Several companies submitted designs. Bristol put forward its Type 148 a low-winged monoplane, Hawker suggested yet another biplane and Avro put forward a number of ideas that go no further than designs on paper.

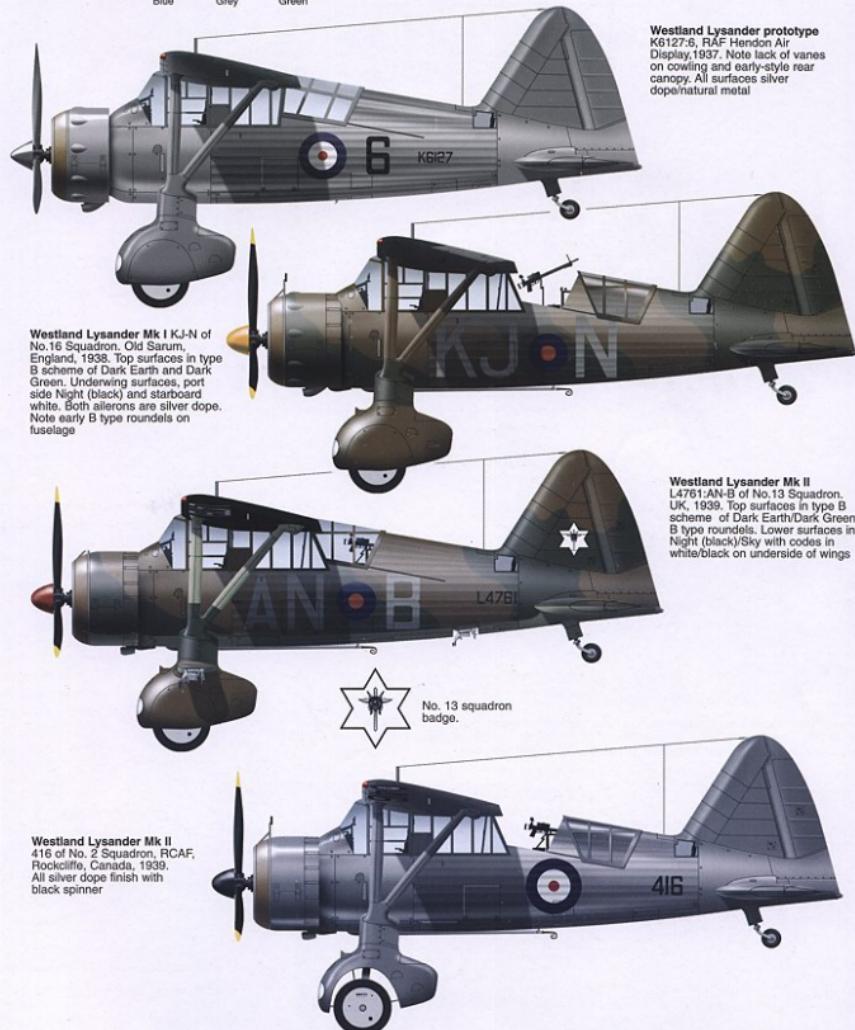
Westlands on the other hand with W.E.Petter recently appointed as technical director and chief designer Arthur Davenport under his direction, sought the views of many people closely connected with the idea from both the RAF Army Cooperation squadrons and their own aircrew and engineers.

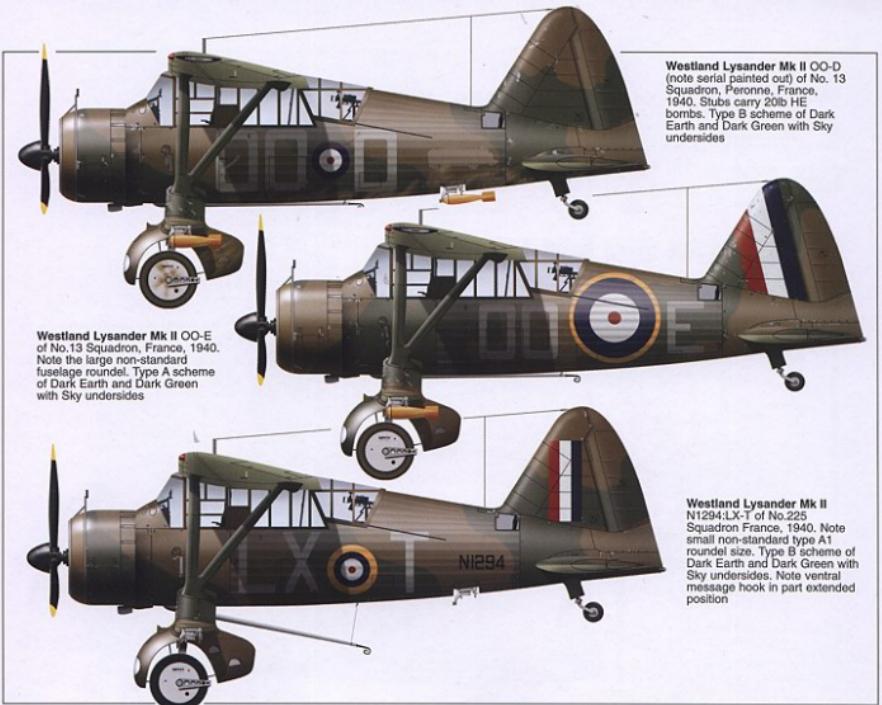
What transpired was the Westland P.8 design which had a high wing, good visibility for the crew and short take-off and landing capabilities as well as being able to fly at slow speeds whilst fully under control.

Westland Lysander camouflage and markings

Drawings by Tim Brown

WESTLAND LYANDER COLOUR KEY





Westland Lysander Mk II OO-E
of No.13 Squadron, France, 1940.
Note the large non-standard
fuselage roundel. Type A scheme
of Dark Earth and Dark Green
with Sky undersides

Westland Lysander Mk II OO-D
(note serial painted out) of No.13
Squadron, Peronne, France,
1940. Stubs carry 20lb HE
bombs. Type B scheme of Dark
Earth and Dark Green with Sky
undersides

Westland Lysander Mk II
N1294-LX-1 of No.225
Squadron, France, 1940. Note
small non-standard type A1
roundel size. Type B scheme of
Dark Earth and Dark Green with
Sky undersides. Note ventral
message hook in part extended
position



Above: P1698 was the penultimate aircraft from the second batch built at Yeovil pre-war. It is seen here at Filton presumably for engine test work. (A.Whittaker via Andrew Thomas)
Below: A flight of three Lysanders from No.309 Squadron in 1941. (via Andrew Thomas)



The first sketches showed a high-winged monoplane with an undercarriage that retracted into stub lower wings but this was discarded in favour of a fixed very heavy duty undercarriage which could sustain landing on even a ploughed field as was to be seen in the mid and later stages of the war when in use by the Special Duties squadrons engaged in clandestine sorties to Occupied Europe taking and returning Special Operations Executive agents.

The Air Ministry issued a contract for the construction of two prototypes each by Westland and Bristol, the former winning the competition mainly because of the better visibility afforded by its high wing. Doubts had been expressed about Peter's ability to produce a worthy aircraft for its role but based on a great many studies the aircraft that emerged covered all of the aspects that the Air Ministry had requested in their Specification.

The first prototype serialled K6127 was completed at Yeovil inside one year of the placing of the contract. The initial taxiing trials were carried out at the company's Yeovil airfield on 10 June 1936 followed by a move by road to the RAF airfield at Boscombe Down where it made its first flight on 15 June and then returned to Yeovil. Because of the speed at which early flights were conducted L6127 was flown without painting and minus its characteristic spats covering the wheels. It went to Hatfield for the SBAC show on 25 July by now fully spatted and painted in Aluminium



overall displaying the number 6 on the rear fuselage for showing in the Experimental Park. From there it flew to A&AEE Martlesham Heath for one week of handling evaluation before returning to Westlands.

Company trials continued. Changes were made to the tailplane area as the aircraft was found to be longitudinally unstable at maximum level speed and trimming tabs were added. A&AEE concluded that although it was not the ideal solution the need to get the aircraft into quantity production - the factory had already laid down the first metal for this - the notification was made in the Pilot's Notes that only partial power in a baulked landing was to be used until the tail had been re-trimmed.

A number of other minor modifications were also made including the positioning of the steps in the fuselage side to allow access to the pilot's cockpit. A single Lewis gun was added to the rear cockpit and guns installed in the spats. Alterations were also made to the rear cockpit hood allowing the gunner a better chance of using his weapon.

The second prototype L6128 made its first flight in all but final configuration as the bulk of the modifications and corrections had been made to the first prototype and incorporated during construction. It flew on 11 December 1936 and was sent to Martlesham Heath for further handling trials and then went by sea to India for tropical and climatic trials with No.5 Squadron based at Miramshah. Later it was flown back to England after further albeit brief trials in the Middle East.

Above: A No. 4 Squadron Lysander, coded TV:B, seen picking up a message with its tail hook down and the message suspended between two poles (A.W.Hall collection). Below: Lysander Mk.IIs of No. 16 Squadron during pre-war manoeuvres over Salisbury Plain. Because of the Munich crisis and the hasty application of camouflage which removed the serials, the only aircraft known to be in this formation was L4801 which was the centre aircraft shown here. (Peter Green via Andrew Thomas)





On its return advanced handling trials met with a mishap which could have caused considerable delay in production. In a high speed dive the upper wing fabric started to tear and soon almost the whole of the upper surface and some of the underside was missing. Through great skill Sqdn. Ldr. R.W.P. Collings, the pilot, was able to retain control and although the landing was a very fast one, it survived and a well earned Air Force Cross was awarded to the skill and bravery of the pilot.

HIGH LIFT WING

One of the most advanced features of the Lysander was its wing which had an unusual shape due to the slots and flaps that gave the Lysander its slow flying speed when needed and allowed a football pitch landing and take off run.

The advances made in the design of this wing could be called an aerodynamic mas-

terpiece. In plan view the inboard sections had reverse taper leading edges and straight trailing edges while the outboard sections had straight leading edges and tapered trailing edges; thus the root chord was a mere 3 ft. 6 ins. whilst the maximum chord outboard was 6 ft. 6ins. Similarly the wing thickness at the roots was less than half that at the maximum chord position echoing the shape and section of the Westland Widgeon's wing of some 12 years earlier.

There was no centre section, the wing root ribs being attached to the fuselage frames and were separated by the Lysander's long cockpit canopy.

Structurally and aerodynamically the single-spar wing also was unusual and was the first fully flapped and slatted wing to be used on a British military aircraft. The main spar had machined Hiduminium extruded sections forming the booms which were riveted to a plate web with top-hat stiffeners. Pressed nose ribs attached to it were clad with a light

The Lysander entered service with the Middle East air forces shortly after it was issued to Army Cooperation squadrons at home. These three Mk.IIs came from No.208 Squadron and are seen overflying the Suez Canal. (IWM)

alloy tubular construction and were fabric covered. A false spar carried the flaps, aileron hinge and control system bearings. Additional struts from the wing to fuselage assisted to strengthen the high wing.

COVENTIONAL FUSELAGE

Construction of the fuselage was conventional. It consisted of a fore and aft section of metal girder construction. The front part employed the Westland system of square-section duralumin tubes welded together, the two sections being joined at a point just aft of the observer's position by bolted flitch plate joints. The front of the fin was attached to the upper two longerons and the rear was bolted to a bridge fitted between them. The tailplane was again conventional and fitted to the rear fuselage structure. A 95 gallon fuel tank was fitted between the pilot's and observer's cockpits and had a hinged table for navigational purposes. Wings and fuselage were fabric covered.

The Lysander's fixed undercarriage was constructed from two massive forged 'stirrups' to the front fuselage structure and ensured that the aircraft could withstand heavy landings on rough fields. Stub axles were fitted with Dowty internally sprung wheels thus avoiding the need for oleo legs and which were fully spatted albeit that the outer panels could be removed, and often were, where the aircraft's wheels was subjected to clogging by snow or mud.

Stub fairings were attached to each undercarriage leg for the carriage of bombs or in the later stages of the war, air-sea-rescue dinghies. Hinged panels on top of each squat gave easy access to the ammunition bays for the machine guns mounted in the spats and to the landing lights also fitted there. The tailwheel was fully castoring and self centring with an oleo-pneumatic shock absorber.

Initially the Lysander was fitted with a 890 hp Bristol Mercury XII radial engine on the Mk. I and a Mercury XX on the Mk. III. Beginning with L4739 the Mk. II had a 905 hp Bristol Perseus geared and supercharged power plant which had nine cylinders and drove an 11 ft. variable pitch three-bladed metal propeller.

The underside of the fuselage had a clear-view panel from which the observer could get a better downward view and was also used for aiming bombs. A series of steps was cut into the forward fuselage for access to the pilot's cockpit and all side panels were removable to give adequate ease of entry to the control runs and electrical connections. Both cockpits were heated and the

Not the best thing to do with a Lysander when flying at slow speed. A number of accidents accrued due to pilots demonstrating the slow flying characteristics of the aircraft and ending up in a more static form from which it was impossible to recover. This aircraft, a Mk.I serialled L4474, but without squadron codes seems to be doing it right and keeping on sufficient power to avoid the inevitable disaster. (via Andrew Thomas)





Above and below: Two pictures taken in 1941 of Lysander Mk.IIs of No.54 Operational Training Unit in flight. The nearest aircraft in the top picture is N1294:LX-T and that underneath is N1256 LX-M. Both have the wheel covers removed for unrestricted landings in unprepared fields and are fully armed with machine guns in the rear cockpit and wheel stubs. (IWM)

seats adjustable in height with the observer's seat being laterally adjusted as well.

PRE-WAR SERVICE

With both service and manufacturers trials complete and the production line at Yeovil

starting to produce completed airframes it is somewhat surprising to note the speed at which the Lysander grew from the drawing office to RAF use. The first production aircraft was L4673, a mere two years having elapsed before the first aircraft was delivered to No.16 Squadron in June 1938 fol-





Above: A Lysander II of No. 13 Squadron seen on a French airfield during the severe winter weather experienced in 1939-40. The squadron code of OO can be clearly seen but the individual letter is hidden and the serial toned down (IWM)

lowing the Air Ministry contract for 169 airframes being issued.

Based at Old Sarum, the RAF's School of Army Cooperation, both new pilots and instructors could be trained at the same place. By the time of the Munich crisis in 1938 the school and squadron were both fully operational and exercises with army elements on Salisbury Plain regularly tasked.

No.16 Squadron was allocated 14 Lysanders whilst the School of Army Cooperation had nine. The next squadron to form was No.13 at RAF Odibham but later moved to Duxford later in the same year. This was followed by No.26 Squadron in February 1939, based at Catterick, and within three months after formation won the Sassoon Air Photographic Competition. The Lysander had proved very popular with its crews.

By the start of World War 2 Nos. 2, 4, 13, 16, 26, 613 and 614 Squadrons had been formed the last two being Royal Auxiliary Air Force units. By this time most of the original Lysander Mk.Is had been replaced by the Mk.II with its more powerful Perseus engine. Most of the older aircraft had been shipped to the Middle East where they formed No.208 Squadron.

MISHAPS

The slow flying qualities of the Lysander led to a number of accidents where over enthusiastic pilots were misled into thinking that the aircraft was more manoeuvrable than it was.



Above: Lysander II L4818-KO-L of No.2 Squadron, after having returned from France in the summer of 1940 was based at Sawbridgeworth by October of that year. It appears to have retained its pre-war code letters and national markings. (via Andrew Thomas) Below: No.208 Squadron was based at Heliopolis in the Canal Zone when this picture was taken in September 1939. (A.W.Hall collection)





Westland Lysander Mk I
R2622, 2nd Squadron,
UK, 1941. Type B scheme of
Dark Earth and Dark Green
with Sky undersides. Note
unusual tailflash. Red spinner



Westland Lysander Mk II
461:GV-C of either Nos.3 or 32
OTU RCAF, Canada, 1942.
Type B scheme of Dark Earth
and Dark Green with Sky
undersurfaces. Codes repeated
under wings. Note lack of rear
canopy and underline on grey
fuselage codes. Note also the
very large tail flash.



Westland Lysander Mk III
T1532-KO-D of No. 2 (AC)
Squadron, RAF, Sawbridgeworth,
UK, 1941. Type A scheme of Dark
Earth and Dark Green with Sky
undersides.



Westland Lysander Mk IIIA
V9347-AR-B serving with No. 309
Polish (AC) Squadron, Scotland,
1942/3. Type A scheme of Dark
Earth and Dark Green with Sky
undersides. Note overpainting of
earlier codes on fuselage



Type A scheme of Dark Earth
and Dark Green with Sky
undersides. Type B roundels.



Type B scheme of Dark Earth
and Dark Green with Sky
undersides. Type B roundels.

In April 1939 a No.2 Squadron pilot whilst giving a demonstration flight at Hawkinge of slow and low flying abilities of the Lysander put it into a steep climb without noticeable increase in power. The aircraft L4702 stalled and as there was insufficient height to regain control it crashed killing both occupants.

Almost at the same time a Lysander L4762 on a cross country from Denham to Odiham made a steep climb after take off and an unrecoverable stall resulted in a fatal crash.

Urgent investigations were carried out at Martlesham Heath and orders subsequently issued that the Lysander was not to be steeply climbed under 600 ft and under 50 mph. But the crashes still followed and in May the same year at the Ringway (Manchester) Empire Air Day L4784 demonstrating slow and low flying stalled a mere 200 ft. above the ground during a turn, again with fatal consequences. Yet another accident occurred, this time at night, on 6 November when N1310 climbed too steeply turning to port at 400 ft. and stalled in.

One other rather interesting accident recorded to do with slow flying was that which occurred at Yeovil just before the war when a French test pilot was invited to fly the aircraft with the view of a possible order. Confused by the Yeovil airfield's steep slope on the northern boundary the pilot stalled the aircraft thinking he was making a normal landing. The subsequent heavy landing broke one of the undercarriage legs but the pilot with quick presence of mind put on sufficient power to regain control, did another circuit and landed on one wheel without a great deal of damage to the rest of the aircraft.

Another incident at Yeovil occurred when a Turkish pilot having been shown the technique developed by Harald Penrose, Westland's chief test pilot, for 150 yard short take offs tried to emulate his performance. It is recorded that the Turkish pilot weighed a great deal more than Penrose and the subsequent take off with him at the controls caused much amusement. Penrose always aimed at a cottage on the edge of the

Right: This Lysander II coded KU-Y was part of 53 Operational Training Unit and was seen at Hibaldstow. (Pat Horton via Andrew Thomas)
Below: The air and ground crew of Lysander II T1709:NM-A belonged to No. 268 Squadron when based at Snailwell in 1940-41. (A.W.Hall collection)



airfield but the Turkish pilot unaware that he had put the Lysander's all-up-weight up by a significant amount aimed directly at the cottage missing the roof by a few inches. The comments of both Penrose and the cottage owner are not recorded.

FRANCE AND FIRST ACTION

With seven Army Cooperation squadrons already formed it went without saying that they were to be the first to go to France after the declaration of war.

Six squadrons were eventually to form part of the BEF leaving No.16 Squadron behind at Old Sarum which together with the School of Army Cooperation went on

Lysanders in RAF squadron service

Additional material supplied by Andrew Thomas

Squadron Number	Code/s	Mark	Example serials
2	KO*, XV	I	L4818/KO-L
		II	N1203/KO-M (WW2)
		III	T1613/XV-H
4	FY*, TV	II	L4752/FY-V
		III A	V9587/TV-X
6	JV	I	L4709
		II	L8978/JV-D
13	AN*, OO	II	L4761/AN-B
		III	T1516/OO-A
16	KJ*, EE, UG	I	L4785/EE-M
		II	L6855/KJ-Q
		III A	V9512/UG-L
20	HN	II	DG445/HN-K
24	nil	III	R2622
26	HL*, RM	II	L4774/HL-*
		III	T1429/RM-H
28	BF	II	P9139/BF-A
81	nil	II	P9107
116	II	III A	V9619/II-R
138	NF	III A	T1508/NF-*
148	FS	III A	T1750/FS-B
161	MA, JR	III A	R9125/JR-M
173	nil	II	N1304
208	GA*, RG	I	L4717/RG-F
		II	L4711/GA-B
225	LX, WU	II	N1294/LX-T
		III A	V9595/WU-F
231	VM	II	P1673/VM-U
		III	R9066/VB-B
237	nil	I	L4688
		II	N1206
239	HB	II	L4786/HB-U
		III A	V9377
241	RZ	II	N1219
		III A	T1672/RZ-A
267	nil	I	L4677
		II	R1987
268	NM	II	R1997/NM-L
		III	T1709/NM-A
275	PV	III A	V9740/PV-N
276	AQ	III A	T1696/AQ-H
277	BA	III A	V9547/BA-E
278	MY	III A	V9817
285	VG	III A	V9727
286	NW	II	R2042
287	KZ	III A	R1688
288	RP	II	P9060
289	YE	III	T9140
309	AR	III A	V9314/AR-V
357	nil	III A	V9867/K
400 RCAF	SP	III	T1434/SP-N
414	RU	III	V9281/RU-M
451	nil	III	R2648
510	nil	III	R2635
516	nil	II	P9105/B
		III	V9311
598	nil	III A	V9818
613	ZR	II	L4799/ZR-*
		III A	V9374/ZR-F
614	YX, LJ	I	P1677
		II	N1241/YX-O
		III	R9024/LJ-P
679	3M	III	R2639
695	SS	II	P1755

Above: Although no serial or unit can be identified from this picture it is of value in showing the Observer/gunner's entrance hatch and the position of the aerial camera in the fuselage. The aircrew seem to have non-standard radio headsets which may mean that the aircraft was Canadian and the radio of American origin.

with the task of training new crews.

The first few months were remarkable for the inactivity with the Germans and French feeling safe behind either the Maginot or Seigfried lines of defences.

The winter of 1939 was particularly severe and the squadrons based at either Le Plessiel or Maon-en-Chaussée were confined to local reconnaissance flights and occasional surreptitious trips over Belgium. They flew fighter liaison flights with the Hurricane or Gladiator fighter squadrons and indulged in aerial photography but the coming of heavy snow meant a change of base and the Nos 2 and 4 Squadrons moved to either Drucat or Monchy Lagache respectively. No.16 Squadron also moved nearer to France by being stationed at Lympne in February 1940.

The axe fell on 10 May 1940. Unlike the German forces where cooperation between ground and air forces was supreme the British ad French suffered a lack of communications between them and were prey to the vastly superior fighters of the Luftwaffe which ranged over their advancing tank spearheads looking for any possibility of interference by Allied aircraft.

Consequently the Lysander squadrons

suffered just as much as the other aircraft making up the small British air force detached to airfields in northern France.

As the German invasion of Belgium and the other Low Countries had been foreseen Nos.2 and 4 Squadrons moved into Lille-Ronchin leaving the other Lysander squadrons to carry out reconnaissance and gun spotting for the BEF. Casualties were heavy. As an example when No.4 Squadron moved into Belgium one pilot was attacked by no less than six Messerschmitt Bf 109Es

but in the running fight that followed the gunner shot down one of the enemy before the Lysander escaped at low level. The Luftwaffe claimed eleven Lysanders and nine crews were lost over a period of 106 sorties between 10 and 23 May. Many aircraft were also lost by attacks made by enemy bombers on the airfields resulting in only one aircraft and five crews being evacuated to England where they went to lick their wounds at Ringway on 25 May.

Knowing the problems of dispersal and

Miscellaneous units using Lysanders

Operational Training Units

Unit	Example serials
Air Gunnery Schools	
CGS	R9131
1	R9114
2	T1700
3	
7	T1587/4
8	T1756
9	R9130
10	V9414/U
13	
1 AGS (I)	R2006

Air Observers Schools

1	P9118
2	V9893
4	T1438
5	N1289/UJ
1 (O) AFU	T1446
2 (O) AFU	T1502
3 (O) AFU	
4 (O) AFU	
9 (O) AFU	T1529

Communications Flights/Units

A Co-op Cd CF	T1567
Bengal CF	P9062
1 Gp CF	R2619
2 Gp CF	
3 Gp CF	L6872
4 Gp CF	R2627
5 Gp CF	R2636
9 Gp CF	N2001
10 Gp CF	R2614
16 Gp CF	W6942
18 Gp CF	T1741
19 Gp CF	T1757
83 Gp CF	T1447
92 Gp CF	
201 Gp CF	L4720
204 Gp CF	P1657
211 Gp CF	P9062
221 Gp CF	L4802
CF Khartoum	
AHQ Levant CF	R2648
CF Lydd	L4677
AHQ ME CF	P9055
Tspt Cd CF	N1212
W Africa CS	R9022
WDCF	R1988
Aden CF	L4715

Other Units

1 APC	T1672
2 APC	P1725
3 APC	R2639
4 APC	R9107
6 APC	P9111
8 APC	T1438
1626	P1725
1627	R9068
1628	R9107
1630	P9111
1631	P1682
1632	V9818
1634	N1210
16 APC	R2034
1 ATC	T1567
2 ATC	N1213
3 ATC	P6188
1 AAS	T1448
1 AACal Flt	L4695
A Co-op Pool	L6862
1 SAC	L6855
2 SAC	
1333 CU	V9305
1653 CU	L4701
3 S of GR	

Unit

Example serials

5 GTS

1 GDGS

9 Gp AA Co-op Flt

10 Gp AA Co-op Flt

11 Gp AA Co-op Flt

12 Gp AA Co-op Flt

13 Gp AA Co-op Flt

14 Gp TT Flt

15 Gp AA Co-op Flt

16 Gp AA Co-op Flt

18 Gp AA Co-op Flt

19 Gp AA Co-op Flt

1 Gp TT Flt

2 Gp TT Flt

3 Gp TT Flt

4 Gp TT Flt

5 Gp TT Flt

6 Gp TT Flt

9 Gp TT Flt

10 Gp TT Flt

11 Gp TT Flt

12 Gp TT Flt

13 Gp TT Flt

14 Gp TT Flt

5 Gp Trg Flt

PTU & RP

SD Flt

1 TEU

1 TTU

2 TTU

1 OTU (C)

2 OTU(C)

3 OTU(C)

4 OTU(C)

5 OTU

6 OTU

7 OTU

9 OTU(C)

10 OTU

11 OTU

12 OTU

13 OTU

14 OTU

15 OTU

16 OTU

17 OTU

18 OTU

19 OTU

20 OTU

21 OTU

22 OTU

23 OTU

24 OTU

25 OTU

26 OTU

27 OTU

28 OTU

29 OTU

41 OTU

42 OTU

43 OTU

51 OTU

53 OTU

54 OTU

55 OTU

56 OTU

58 OTU

59 OTU

60 OTU

61 OTU

70 OYU

74 OTU

78 OTU

81 OTU

102 OTU(G)

132 OTU(C)

P9060

151 OTU(F)

N1295

1 OTU (I)

Unit

Example serials

L4753

P9183

R2027

L4805

P9077

V9853

P9129

P1929

T1425

V9780

T1688

T1507

P1731

T1568

N1249

V9744

V9549

T1441

P9077

1424

L4728/B

1441

P1725

R9017

1480

V9321

1481

V9794

1482

V9781

1483

V9775/E

1484

V9776

1485

V9799

1486

V9727

1487

V9727

1488

N1227

1489

N1349

1490

R1990

1491

V9904

1500

V9485

1625

V9655

Unit

Example serials

Anti-Aircraft Co-operation Units

1 AACU:

Consisting of

A Flt

R2585

B Flt

R2585

D Flt

R2587

F Flt

R2588

H Flt

T1439

O Flt

R2589

P Flt

R2589

6 AACU

T1448

7 AACU

T1448

8 AACU

T1448

9 AACU

T1448

10 AACU

T1448

11 AACU

T1448

12 AACU

T1448

13 AACU

T1448

14 AACU

T1448

15 AACU

T1448

16 AACU

T1448

17 AACU

T1448

18 AACU

T1448

19 AACU

T1448

20 AACU

T1448

21 AACU

T1448

22 AACU

T1448

23 AACU

T1448

24 AACU

T1448

25 AACU

T1448

26 AACU

T1448

27 AACU

T1448

28 AACU

T1448

29 AACU

T1448

30 AACU

T1448

31 AACU

T1448

32 AACU

T1448

33 AACU

T1448

34 AACU

T1448

35 AACU

T1448

36 AACU

T1448

37 AACU

T1448

38 AACU

T1448

39 AACU

T1448

40 AACU

T1448

41 AACU

T1448

42 AACU

T1448

</div



Above: Lysander II, R2007:LX-U of No.225 Squadron. From June 1940 this unit was involved in anti-invasion coastal patrols along the south coast and Isle of Wight until re-equipped with Mustangs in May 1942. (IWM)

the chances of being attacked on their own airfield No.2 Squadron went into Belgium with 17 Lysanders but placed roughly three each at Abbeville, Bethune, Roncq, Lille and Brussels. Enemy aircraft continued to harass the Lysanders but often did not get the best of the encounter. Two instances quoted showed that the Lysander could hit back. Attacked over Cambrai one aircraft from this squadron coded KO-N survived a 20 minute engagement on the way to Douai and after landing discovered 12 holes in the fuel tank. Fortunately the Germans were not using incendiary ammunition. The enemy were very close and it was decided that the

Lysander would have to be burned to prevent it falling into German hands.

In another engagement with a No.2 Squadron Lysander, this time KO-U, the pilot shot down a Henschel Hs 126 whilst his gunner successfully brought down a Junkers Ju 87B.

No.26 Squadron was based at Dieppe and although initially some way behind the Front was attacked by enemy aircraft. The

best form of defense seemed to be to get the Lysanders airborne as soon as reports of a raid approaching was given. Meanwhile the established strength of each squadron was

Getting into the pilot's cockpit was rather like climbing the side of a house in the case of the Lysander but the view forward and downward was excellent. This shows a Polish pilot of No.304 Squadron supervising the removal of a camera at the end of a liaison sortie with Polish troops in Scotland in 1942. (IWM)



Westland Lysander Mk II
R1999-LX-P of No. 255
Squadron, France, 1940.
Type A scheme of Dark
Earth and Dark Green with
sky undersurfaces



Westland Lysander Mk II
L4798-HB-X of No. 239
Squadron, 1940. Note the
open camera port in the
fuselage. Type B scheme of
Dark Earth and Dark Green
with Sky undersurfaces.
Spinner black with white tip

**Aggressive Lysander, Mk.II T1532:KO-D of No.2
Squadron with the gunner pointing his Lewis
gun at the camera. (IWM)**

increased to 18 aircraft allowing three flights to each but this was hardly enough. Aircraft were ferried to Glisy in France which served as a replacement base, by pilots of the two Auxiliary Squadrons, Nos 613 and 614.

A mere nine days were to pass before the German advance began to threaten the airfields of the Lysander squadrons. Air Ministry ordered that if suitable airfields could not be found away from the Germans' thrust for the Channel ports partial evacuation to the UK should be considered. It was therefore fortunate that No.16 Squadron had already moved to Lympne and was available to assist in operations and the evacuation.

A temporary airfield at Bekesbourne, near Canterbury, housed Nos.2 and 13 Squadrons whilst Nos 16 and 26 went to Lympne and continued to operate over France as best they could. Finally No.4 Squadron with its one remaining aircraft were evacuated to Ringway.

It appears that 174 Lysanders were sent to France between September 1939 and May 1940 Of these 88 were shot down by enemy aircraft whilst a further 30 were destroyed on the ground. Only about 50 Lysanders in various states of repair remained out of the

Lysander II T1529-Z may have been taken in France during the early months of the AASF and before the May blitzkreig. The pilot's parachute has been placed in readiness on the wing stub. (A.W.Hall collection)





Lysander II R1992 in the Western Desert. Camouflaged in desert colours but without unit codes, Lysanders were used for reconnaissance purposes during the early days of the Middle East war. Note the sand filter under the engine (IWM)

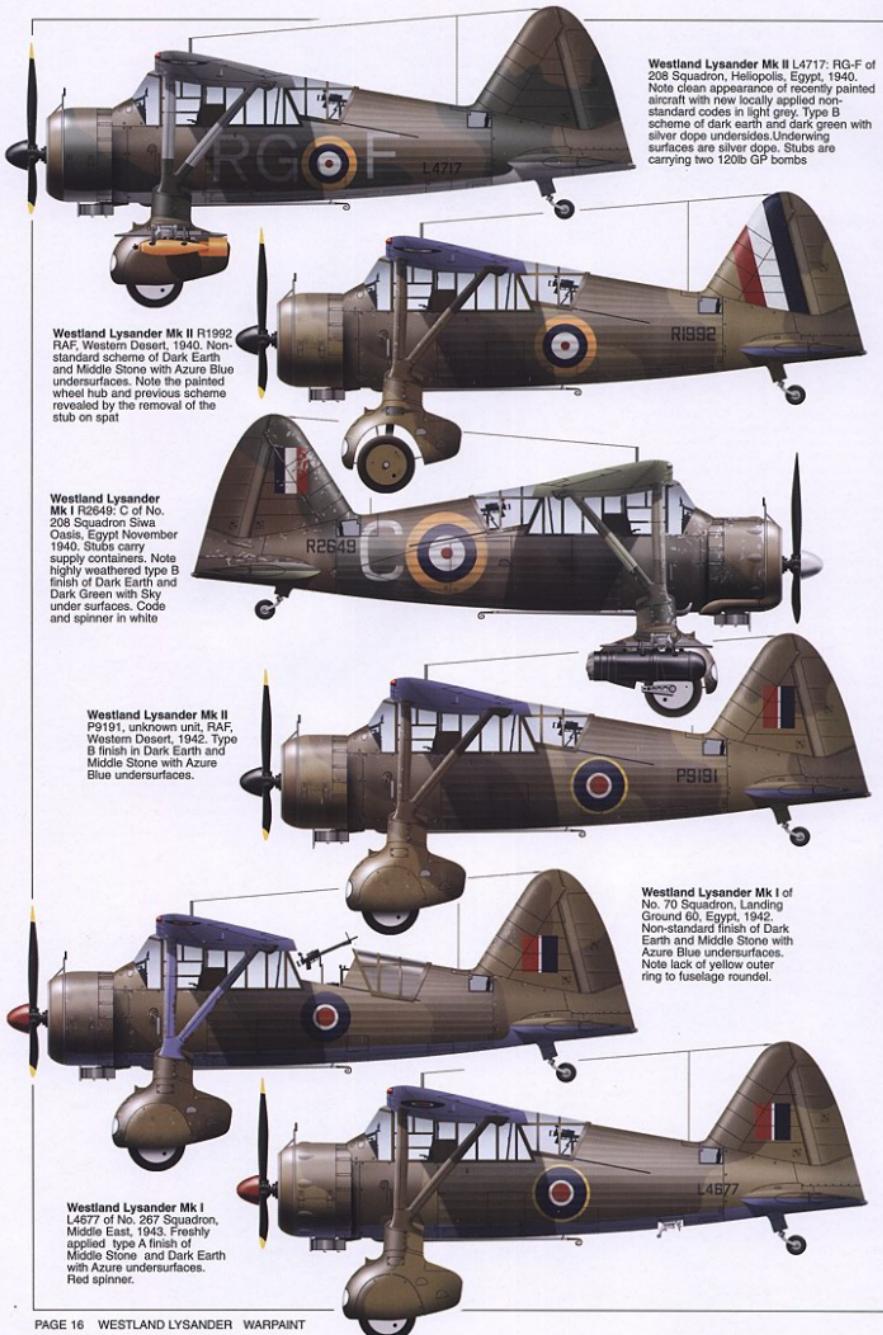
numbers that left for France.

From their temporary home in Kent the squadrons were dispersed to other airfields and a variety of more mundane tasks than hitherto. No.26 Squadron stayed at West Malling and from there flew reconnaissance sorties looking for possible enemy landing grounds in the event of a German invasion of the British Isles. Even so they had three Lysanders destroyed on the ground during the Luftwaffe's attacks on fighter airfields in the south. No.4 Squadron went to Linton-on-Ouse and then Clifton where they were used on their designed role of Army Cooperation with the 11th Armoured Division. Nos.13 and 16 Squadrons went to Hooton Park and Weston Zoyland only to send small detachments to coastal airfields to act in the air-sea-rescue role - the begin-



Above: Two young WAAFs pose on the tail unit of a No. 53 OTU Lysander KU:X, at RAF Hibaldstow in 1943. (Pat Horton). Below: Lysanders in the USAF. One of several units equipped with target towing Lysander TT.IIs for fighter pilot training in England. This one was the 496th Fighter Training Group based at Goxhill. A couple of Master T.IIs can be seen in the background. (P.Green via Andrew Thomas)





ning of one of the Lysander's most important jobs thereafter. No.26 Squadron later moved to Gatwick to perform lowly tasks of anti-aircraft liaison and balloon spotting.

GENERAL DUTIES

The whole of the British Isles stood by against the threat of invasion by the Wehrmacht during the summer and autumn of 1940.

BEF Lysanders had not shown that they could be used in the World War I role of spotter aircraft for artillery or even on general reconnaissance and photographic work. In every case it would have meant allocating large numbers of fighter aircraft for the protection of one Lysander and apart from the fact that there were no fighters to spare and the enemy's advance through Belgium and northern France so rapid the loss rate, as has been shown previously, was extremely high.

Britain stood alone against the all-conquering German army and air force. The Lysander squadrons were re-equipped and new aircrews posted to them as Westland's production had been considerably stepped up. A second production line was to be established at Doncaster which had been tooling up under guidance from the main factory at Yeovil. However only 17 aircraft were built there before the Ministry of Aircraft Production allocated most of its resources to the construction of fighters and bombers.

Immediately after the fall of France much of the work for Lysanders was either connected with air-sea-rescue or patrols along the coast to watch for any signs of troop-carrying barges leaving the Channel ports.

Lysander I L4795:EE-M of No. 16 Squadron seen in 1939 when based at Old Sarum. It was the first Lysander squadron to be equipped and its role was as much of an Operational Training Unit although it had separate squadron identity. (via Andrew Thomas)

Australian and Canadian Lysanders

Royal Australian Air Force

Squadron Number	Code/s OS	Mark	Example
3	II	II	P9***/OS-I

Royal Canadian Air Force (Canada based)

Squadrons

2	KO	II	421
110	AY	II	429
111	TM	II	416/TM-A
112	XO	II	436
118	nil	II	420
121	JY	II	1559
122	AG	II	445/AG-K
123	VD	II	477

Other Units

1 B&GS			2325
2 B&GS			3252
3 B&GS			1574
4 B&GS			2307
5 B&GS			1523/7F
6 B&GS			2328/P
7 B&GS			2387
8 B&GS			2354
9 B&GS			
10 B&GS			
31 B&GS			1544
1 NAGS			
1 CAC det			4**/LU-B
3 CAC det			461/GV-L
1 OTU			2424
3 OTU			
31 OTU			2397
32 OTU			2410
34 OTU			2403
36 OTU			2395

They also took part in army exercises but the role of the Lysander being used as an artillery spotting aircraft had not gone away and the lessons that should have been learned in France often ignored.

Accidents were bound to happen. In sev-

eral cases aircraft ran into high ground whilst, in another, the parachute of a supply container mounted on the stub wings deployed, wrapping itself round the tail unit and making the aircraft uncontrollable. Fortunately the crew escaped by bailing out



before the aircraft hit the ground. In another incident on the night of 11 November 1940, a whole squadron was put out of action by a gale that swept in from the Irish Sea and as the unit was under canvas at the time on an army exercise, inadequate picketing led to 13 Lysanders being spread over the local countryside mostly written off.

New Lysander squadrons were formed and Army Cooperation Command established - the only RAF Command to have a single aircraft type to operate until the arrival of new types from America. The Command was split into two Groups, No.70 Group for anti-aircraft cooperation with Nos. 40 and 41 (Army Coop) Operational units at Old Sarum and Andover respectively and some target towing flights. No.71 Group controlled 13 squadrons namely Nos. 2, 4, 13, 16, 26, 225, 231, 239, 241, 268, 309 (Polish), 613 and 614.

Lysanders were eventually replaced by two other aircraft types. For the reconnaissance role the P-40 Tomahawk was used with the first aircraft going to No.2 Squadron which was by then based at Sawbridgeworth. The other aircraft, the Auster because of its slow flying and manoeuvrability, became part of the Air Observation Post Flights for forward reconnaissance and artillery spotting. With the need for gunners in the rear cockpit having been eliminated these were quickly absorbed by Bomber Command.

AIR-SEA-RESCUE

But that was by no means the end of the Lysander. During the Battle of Britain and beyond Lysanders were formed into air-sea-rescue squadrons with detachments at a

During the operations to invade the island of Madagascar in 1941, No.1433 Flight of Lysanders were employed for the tactical role. In the picture are V9606, V9499, V9350 and V9728, all Mk.IIs (IWM)



Free French Lysanders were used in the desert campaigns of 1941. Above: Lysander II P9102 is seen on 12 February was used to search for a missing Bombay which had force landed after an attack on the Kufra oasis. Below: Lysander II P9134 of the Grp Bretagne seen at Wadi Sledna in 1941. Both via Andrew Thomas



number of strategic points around the coast. Four new squadrons, No. 275, 276, 277 and 278 were established with 36 Lysanders in total and one or two Walrus amphibians for picking up ditched crews.

Confined to coastal work, examples were recorded where Lysanders made record distance flights to find downed aircraft and

summon assistance. One of the longest known was in the case of a Halifax from No.35 Squadron that had ditched some 50 miles off Portsmouth on 18 December 1941. The Lysander dropped a dinghy for the crew and then circled overhead for 90 minutes until marine rescue craft could reach them.

Continued on page 22



Westland Lysander TT Mk III
R9062; U No. 2 Air Gunnery
School, Scotland, 1941. Type B
scheme of Dark Earth and Dark
Green with yellow and black
underside stripes. Note heavy
loss of paint on tail



Westland Lysander TT Mk III
2307 No.1 OTU, Bagotville,
Quebec, Canada, 1942-3. All over
high-visibility stripes in yellow and
black. Codes repeated under
wings see bottom left



Westland Lysander TT Mk III
2424 No.1 OTU, Bagotville,
Quebec, Canada, 1942-43.
All over yellow and black
stripes



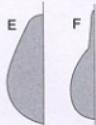
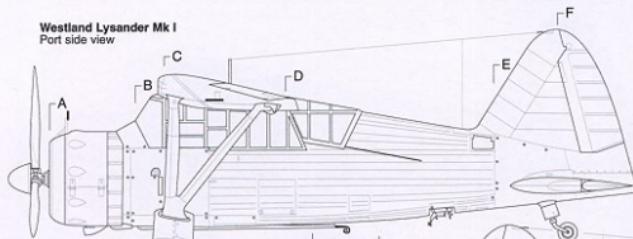
Westland Lysander TT Mk III
V9817, 3rd Gunnery and Tow target
Flight, USAAF, UK, 1944. Top
surfaces in type B scheme of Dark
Earth and Dark Green with yellow
and black striped undersurfaces.
Note mix of US and RAF markings



Westland Lysander TT Mk III
T1445; W6-K of No. 755 Squadron Fleet Air Arm, Worthy
Down, UK, 1942. Type B scheme of Dark
Earth and Dark Green with striped
undersurfaces. Codes in light grey

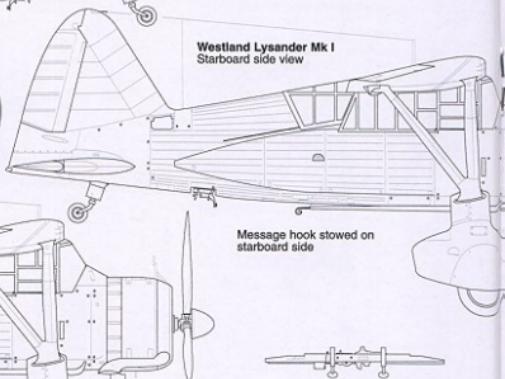


Westland Lysander Mk I
Port side view

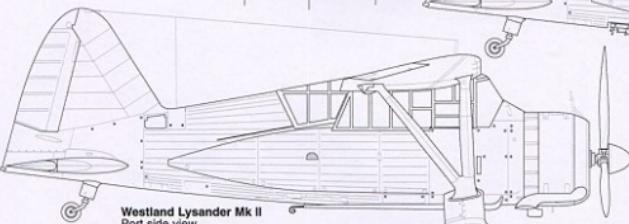


WESTLA

Westland Lysander Mk I
Starboard side view



Message hook stowed on
starboard side



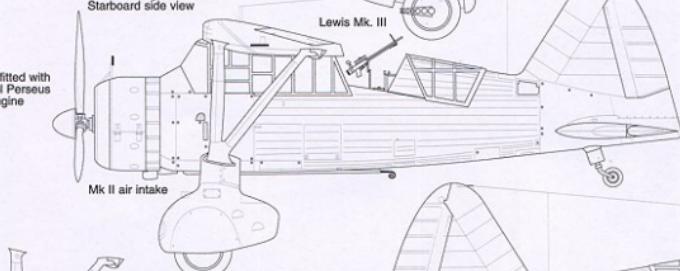
Spat covers removed

Universal No. 1 carrier
Starboard view

Westland Lysander Mk II
Port side view

Westland Lysander Mk II
Starboard side view

Mk II fitted with
Bristol Perseus XII engine



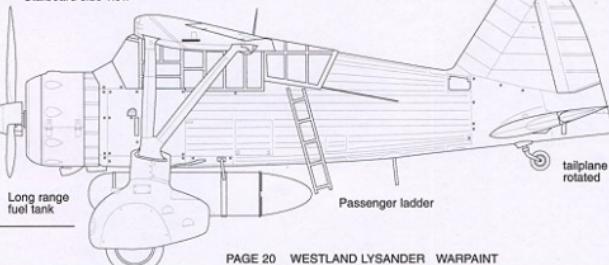
Lewis Mk. III

Mk II air intake

Alternative pilot tube position
as fitted to some Mk Is



Westland Lysander Mk IIIA (SD)
Starboard side view



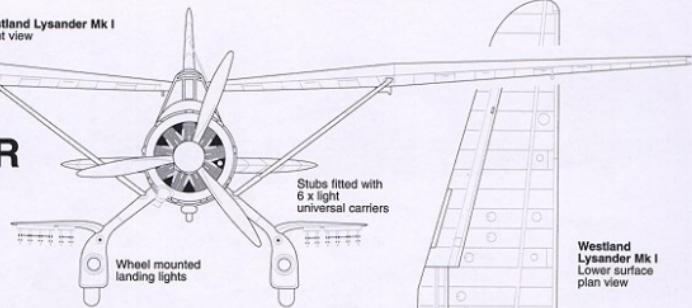
Westland Lysander Mk IIIA
Port side view



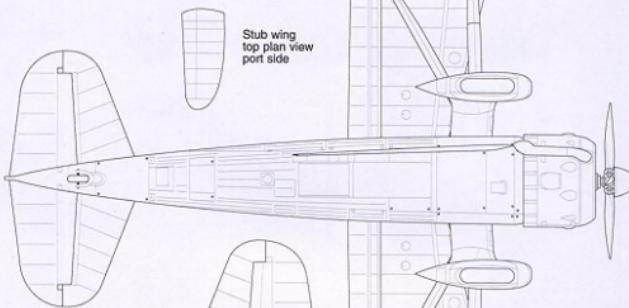
Bristol Mercury
front view

AND LYSANDER

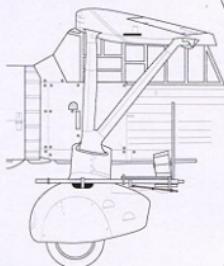
Westland Lysander Mk I
Front view



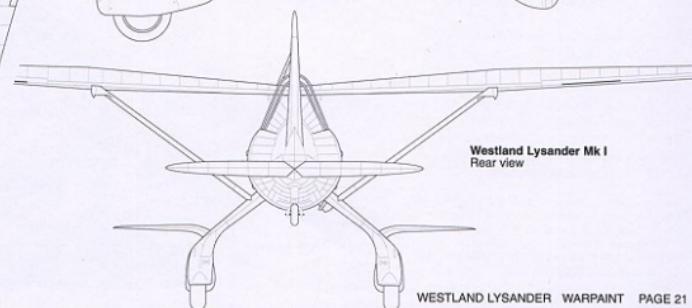
Westland Lysander Mk I
Lower surface plan view



Westland Lysander Mk I
Upper surface plan view



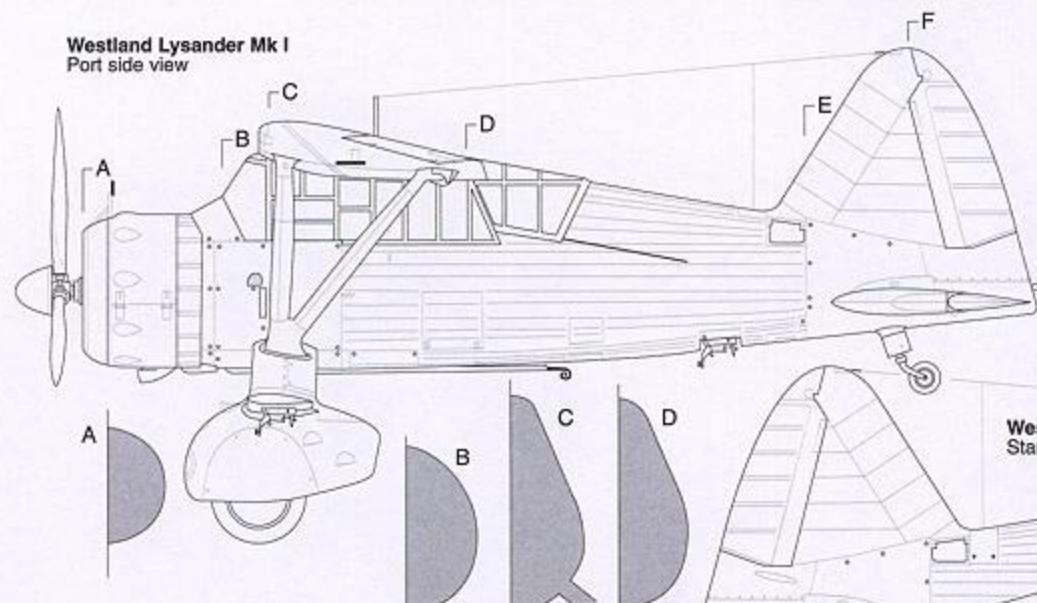
Westland Lysander Mk I
Rear view



1:72nd SCALE

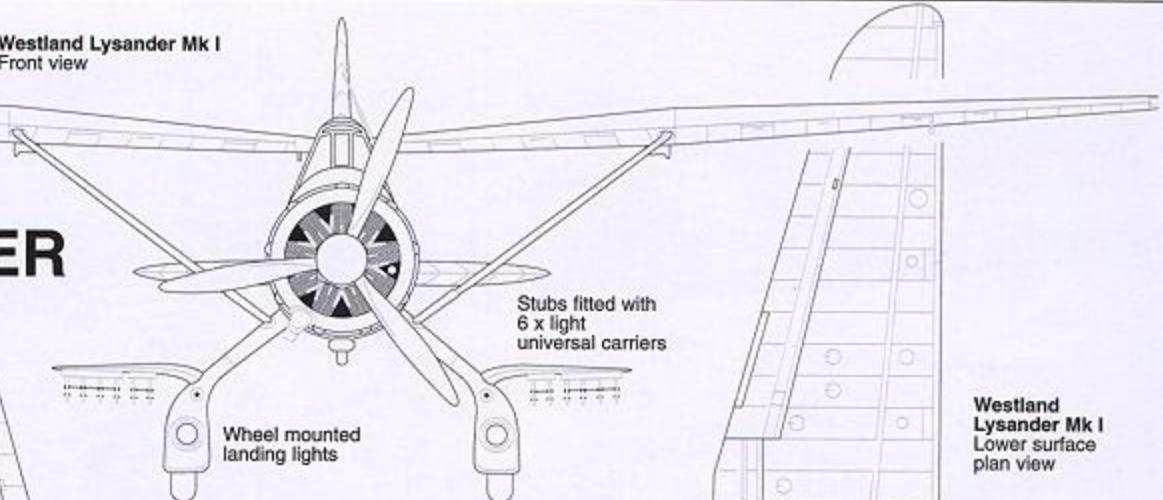
Feet Metres

Westland Lysander Mk I
Port side view

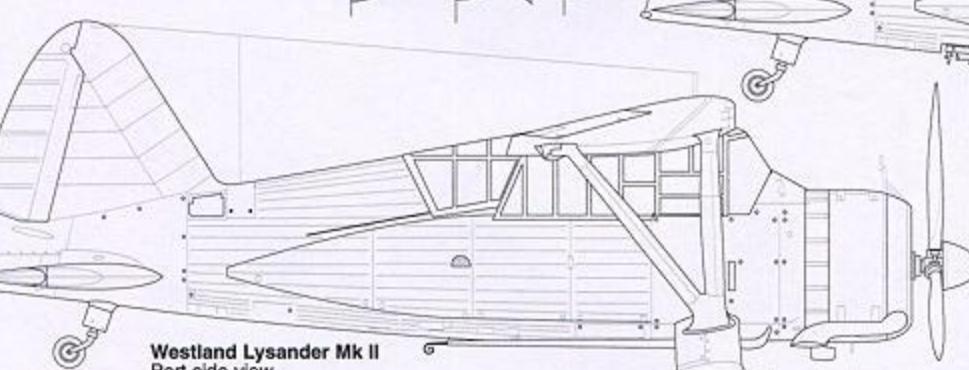
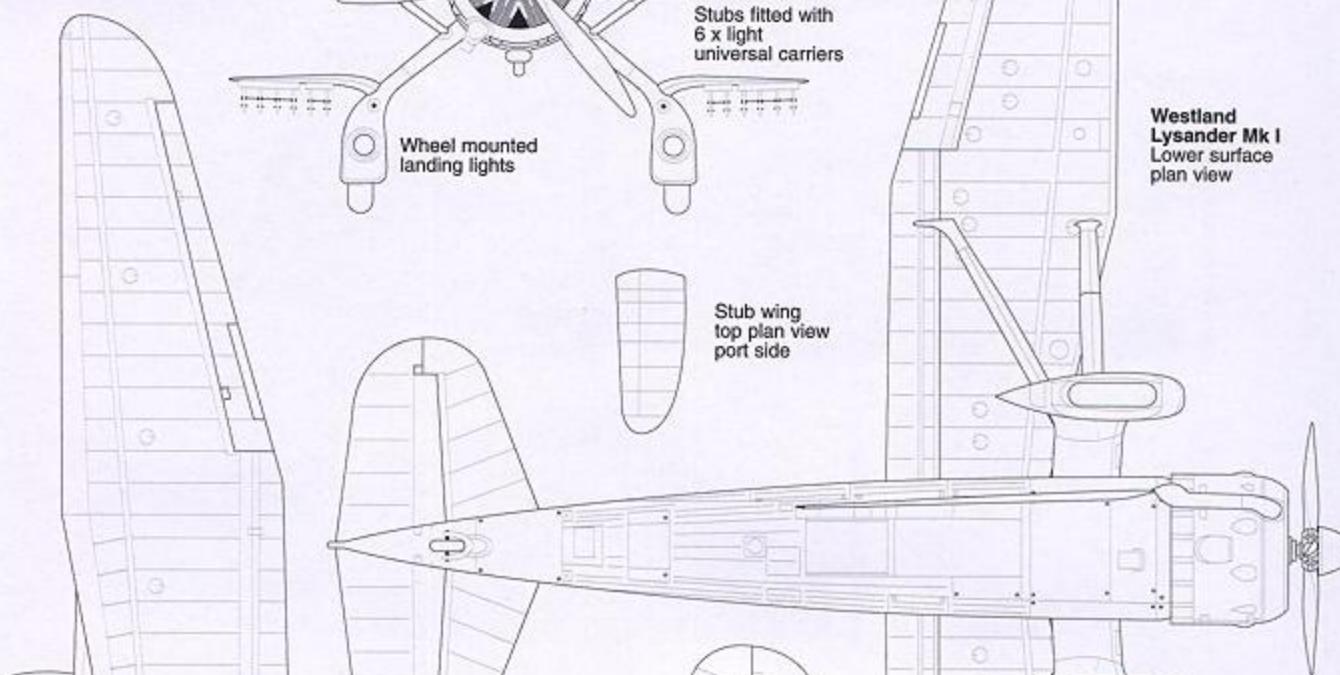


WESTLAND LYSANDER

Westland Lysander Mk I
Front view

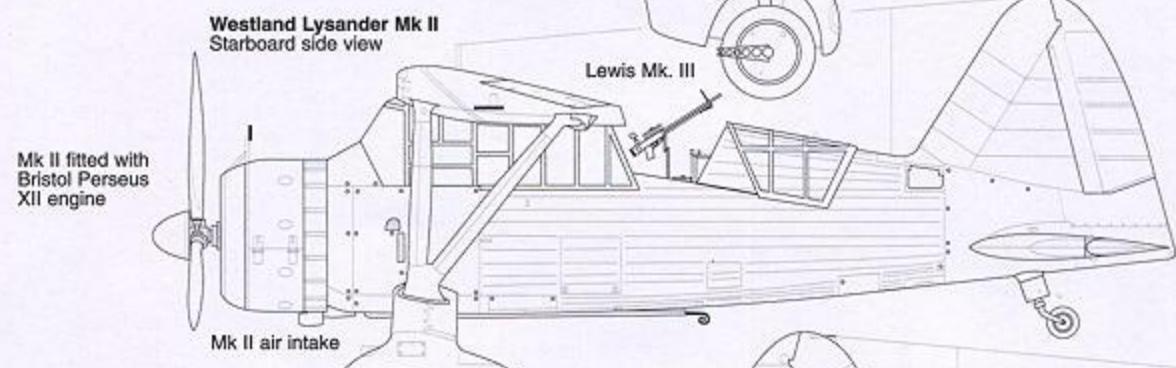


Westland
Lysander Mk I
Lower surface
plan view

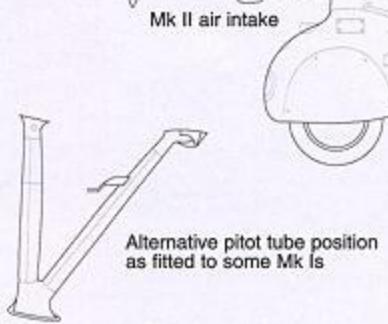


Message hook stowed on
starboard side

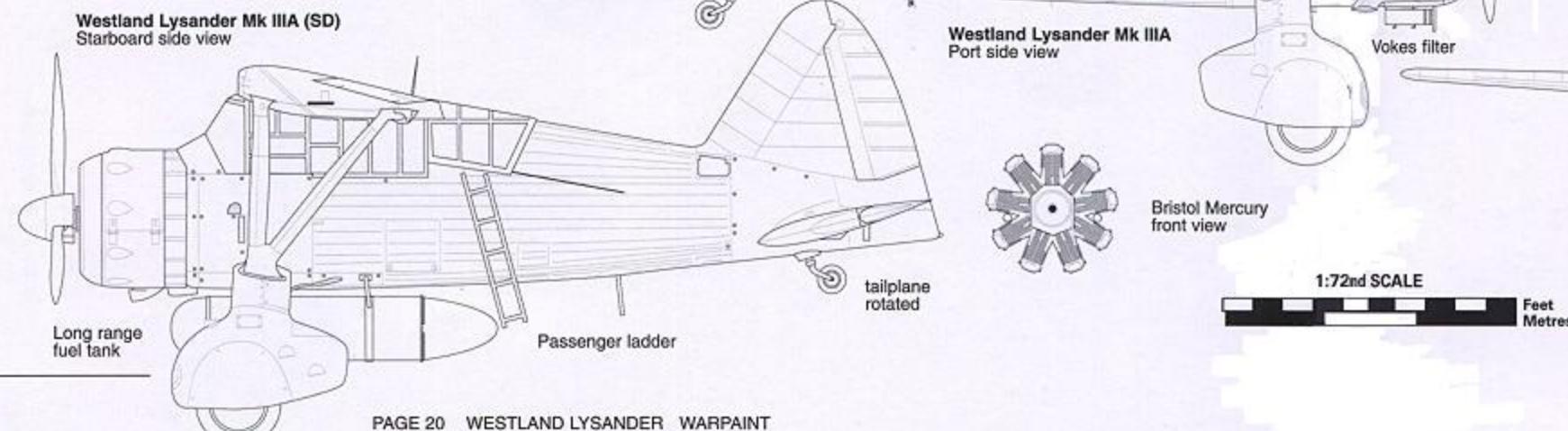
Universal No. 1 carrier
Starboard view



Mk II fitted with
Bristol Perseus
XII engine

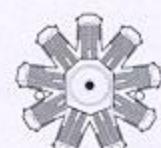


Alternative pilot tube position
as fitted to some Mk Is



Westland Lysander Mk IIIA (SD)
Starboard side view

Westland Lysander Mk IIIA
Port side view



Bristol Mercury
front view

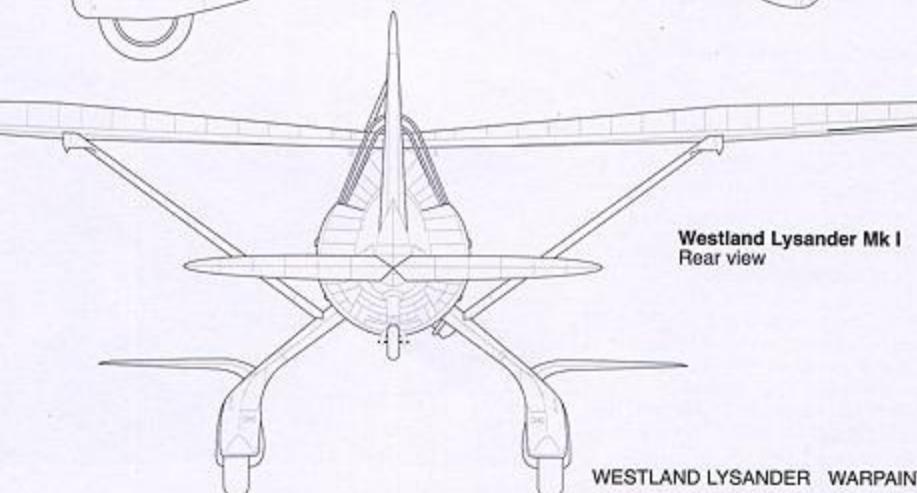
1:72nd SCALE

Feet
Metres

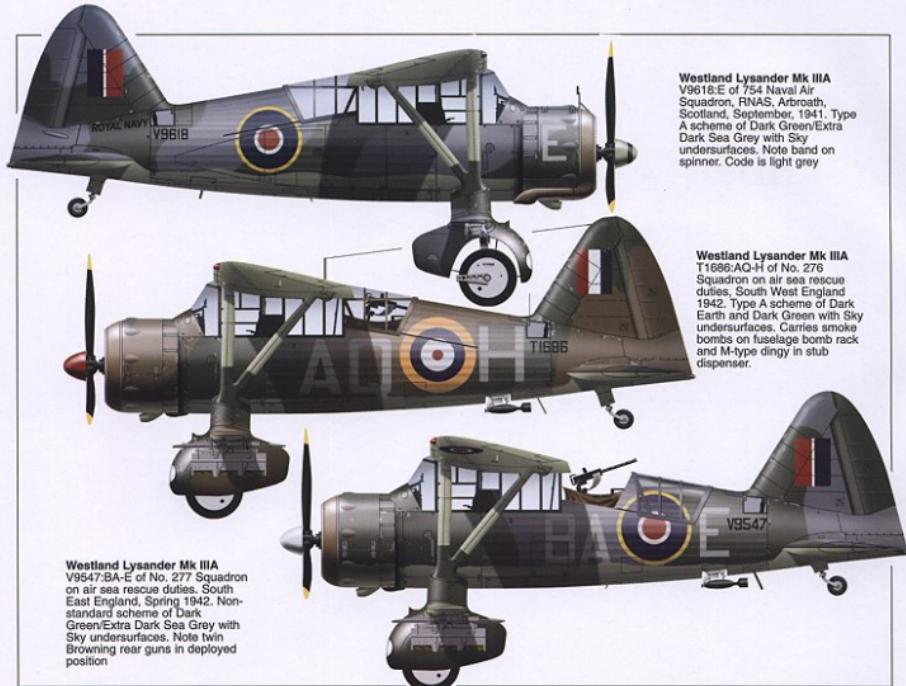
Westland Lysander Mk I
Upper surface plan view



Scrap view showing
Mk I with twin 20mm
Oerlikon cannons



Westland Lysander Mk I
Rear view



Westland Lysander Mk IIIA
V9547-BA-E of No. 277 Squadron
on air sea rescue duties, South
East England, Spring 1942. Non-
standard scheme of Dark
Green/Extra Dark Sea Grey with
Sky undersurfaces. Note twin
Browning rear guns in deployed
position

Continued from page 18

A secondary task of spotting and recording drifting mines was allocated to the four squadrons. Meanwhile each detachment kept at least one aircraft at readiness for immediate take-off to render assistance where possible.

For a short period in 1942 Defiants replaced a number of Lysanders which, because of their faster speed in being able to get to a ditched aircraft, were used. These did not survive for long and the Lysander was once again the main aircraft in use but this time backed up by specialised Spitfire squadrons for protection. During the war countless RAF and USAAF aircrew owed their lives to the work of the Lysander squadrons.

LYSANDERS OVERSEAS

Pre-war expansion plans formulated by the Air Ministry decreed that army cooperation aircraft were needed in the Middle East. Accordingly 24 Lysanders L4707 to 4730 were taken direct from the production line, crated and shipped to Heliopolis in the Canal Zone arriving in November 1938 and replacing the outdated Audax biplanes then in use for army cooperation.

Air Sea Rescue became a major role for UK based Lysander squadrons. This Lysander III could have been based at any one of seven detachments from No. 277 Squadron which received its first Lysanders in December 1941 and did not give them up until February 1945. (IWM)

Westland Lysander Mk IIIA
V9618-E of 754 Naval Air
Squadron, RNAS, Arbroath,
Scotland, September, 1941. Type
A scheme of Dark Green/Extra
Dark Sea Grey with Sky
undersurfaces. Note band on
spinner. Code is light grey

Westland Lysander Mk IIIA
T1686-AQ-H of No. 276
Squadron on air sea rescue
duties, South West England
1942. Type A scheme of Dark
Green/Extra Dark Sea Grey with
Sky undersurfaces. Carries smoke
bombs on fuselage bomb rack
and M-type dingy in stub
dispenser.

No.208 Squadron reformed using the Lysander. The numbers of aircraft allocated to Middle East squadrons was increased to 13. No. 6 Squadron was the next to re-equip with the total number of Lysanders being shipped to Egypt established at 48. Most of the aircraft sent out were Mk.IIs as the home squadrons replaced their Mk.Is with Mk.IIs in France and at home. The original batch were not fitted with carburettor air filters so that no sooner than the second shipment had arrived than they had to be used as replacements for the first.

When war came No.208 Squadron was based at Qasaba with 16 Lysanders and

although there was a possible move to return both the squadrons and their aircraft to Europe this was cancelled and the squadrons prepared for war by liaison with the 7th Armoured Division in the desert.

The Italians under Mussolini declared war on Britain and France on 10 June 1940. Tactics developed in the desert allowed for two mobile echelons consisting of two and three ton trucks carrying supplies for seven days and the second echelon using similar transport for the carriage of tentage and maintenance equipment.

The first task was to establish where the Italians were and accordingly reconnaiss-





Above: Another of No.277 Squadron's Lysanders used for air-sea-rescue duties based on detachment along the south coast of England. This one shows the Observer getting into the rear cockpit and the dinghies slung under the aircraft's stub wings. (IWM)



Above and below: Two of the original batch of Lysander Mk.IIs built in Canada for use in training pilots and gunners for the RAF. Originally overall silver finish with the three figure serial in place of the RAF one, that above is 421 and below, 418. 421 also saw service with No.2 Squadron RCAF before relegation to training duties.

Lysanders in foreign service

Indian Air Force

Squadron Number Code/s Mark Example

1	NB	II	N1255/NB-F
2	US	II	N***/US-A
4	AG?	II	L4801/V

Foreign Service (selective examples)

Finland

LLv 30	LY-121
2/LeLv 16	LY-120

France (Free French)

Det du Cameroun	
Det du Moyen Congo et Gabon	R2036
Det Permanent des Territoires du Tchad	N1208
Free Fr Fg Sch	
Gp Artols	P1713

Gp Bretagne	P9134
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Gp Mixte de Combat No 1	P1738
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United States

8th Air Force	
330th Bomb Squadron	R1622
340th Bomb Squadron	V9776
2025th Gunnery Flight	
2031st Gunnery Flight	
496th Fighter Training group	

Royal Egyptian Air Force

Y500-Y517	
No.1 Sqdn	GF Mk.I

Y511:GF-U

Turkey

Serials 3101-3136

Ire

Serials 61-66

Portugal

Esquadria de Observacano BA3 (Tancos)
316 ex-V9321





On coastal patrol over the near uninhabited areas of eastern Canada, this Lysander II serialled 463:CD-D does not seem to have standard codes and serials of an operational RCAF squadron.

sance flights were undertaken over Libya. But the same problems of unescorted Lysanders seen in France soon came to light and Gladiators were used as escorts often getting involved in running battles with Italian Fiat CR.32 and 42 fighters.

It is recorded that in one air battle a Lysander was attacked by seven Breda Ba65 light bombers. The Lysander crew fired Very lights to attract the attention of the escorting four Gladiators and the Italians

summoned up a number of Fiat fighters for their own support. The result was that three of the Gladiators were shot down but two of the pilots were able to walk back to their own lines.

When the Italians eventually invaded Egypt in early September they were reinforced by a number fighter aircraft units from Italy making it even more hazardous for the Lysanders and for their escorts even if these could be provided.

On 9 October L4729 on reconnaissance near Sofafi met up with Italian fighters. The pilot immediately turned for home and adopted the usual tactic of flying as low as

possible. This however was his undoing as the aircraft hit the ground and the port stub wing was torn off and the tyre burst. The Lysander reached base and made a controlled crash landing. Casualties began to mount. Another Lysander was shot down and blew up near Giarabub after a running battle with three Fiat CR.42s. No.208 Squadron was also bombed by the Italians when they were dispersed at Siwa oasis on 7 November during which one aircraft was destroyed and several damaged. One of the Lysander II 445:AG-K of No.122 Squadron RCAF which operated coastal patrols when based at Patrol Bay in June 1942. (Public Archives of Canada)





Above: Canadian reflections. Lysander TT.III 2307 was used by No.4 Bombing and Gunnery School RCAF as a target tug and distinctively painted in conventional black and yellow stripes overall. (J.G.Oughton via Andrew Thomas)

longest aerial battles that took place happened on 20 November. Whilst making a reconnaissance of Sidi Barrani by a Lysander and Blenheim escorted by nine newly arrived Hurricanes and six Gladiators, the battle lasted for over half an hour. Meanwhile both reconnaissance aircraft made the return flight to their home airfields carrying valuable photographs.

No.6 Squadron which had also been equipped with 13 Lysanders and had two Gauntlets and a Hardy on strength was in Palestine where they took part in anti-terrorist activities and maintained a coastal defence patrol searching for illegal immigrant ships and cooperated with the Arab Legion. The squadron had three Flights and for a short period C Flight went to Qasaba in Egypt for operational training before taking their place in the desert. B Flight rotated with them in December and on the 20th No.6 Squadron suffered its first casualty from enemy action when one aircraft was shot down by ground fire.

During the first Axis retreat as far as El Agheila the Lysanders were of great use in and around Bardia spotting enemy columns and directing ground forces after them. But by that time the Germans had come to the aid of their Italian counterparts with the arrival of Erwin Rommel and the Afrika Corps in the desert and the withdrawal of many army units under Prime Minister Churchill's orders to come to the help of the Greek armies fighting a rearguard action against overwhelming opposition.

The strength of the German attack in both Greece and Libya caught the British and Commonwealth troops by surprise. Great



Above: Lysander TT.III 1563-4 in the Canadian snows. Again painted in black and yellow stripes overall its actual unit cannot be ascertained as there were some 11 Bombing and Gunnery Schools spread over the Canadian mid-west. (A.W.Hall collection) Below: Lysander TT.IIIA fitted with a Mercury XX engine as V9905 was the last but one of the many Lysanders built by Westlands at Yeovil. (IWM)





Streaming the banner. A Lysander T.III at the point of reeling out the cable to which is attached a long sleeve that acts as the target for under-training air gunners. (IWM)

help was given by the Lysanders in locating friendly forces so that the desert retreat did not become a rout. But so fluid was the battle that the mobile headquarters of the squadron were lost in the desert for two days and part of the supply and maintenance team fell into German hands.

When matters stabilised and it was decided to retain hold on Tobruk two squadrons were detailed to remain within the perimeter. No. 6 Squadron's Lysanders and No. 73 Squadron's Hurricanes occupied either one of the two rough airstrips that were retained. By 11 April the Luftwaffe brought Junkers

Ju 87s and Bf 110s to support their attempts to subdue Tobruk but although the Hurricanes were reduced to only a handful the Lysanders were far more fortunate. Their reconnaissance patrols were able to establish the position of enemy units and were able to direct bombers at night to attack them after reporting their findings by radio. In an engagement with a Junkers Ju 52 the Lysander shot it down. Later in April Messerschmitt Bf 109Es of I/JG27 had arrived and the combined bomber and fighter units of the enemy bombed and strafed the Australian garrison continuously.

So heavy were these attacks that in spite of dogged resistance the remaining aircraft of the two squadrons were withdrawn from the Tobruk perimeter on 19 May.

In Greece it was a different matter. The British air contingent of Hurricanes, Blenheims and Lysanders suffered heavily from repeated aerial attacks by the Luftwaffe on their airfields rendering their support for the army negligible and in the face of the opposition the remaining few aircraft were withdrawn leaving the ground crews to do their best in heading for the evacuation beaches. Initially No.208 was tasked with providing three Hurricanes and nine Lysanders which made their way to

A closer look at the underside of a Lysander T.III showing the attachment on the underside of the fuselage from which the target sleeve was reeled out at least half a mile behind the towing aircraft. Black and yellow stripes under the wings and fuselage indicate that this is a target towing aircraft. (IWM)





Westland Lysander Mk IIIA
P1725 of 1441 Combined Operations Unit, Scotland, 1942. Type A scheme of Dark Green and Extra Dark Sea Grey with Medium Sea Grey undersurfaces. Large type C1 roundel on fuselage. Note heavy weathering and smoke dispenser on stubs

Westland Lysander Mk III (SD)
V9367 MA-B of No.161 Squadron, RAF Tempsford, UK, 1942/3. All over Night (black) finish with codes in red. Note white painted ladder rungs to aid fast agent pick ups



Westland Lysander Mk III (SD)
V9367 J No.161 Squadron, Tempsford UK, 1942. Piloted by Group Captain Hugh Verity. Type B finish of Dark Green, Medium Sea Grey and Night (black) finish

Jiminy Cricket nose motif



Phasala on 15 April 1941 by way of a refuelling stop on Crete. They moved to Kazaklar on the 16th losing two Lysanders to Bf 109s on the way. Four days later No.208 flew to Argos and withdrew to Crete on the 22nd. They had lost three Hurricanes and three Lysanders on the way but most of the crews escaped back to Egypt by sea.

But the days of the Lysander in the desert war front were numbered. One of the last to be lost was a No. 6 Squadron aircraft which was shot down and subsequently strafed on the ground by a Bf 109E. Although this was not the last appearance of Lysanders in the desert war they were almost entirely replaced by Hurricanes by 1942.

INDIA AND THE FAR EAST

As seen earlier the first Lysander to reach India was the second prototype K6128 which went to an airfield near Karachi in March 1938 for tropical trials. Later it moved in with No. 5 Squadron at Risalpur and was later flown to Delhi for navigation trials as the Indian Air Force showed great interest in equipping their reconnaissance squadrons with the type.

No threat was envisaged at that time from Japan accordingly the Indians required an aircraft that could maintain coastal patrols and for policing the North-West frontier - a task that the RAF had undertaken during the inter-war years.

No.1 Squadron, Indian Air Force was concentrated at Drigh Road, Karachi after hav-



Indian Air Force Lysanders. Above: Coded US-A this aircraft is thought to belong to No. 2 Squadron IAF but has used the pre-war codes of No.28 Squadron, (J.J.Halley) Below: Lysander Mk.I N1255; FN-B belonged to No. 1 Squadron IAF in 1941-42 (RAF Kal Tak records)





Lysanders in the Far East. This Mk.IIIA V9289 belonged to No.357 Squadron operating in Burma on communications duties. It has the SEAC national markings on the fuselage sides and fin stripe plus a long range tank. (R.L.Ward)

ing been withdrawn from its multifarious duties in other parts of the sub-continent. The Station took delivery of 48 Lysanders in August 1941.

Although European doubts were expressed about Indian abilities to handle the Lysander their previous experience with Harts and Audaxes stood them in good stead and under RAF supervision training began. Later the squadron was posted to Peshawar in North-West India and the main body of the squadron set off for a 750 miles journey fully confident in their abilities leaving behind a small flight to continue with continuation training. Only one Indian Lysander met with a mishap en route when an undercarriage was damaged during landing at Multan. Indian ground crews worked all night to get the damage repaired and the whole squadron duly arrived at its appointed destination in one piece.

Although operated by the Indian Air Force the Lysanders were in fact on loan from the RAF but matters were put right on 7 November 1941 at a Peshawar ceremony. The Governor of Bombay formally presented 12 Lysanders to the squadron which had been purchased by donations from the Bombay War Gifts Fund.

No. 2 Squadron, Indian Air Force, was the next to form which gave up its Audaxes in favour of Lysanders. In all ten squadrons were expected to be formed and these eventually materialised but not all of them were equipped with Lysanders. In order to show the Indian population that their air force was

equipped with modern aircraft it was arranged that a demonstration flight over Calcutta be staged. No sooner had this been done than the Japanese attacked Pearl Harbour on 9 December and began the invasion of Burma and Malaya.

The response from the Indian Air Force was somewhat delayed as there was an acute shortage of air gunners because it was not necessary to carry them on North-West Frontier patrols. An intense recruiting campaign was carried out and many volunteered for the work. Training was hurried but not without its casualties.

No.1 Squadron now fully operational was moved to their war station of Toungoo on 1 February 1942 with 12 Lysanders as by that time the Japanese were almost on the Indian frontier with Burma. That same night the Japs bombed the airfield fortunately without any casualties to No. 1 Squadron and only slight damage to the Lysanders of No. 28 (RAF) Squadron's aircraft which were also based there. Presuming that the raiders had come from Mae-Haugsaum in Siam the

India Squadron Leader set off on 3 February escorted by two RAF Buffalos of No. 67 Squadron and returned the compliment by accurately placing his bombs on the only hangar seen to be available. The next day the whole squadron carried out a similar attack, this time unescorted, and succeeded in hitting the wireless station and a number of dispersed aircraft on the ground.

As the Japanese advanced so the Allied forces had to withdraw until they went back as far as the frontier between India and Burma. During the retreat the Lysanders in both the Indian Air Force and RAF took part in the defence of Rangoon whilst others went to support the Chinese 5th Army at Lashio. Equipment, mainly bombs, gave trouble for the Lysanders operating from rough airstrips. The bombs were of American origin and did not fit all that well on the Lysander's stubs wing bomb racks. Consequently several armed bombs fell off whilst the aircraft were taxiing and taking off blowing up the aircraft and with dire results for the crew.



The prototype of the Lysander Mk.III which was assigned to Special Duties. T1771 had the standard long range tank and an easy access ladder on the port side rear cockpit. It eventually went on to serve with No.161 Squadron at Tempsford. (J.D.Oughton via Andrew Thomas)

Eventually No.1 Squadron was evacuated to Magwe. As the Japanese were going through difficult jungle their advance was slowed down which gave the squadrons a chance to regroup and replace losses. In one instance two Hurricanes were abandoned on Mingaladon airfield near Rangoon in serviceable condition. Sqn Ldr Majomdar of No. 1 Squadron sent two Lysanders with Hurricane pilots in the back seat to successfully collect them.

But by then the days of the Lysander's use in facing the Japanese were all but over. No.1 Squadron was withdrawn and returned to Peshawar where they re-equipped with Hurricanes. At the same airfield No. 4 (Indian) Squadron was also re-equipping at Peshawar using the former No. 1 Squadron Lysanders and new aircraft from the UK. They were sent to Kohat and a Flight of four sent to the frontier carrying out bombing raids against tribesmen. Rioting in central India also saw a detachment being sent to Hyderabad.

By the end of 1942 almost all Indian and Nos.20 and 28 (RAF) Squadrons were being re-equipped with Hurricanes and the few remaining Lysanders used for target towing duties at Peshawar and for communications duties on the Burma Front.

SPECIAL OPERATIONS

Although the reconnaissance and artillery spotting roles of the Lysander were over the aircraft, because of its sturdy construction and short field landing and take-off run, found a new duty which the general public knew very little about until some time after World War 2.

This was the delivery and collection of Special Operations agents to France and other Occupied Countries in Europe.

Westland Lysander specifications

	Lysander Mk.I	Lysander Mk.II	Lysander Mk.III
Dimensions:			
Span	50 ft.0ins	50ft. 0ins	50ft. 0ins
Length	30ft.6ins	30ft. 6ins	30ft. 6ins
Height	14ft.6ins	14ft. 6ins	14ft. 6ins
Wing area	260 sq ft	260sq ft	260 sq ft
Power plant	One 890 hp Bristol Mercury XII air cooled radial	One 905hp Bristol Perseus XII air cooled radial	One 870hp Bristol Mercury XX air cooled radial
Weights			
Empty	4,065 lbs	4,160 lbs	4,365 lbs
Loaded	5,920 lbs	6,015 lbs	6,318 lbs
Performance			
Max speed sea level	211 mph	206 mph	209 mph
5,000 ft	215 mph	221mph	212 mph
10,000 ft	219 mph	230 mph	207 mph
Climb to 5,000 ft	3.4 mins	3.3 mins	4.1 mins
10,000ft	6.9 mins	6.9 mins	8.0 mins
Service Ceiling	26,000 ft	26,000 ft	21,500 ft
Take-off run to 50 ft	250 yards	245 yards	305 yards

Armament

All versions of the Lysander had similar armament in their front line operational role. Target tugs TT.Mk.III and most Lysanders used for special duties had no armament but all SD aircraft had the stub wings fitted as needed.

Operational armament was: Two fixed .303 Browning guns mounted in wheel spats above the main wheels each having an ammunition supply of 500 rounds. Mk.I and Mk.IIs had one free mounted .303 Lewis gun in rear cockpit on Fairley mounting with eight 97 round ammunition drums and a Mk.I reflector sight. Mk.III aircraft had twin .303 Browning guns in rear cockpit.

With detachable stub wings and rear fuselage bomb racks fitted the Lysander could carry 16 x 20lb ME Mk.I bombs, Mk.II smoke floats or Mk.II reconnaissance flares. Alternatively four Mk.IV 112lb or 120 lb General Purpose bombs or two 250 lb bombs or two smoke generator canisters could be carried on the stub wings. A clear view sliding panel in the fuselage underside was used for bomb aiming by the Observer/gunner.

Aircraft involved in air-sea-rescue duties carried dinghy containers on the stub wings and smoke floats on the rear fuselage bomb carriers.

For pure reconnaissance sorties the rear cockpit port side could be fitted with an F.24 oblique camera and was operated by the Observer/gunner.

Clandestine operations in Yugoslavia. A number of Lysander III(SDs) were on detachment in Italy and ran liaison sorties to the partisans carrying personnel, arms, ammunition and explosives for the followers of Tito who were harrying the Germans in that country. This assorted group of British military and Yugoslav partisans are gathered round the Lysander which has just landed in one of the few flat areas in the mountainous countryside. (IWM)





The only known Special Duties Lysander III to wear black and white invasion stripes on the fuselage but not on the wings. The actual serial has been overpainted leaving the red codes JR P denoting No.161 Squadron, A Flight. It was generally flown by Flying Officer 'Lucky' Newhouse whose story is contained in the text. (via R.L.Ward)

Some 20 Lysander Mk.IIIs and IIAs were withdrawn from Maintenance Units and under a Ministry of Aircraft Production Construction Contract titled Lysander SCW (Special Contract Westland) were converted.

A year after the Franco-German armistice a new squadron No. 138 (Special Duties) was formed in April 1941 for this task and initially equipped with Lysanders. The aircraft were modified to take up to three or four SOE agents in the former gunners position, a step ladder was fitted to the aircraft's port side and a 150 gallon long range fuel tank fitted under the fuselage. The Lysanders could also, when the need arose, deliver containers by parachute carried on the stub wings.

Another squadron, initially based at Newmarket and hitherto known as No.1419 Flight at North Weald, Stapleford and then Stradishall moved to be based at Tempsford, not far from Bedford, and was renumbered No. 161(SD) Squadron. Both squadrons were also equipped with Hudsons, Whitleys and eventually Halifax A.IXs as the number of tasks multiplied, especially just before D-Day.

The author, in his younger days, well remembers trying to find Tempsford airfield as a keen spotter riding his bicycle to many of the aerodromes in the north of the London home counties. So well was

Tempsford camouflaged that it was never really found yet the main Kings Cross to the north railway line ran along one boundary.

No.161 (SD) Squadron finally formed at Tangmere and this airfield was frequently used by No. 138 as a forward base for longer range trips into France. Later both units were brought together at Tempsford though Tangmere, Hawkinge and Lympne continued as forward bases for refuelling.

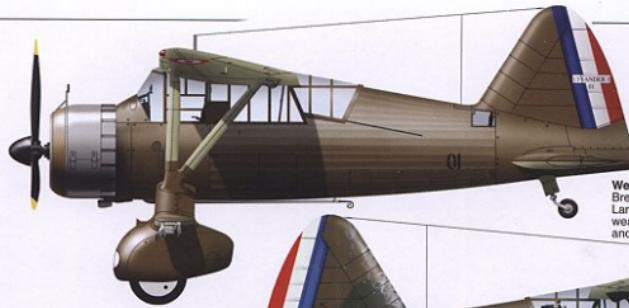
Both squadrons operated at night in moon light periods and were welcomed by a special secret arrangement of three lights or bonfires on the ground marking the landing zone (LZ) in a large reasonably level field into which the Lysander landed with no other lights. Some fields were even ploughed and there were a number of instances where aircraft became stuck in

mud and had to be towed out by teams of horses and willing man-power to free them.

These operations took place under the noses of the Germans and notice of an impending sortie was given by a coded message broadcast on the BBC overseas service before the operation took place. Finally, if the LZ was secure, those on the ground flashed an agreed light signal which if not received meant that the aircraft had to return to the UK without the mission being completed. On one occasion it is recorded that the Resistance workers were captured whilst setting up the 'airfield' lights and the Germans were waiting. As the aircraft landed

Taken just before delivery Lysander Mk.III 3112 out of an order for 36 for the Turkish Air Force is seen at Yeovil in full national markings and camouflage. (A.W.Hall collection)





Westland Lysander Mk II
serialised OI. French demonstration aircraft. Lost on trials at Yeovil, 1940. Upper surfaces all Dark Earth with Sky undersurfaces. Cowling natural metal!



Westland Lysander Mk II Group Bretagne, Free French Air Force, Fort-Lamy, Chad, North Africa 1942. Heavily weathered type A scheme of Dark Earth and Dark Green with Sky undersurfaces

Westland Lysander Mk II P9134 of Group Bretagne, Free French Airforce, Tunisia, 1942. Heavily weathered type B finish with Dark Earth and Dark Green and Sky undersurfaces. Note crude cross of Lorraine markings on fuselage and wings



Scrap view of lower wing



Scrap view of lower wing



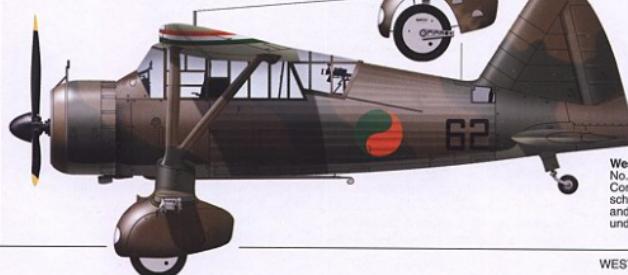
Westland Lysander Mk II 3112. Factory fresh aircraft awaiting delivery at Westland's factory airfield, Yeovil, UK, 1940. Standard RAF scheme type B of Dark Earth and Dark Green with silver underwing surfaces. Codes repeated above and below wings



Scrap view of lower wing



Scrap view of lower wing



Westland Lysander Mk II 62 No. 1(F) Squadron, Irish Air Corps, 1942. Standard RAF scheme type B of Dark Earth and Dark Green with Sky underwing surfaces



The Turkish Air Force acquired a mixed bag of both Allied and German aircraft during World War 2. The B-24 Liberator made up much of the heavy bomber force but the Lysander Mk.II beside it was delivered early in the war for its original army cooperation role. (IWM)

ed a searchlight was switched on and machine guns opened fire. The pilot, Sqdn Ldr Conroy quickly opened the throttle and took off again albeit that he was wounded in the neck and one hand. Just brushing the tops of the trees at the end of the landing run the bullet-riddled aircraft was brought back to safety.

The Hudson was also used for some landings in enemy territory where a large number of agents had to be delivered or collected. The Whitleys and Halifaxes were only used for dropping supplies. It is remarkable that these lone trips into such a hostile environment as that created by searchlights and gun batteries scattered throughout France were made and became normal. The skills of the squadron navigators, in the larger aircraft, and the single pilot in the case of the Lysander were worthy of the highest praise from those involved.

With their undersurfaces painted in a non-reflecting RDM2 black paint, tests carried out in June 1941 at A&AEF before the start of operations showed that the Lysander could have a range, with two passengers on board, of 450 miles at a cruising speed of 165 mph. Even with an emergency load of four passengers, and reduced range, the aircraft could take-off from an unprepared strip in 600 yards. With two on board the take off was much lower at 300 yards. Two actual seats were fitted to the rear cockpit but with four on board one had to lay on the floor and the other perched on top of the fuel tank between the pilot and rear compartment.

Between August 1941 and the end of 1944 over 400 sorties were carried out by the two squadrons at Tempsford. No. 161(SD) Squadron carried out 111 successful trips

out of 157. In all 293 agents and other passengers were carried into France and 500 brought back. The peak period was in 1943 when 60 agents were ferried in and 81 collected in 38 Lysander sorties.

In January 1942 Sqdn Ldr Nesbitt-Dufort made a trip to Tours for a pick-up. Both landing and take-off were successful but on the return flight in the area of Bernay a mass of cumulo-nimbus storm clouds had built up and in spite of trying to get over them and the aircraft flying in extreme cold at 7,000 ft it was obvious that there was no way through the front. Deciding that the only way was to fly through the cloud the pilot now getting short of fuel experienced severe airframe icing and violent turbulence. With the wings iced up and the estimated remaining fuel almost gone there was no alternative but to make another landing in France. They found that they were near Issoudun and were fortunate to be able to contact the local underground and get away. But now the enemy had a fully equipped Lysander, albeit with its nose stuck in a ditch, and used the knowledge gained to estimate the range and capabilities of the Lysander in the collection and dispatch of agents. Fortunately no other aircraft were lost in this way and the safe traffic in Resistance workers continued.

The aircrew of the two squadrons were an assorted bunch of pilots coming from many different origins. In the early days of No.161 Squadron it was commanded by Wing Commander E.H. Fielding MVO, AFC who was in charge of the King's Flight before the war.

Another interesting pilot was Flying Officer L.R. 'Lucky' Newhouse, one of the very few RAF front line pilots to wear glasses. Originally he came from Holland but arrived in England in the late 1920s where he learned to fly but was not granted a British Commercial Licence because of his need to wear glasses. So he went to Canada where the restrictions were less

stringent and there he flew commercially. But with the start of the war in Europe he returned to England and in spite of the fact that he had not completed formal RAF flying training gained his pilot wings and flew with every RAF Command apart from Fighter Command and was well acquainted with a large number of different aircraft types. This made him an ideal candidate for special operations and he joined No.161 Squadron from No. 325 in March 1944. It is not recorded if he flew Hudsons but the Halifaxes, Whitleys and Lysanders all had his name on the crew list at one time or another. His own much loved Lysander was coded JR-P and it is recorded that he used it for the first time on Operation Scimitar on the night of 4-5 August 1944. He landed with three passengers at 01.30 hours and brought out three more. This aircraft also had invasion stripes painted on the fuselage but not the wings and therefore was almost unique. (*see picture page 30*)

Amongst No.161 Squadron's passengers were some well-known names. Vincent Auriol, later to become President of the French Republic, was one of these. To commemorate these secret missions an all-black Lysander III V9614, in its original, though rather shabby, markings was presented by Britain for display in the Free French memorial.

TRAGIC ACCIDENTS

One would have thought that with its high wing, fixed undercarriage and distinctive appearance that the Lysander could not have been mistaken for any other aircraft. In the Observer Corps at that early stage in the war, when aircraft recognition standards were in their infancy, it has been quoted that there were three types of flying machines that needed to be reported. These were barrage balloons, aeroplanes and Lysanders.

But Lysanders were still being shot down by friendly forces.

The first known incident was in 1940, when Lysander P9127 of No. 16 Squadron was on reconnaissance over Calais, that it was set upon by three Spitfires thinking it was a Luftwaffe Henschel Hs 126 following reports from army units on the ground saying that an aircraft had been loitering over their position. The Lysander offering no resistance to the fighters was shot down.

During the Battle of Britain it has been noted that Lysander L6890 of the School of Army Cooperation flying near Exeter on 17 July was challenged by several Hurricanes. The gunner was slow in firing off the colours of the day and the aircraft shot down.

Barrage balloons also took their toll of slow flying Lysanders when in poor visibility. One incident recorded took place later in the war when V9612 of No.7 Anti-Aircraft Cooperation Unit at Castle Bromwich was carrying ATC cadets on air experience flying tangled with a balloon cable over Birmingham and crashed into a house in Tyburn Road, Erdington.

Target towing Lysanders which were either new-build or conversions from earlier marks were not without danger as well. On 5 June 1942 V9885 of No. 1485 (Bombing and Gunnery Flight) whilst flying off the Lincolnshire coast was hit by the eight machine guns of a Lancaster who claimed at the subsequent Court of Enquiry that they were unable to distinguish the Lysander from its drogue in very poor visibility over the sea. The Lysander was full of holes but although the pilot and winch operator were injured the aircraft returned to base at Coningsby.

The Lysander itself also inflicted friendly casualties amongst Allied forces training in

Deliveries of Lysander Mk.IIIs to the Portuguese Air Force were made from a shipment intended for No.2 SFTS in South Africa and diverted before delivery. Eight aircraft arrived and this one serialled 361 went to the Esquadra de Observacao at BA3 Tancos. (A.W.Hall collection)



England. In an incident on 23 October 1943 when R2613 from Boscombe Down was giving a demonstration of anti-personal bombing, the explosives, due to an electrical fault, were dropped on the troops it was demonstrating to. Seven soldiers were killed and eight wounded.

The clandestine operations were also not without their casualties. A Mosquito pilot returning from intruder operations near Rennes claimed a Hs 126 destroyed but this turned out to be a Lysander returning from a pick-up as the aircraft and crew were not heard of again. No blame was attached to the Mosquito crew as they had not been briefed, necessarily, on the fact that a Lysander might be flying in their area.

One of the most unlucky Lysanders was T1456 of No.148 Squadron in Italy which suffered a number of accidents which included being run down by a Spitfire and a ground loop at Araxos in Greece. Its final accident occurred on 22 November 1944 when it was assigned the task of spy drop-

ping over Yugoslavia escorted by six RAF Mustangs. But before the escort could get into position another six P-51 Mustangs of the USAAF arrived and shot it down, again in mistake for a Hs 126.

COMMONWEALTH CUSTOMERS

Before dealing with direct overseas sales mention must be made of the Commonwealth air forces that used the Lysander. Canada, Australia and India all had this aircraft either in operational squadrons or in the case of all three at training establishments.

Canada was noticeably the largest user and Lysanders were contracted to be built at the National Steel Car Corporation at Hamilton, Ontario. The original contract was for 50



Lysanders later increased to 150 some of which were supposed to be sent by sea to the UK but this contract was cancelled and when No.400 Squadron RCAF came to Britain they used existing RAF stocks.

The production line was moved to Malton, Ontario and the aircraft were fitted with Perseus engines and thus became Mk.IIs. Like other British-aircraft used in Canada the problems of very cold conditions especially on the Canadian prairie meant that the aircraft had to be fitted with a cockpit heating system. Other changes to the airframe involved specialised presses which enabled simple single panels to be produced which did away with the more complicated Westland tradition of two panel and dispensed with some lapped jointing.

The first Canadian built example was serialled 416 which was taken on RCAF strength on 7 September 1939. The first squadron was No.110, No.400 Squadron arrived at Odiham on 9 June 1940.

In Canada operational army cooperation squadrons, Nos. 2, 110, 111, 112, 118, 121, 122 and 123 were formed but these aircraft were later allocated to training units. The Mk.III was also in production in 1940 and 150 ordered but all were fitted with target towing gear to provide facilities for the gunnery and bombing schools then being created. One Lysander serialled 2418 was fitted for glider towing.

The original operational squadrons used Lysanders camouflaged in the standard RAF colour scheme of green and brown upper surfaces and Sky undersides whilst those going to training units varied considerably. Some were all yellow, others painted with black and yellow stripes whilst those coming from operational squadrons often retained their camouflage but had the black

The six Lysanders order by the Irish Air Corps, serialled 61 to 66 lined up at Yeovil. Two were converted for target tug duties and all were struck off charge by April 1947. (Westland)

and yellow target towing stripes on the undersurfaces. Canadian serials were applied which consisted of three or four digits with no prefix letter.

It is known that 11 Bombing and Gunnery Schools were established and six Operational Training Units. These were formed or dis-established as the needs of aircrew training increased or diminished towards the end of the war. All were quickly stood down at the end of the war to be sold off at knock-down prices and all had gone by December 1946. Several Mk.IIs were bought for crop dusting, two being registered as CF-DRL and CF-DGI-X whilst two known Mk.IIIs were registered CF-FOA and CF-GFJ. Others were bought for spare engine parts to fit to other aircraft as necessary. Two Lysanders are known to have survived in museums and another built from spare parts for exhibition purposes.

Australia was also in the market for Lysanders and an operational squadron No. 3 RAAF, with Mk.IIs established. These were later passed over to target towing duties.

The Indian Air Force as has already been stated used the Lysander operationally during the retreat through Burma with four out of a scheduled ten squadrons being equipped. The need for trained aircrew was mainly the responsibility of the operational squadrons at their home bases.

Not a lot is known of 25 Lysander TT.Mk.IIIAs that were transferred to the USAAF in Britain in 1942 and remaining in service for two years. They retained RAF serials and fin stripes but carried US star and bar markings on the wings and fuselage. Apart from two which crashed all the remainder were returned to the RAF in 1945.

OVERSEAS SALES

Immediately before World War 2 consider-

able overseas interest was apparent in the Lysander. During the summer of 1938 the Egyptian government signed a contract for the supply of 19 Lysander Mk.IIs for the Egyptian Air Force serialled Y500 to Y518. Valued at £5,600 each the first flew on 6 October 1938 and deliveries began one week later ending on 15 December. Nothing is known of any operational sorties made by these aircraft during the desert war.

The order from the government of Finland for nine Lysander Mk.IIs is covered in some mystery. The advent of the Soviet attack on Finland meant that the order was made by diverting aircraft ordered by Estonia but not delivered. The actual contract for the aircraft was not formally signed until 8 February 1940 when a further eight ex-RAF machines were diverted to Finland to take their place in the Ilmavoimat almost at the end of hostilities. It is known that the Finns formed their Lysanders into two squadrons. Whether they took part in later operations when the Finns joined in on the German side is not known.

The French ordered one Lysander Mk.I but its use is obscure. Possibly it was the French way of making up for the Lysander that a French pilot damaged beyond repair in an accident during a demonstration flight at Yeovil. The Lysander was delivered to l'Armee de l'Air on 6 July 1939.

During the war at least 22 ex-RAF Lysander Mk.IIs were delivered to the Free French Forces operating in Egypt during 1940. They went on to serve in the Cameroons, Congo and Tchad. Some of these were also thought to have been diverted from the large number of Lysander Mk.III originally intended for delivery to No. 2 SFTS at Pretoria, South Africa but eight from this same shipment were delivered to Portugal aboard the SS *Cumberland* in September 1943.

An order for 36 Lysander Mk.IIs came from the Turkish Air Force on 29 June 1939.



These were eventually allocated the serial numbers 3101 to 3136. The first flight was made on 8 January 1940 and deliveries were completed on 12 April.

Closer to home, six Lysander Mk.IIs were ordered for the Irish Air Corps, serialled 61 to 66, on 8 June 1939. These were delivered between 15 June and 11 July 1940 at a cost of £6,250 each. Two, Nos.61 and 66 were converted for target towing duties as TT.Mk.IIs during September 1944 and all expect one, No.63, were struck off charge during November 1946. This one survived until April 1947 and three were lost in accidents.

Although not an overseas sale no mention has yet been made of five Royal Navy squadrons that were established using TT.Mk.IIIs. 754 based at Arbroath, after having been bombed out of Lee-on-Solent, obtained Lysanders for target towing during June 1941; 755 obtained theirs the same month and were based at Worthy Down whilst 757 Squadron also had Lysanders beginning in April 1942. 771 had a few Lysanders but these were replaced by Defiant TTs and Chesapeakes whilst 804 Squadron is noted to have had at least one on strength.

WEIRD AND WONDERFUL

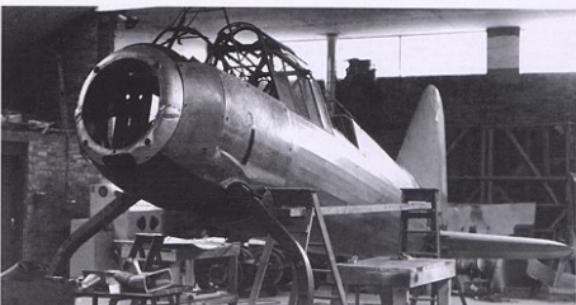
There were a number of interesting experiments made with Lysanders for a whole variety of roles.

Perhaps the most bizarre of these was the twin-finned Lysander with a four-gun tail turret intended for anti-invasion duties or the training of Bomber Command gunners in the use of the tail turret fitted to each of the bomber aircraft in the Command.

To be known as the Westland P.12 Wendover the prototype K6127 had an entirely new rear fuselage which supported a tandem wing with large fins and rudders. The project design was completed at Yeovil and it was intended that the new fuselage was to be constructed by a coach builder in Hove, Sussex called Harringtons who did in fact build the first prototype. Westland's chief test pilot Harold Penrose conducted the flight testing and reported that the aircraft handled well in spite of a considerable aft movement of the centre of gravity. In spite of the urgent need in 1940 for aircraft that could attack concentrations of German troops who were expected to land on Britain's south coast the project was abandoned.

In another experiment with the Lysander's armament a four-gun Boulton Paul Mk.III turret similar to that on the Defiant, and later the Halifax, was mounted on the fuselage just aft of the wing trailing edge. Although installed on P1723 the idea did not get beyond the mock-up stage and the aircraft reconfigured to an ordinary Lysander.

As an attempt to increase the Lysander's fire power before the war two Oerlikon 20-mm cannon were mounted on the wheel spats of the prototype K6127. As the threat of invasion was suddenly thrust upon Britain this idea was resurrected but with the need for cannon to be used in fighter aircraft and the chance of invasion lessened the



Above and below: two pictures of Lysander Mk.III G-AZWT being restored at the Strathallan Museum in November 1978. It became V9367:MA-B and is now part of the Shuttleworth collection. (A.W.Hall)



Above: Seen on its first flight after being rebuilt at Van Nuys airport CA, Lysander III N7791:AC-B went to the NASM Washington DC and was also on display at the USAF Museum on loan. (B.Treadway)
Below: The only French Lysander ordered seen at Yeovil before delivery in July 1939. (Westland)



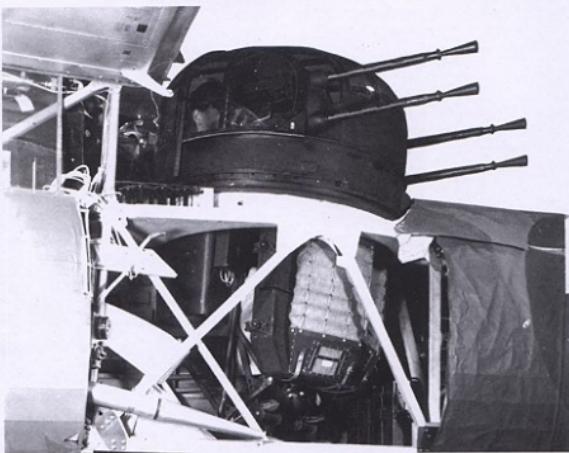
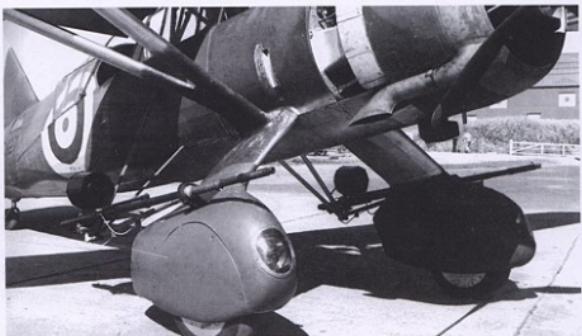
Right: K6127, the first prototype underwent many changes. Here it was experimentally fitted with two 20-mm Oerlikon cannon. Lower right: Mock-up of a proposed Boulton Paul Type A Mk.II four-gun power operated turret to be fitted in a Lysander. (Westland)

project was abandoned in late 1940.

Encounters with enemy aircraft showed that the only way for a Lysander to escape was to fly so low that its attackers could not get below it and shoot it down without the gunner being able to do anything about it. In spite of the rear armament being increased to two .303 Browning machine guns an attempt to overcome the problem was made at Yeovil to build an underside gunner's position. This resulted in a bulged rear fuselage which gave the Lysander a even more unusual shape. Known locally as the 'Pregnant Perch' a mock-up was built and then fitted to Mk.II L4673. The project came to an abrupt halt when George Snarey, who had joined Westlands as assistant test pilot, suffered engine failure over Cornwall and was obliged to make an emergency landing. The port undercarriage leg was torn off and the aircraft only just avoided falling into a deep ditch. With the pieces recovered to Yeovil it was thought best to cancel the project.

Lysander Mk.II P9105 was fitted with an experimental high-lift wing. Based on designs by H. Steiger of Blackburn Aircraft a 38ft span parallel chord wing with full length flaps and slots and the use of wing tip spoilers was built. Designed with a single main spar the wing was swept forward by nine degrees but its use was confined to experimental testing only yet the design was to surface in modified form after the war.

An experimental wing was fitted to Lysander Mk.II P9105. It was based on a design by a Blackburn Aircraft designer and had a 38ft span of parallel chord and full length flaps and wing tip spoilers. The wing was swept forward by nine degrees. Although successful in concept the design was not put into production but the ideas were used in post-war aircraft designs.





Above and right: Two pictures of the Tandem Lysander. Only one prototype was produced using the original L6127. It is seen here flown by Harold Penrose who thought that it handled well but the centre of gravity was greatly changed. The turret was never armed with the four machine guns intended. (IWM)

In another experiment the Lysander's wing was equipped with hydraulically operated bench-type airbrakes. Only one aircraft was completed. Although tested in the air no production contract was issued.

Because of the frequent landing problems encountered by the Special Duties squadrons a request was made to Westlands to see if anything could be done to overcome landing which had necessarily to be made contrary to the wind direction and over rough surfaces. The company responded by installing two Dowty Liquid Spring shock absorbers with internally sprung wheels to the main undercarriage extrusion but although many experiments were carried out it was not put into production. In spite of this another aircraft was fitted with a caterpillar tracked undercarriage but again it was abandoned after experimental flying.

SURVIVING LYSANDERS

Fortunately a number of Lysanders survived the war and are still flying or at least preserved in museums.

Many of the Lysanders rebuilt for either static display or in flying condition originated in Canada being the remnants of the aircraft used in the Bombing and Gunnery Schools.

In Europe examples include those at the RAF Museum (R9125:LX-L), Imperial War Museum Duxford (V9673:MA-J) whilst another is also at Duxford formally with the Kermit Weeks Fantasy of Flight Museum.

In the autumn of 1938 Egypt ordered 19 Lysander Mk.IIs serialled Y500 to Y518. The first flew on 6 October 1938 and all were delivered to the Royal Egyptian Air force by 15 December. (Westland)



In Scotland a Mk.IIIA from Canada went to the Strathallan Aircraft Museum where it was restored but with the closure of this enterprise it became V9367:MA-B with the Shuttleworth Collection, Old Warden.

A Lysander which has had a very interesting life after it had been originally bought for restoration from a farm in Canada was a Mk.IIIA which went to the Musée Royal de l'Armee in Brussels, Belgium. From there it was fully restored by the Sabena Old Timers Foundation using

parts from other Lysanders to make it into flying condition. It was painted as 2442:MA-D but during a demonstration flight force landed at Florennes airfield. It also had the registration OO-SOT and after its accident has been restored yet again and should be on static display at the Brussels Museum once again.

Lysanders restored in Canada and the USA are difficult to trace as many are complete hybrids having been rebuilt from parts

Continued on page 40





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Lysander in Detail

PICTURES BY MARTIN WALIGORSKI, IPMS SWEDEN

5. One of the landing lights contained in the Lysander's undercarriage spats. 6. Starboard side of the engine cowling and exhaust. 7. Looking down on the tail unit. All flying surfaces were canvas covered. 8. The underside of the Lysander's port wing. This shows the extent of the ailerons and flaps plus the position of the pitot tube and the attachment of the 'V' struts.





A rare picture of a preserved Lysander, G-BCWL was the civil registration given to the aircraft after it had been restored to flying condition at Booker aerodrome, High Wycombe, and before it was repainted as V9281:RU-M. Right. After a forced landing it was again rebuilt by the Aircraft Restoration Co, Duxford and was sold to Kermit Weeks' Fantasy of Flight at Polk City, Florida in 2002. (APN via A.W.Hall)

Continued from page 37

of other Lysanders. The Canadian National Aeronautical Collection at Rockcliffe restored a Mk.IIIA but this was sent to the Indian Air Force museum at Palam, New Delhi and another replaced it with the serial R9603.

Perhaps the most varied number of Lysander parts went to the Museum of Flight and Transportation in Vancouver BC where at least four were known to have arrived and one has been rebuilt out of the parts.

The USAF Museum has one Lysander at Wright-Patterson AFB displayed as N7791:AC-B but this may have been stored at the NASM Silver Hill facility where its future is uncertain.

The picture of Lysander G-BCWL seen on this page also has an interesting history. It was restored at Booker aerodrome, High Wycombe using parts of three other Lysanders and painted as V9281:RU-M. From there it went to Doug Arnold's Warbirds of GB Ltd at Blackbushe but had a forced landing and was rebuilt yet again as RU-M at Booker. Operated by the Aircraft Restoration Company Ltd, Duxford it was repainted as V9545:BA-C and has subsequently been sold to the Fantasy of Flight Museum, Polk City, Florida.

It is difficult to say exactly how many Lysanders remain either in static or flying condition today. Reference shows that 23 are in various stages of restoration so it is likely that a number will remain to remind historians of the significant part Lysanders played in World War 2.

PAGE 40 WESTLAND LYSDANDER WARPANT



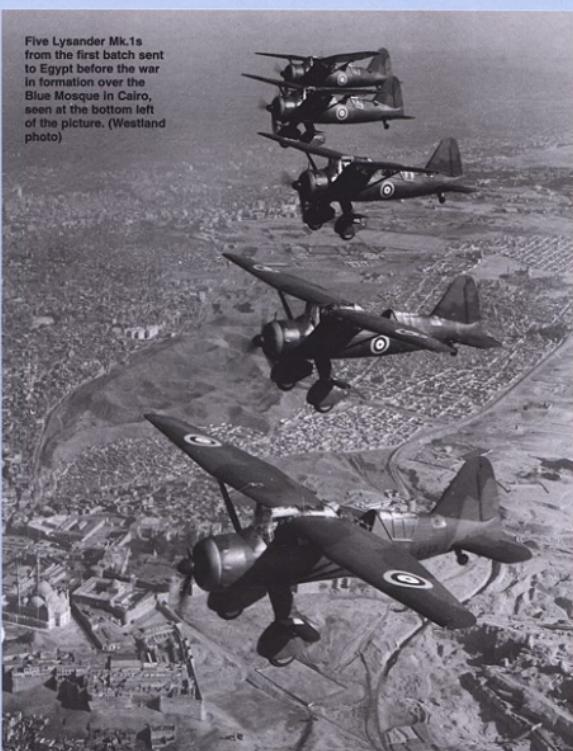
Lysander kits and accessories

Scale	Variant	Manufacturer	Reference	Remarks
Kits				
1:72	Lysander Mk.I	Airfix	AX02053	Complete kit
1:72	Lysander	Eastern Express	EA72285	Ex-Frog
1:72	Lysander Mk.III	Novo	NOV193	Ex-Frog
1:72	Lysander Mk.III	Pavia	PAV72048	Complete kit
1:48	Lysander Mk.III	Matchbox	PK007	Complete kit
1:48	Lysander Mk.III	Eduard	EDK9083	Ex-Gavia
1:48	Lysander Mk.III (SD)	Gavia	GA70401	Complete kit
1:48	Lysander	Italeri	IT0804	Complete kit
1:32	Lysander	Matchbox	PK504	Complete kit
1:32	Lysander	Revell	RV4710	Complete kit
Decals				
1:72	Lysander	AML	AMLD7202	Several squadrons
1:48	Lysander	Aeromaster	AMD48257	Pt. 1 collection
1:48	Lysander	Aeromaster	AMD48258	Pt. 2 collection
1:48	Lysander	Max Decals	MAX4803	Exotic Lysanders
1:32	Lysander	Max Decals	MAX3201	Exotic Lysanders Pt.1
1:32	Lysander	Max Decals	MAX3202	Exotic Lysanders Pt.2
Accessories				
1:48	Lysander	Czechmaster	CMK4130	Detail set
1:48	Lysander Mk.III	Eduard	ED408203	Interior detail
1:48	Lysander Mk.III	Eduard	ED48367	Exterior detail
1:48	Lysander	Squadron Signal	SQS9578	Canopy
1:48	Lysander Mk.I-III	True Details	TD48079	Wheels





Five Lysander Mk.1s from the first batch sent to Egypt before the war in formation over the Blue Mosque in Cairo, seen at the bottom left of the picture. (Westland photo)



When restoration was complete at Strathallan Lysander IIIa G-AZWT was painted in No.309 Squadron colours as V9441:AR-A. This picture was taken on one of its test flights with British Caledonian airline pilot Bernie Sedgwick at the controls. When the Strathallan collection was broken up the aircraft went to the Shuttleworth Trust and was repainted as a No.161 Squadron special duties aircraft V9367. (A.W.Hall)

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