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Imagery analysis report

Batajnica Aircraft Assembly Plant, Yugoslavia [redacted] 25X1

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BATAJNICA AIRCRAFT ASSEMBLY PLANT IN YUGOSLAVIA

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ABSTRACT

1. This is the initial NPIC report on the Batajnica Aircraft Assembly Plant, the second largest aircraft-related plant in Yugoslavia. The plant comprises 31 significant buildings and structures with a total floorspace of 43,447 square meters. A location map, three annotated photographs, eight small-format photographs, and two tables are included in this report. The cutoff date for information used in this report is 31 December 1979 and the date of the latest

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INTRODUCTION

2. Batajnica Aircraft Assembly Plant is situated on level terrain 12 nautical miles northwest of Beograd (Belgrade) on the southeast edge of Batajnica Airfield at 44-55-50N 020-15-30E (Figure 1). Batajnica Airfield serves as the test and flyaway field for the plant. Unlimited expansion is possible to the east.

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History

3. Initial indications of the impending construction of the Batajnica Aircraft Assembly Plant were observed at Batajnica Airfield Construction progressed at a rapid pace until By that time, the plant consisted of 16 major buildings with a total floorspace of approximately 25,000 square meters,[1] including all of the components necessary to begin the assembly of aircraft and the production of aircraft components. construction continued slowly on the remaining 15 buildings/structures currently at the plant.

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BASIC DESCRIPTION

Facilities

4. Batajnica Aircraft Assembly Plant (Figure 2 and Table 1) occupies an area of 49.1 hectares and is secured by a link fence. Access to the plant is restricted to four vehicle/pedestrian and two aircraft (taxiway) entrances. The plant comprises 31 significant buildings and structures with a total floorspace of 43,447 square meters of usable floorspace. These buildings and structures consist of an administration building (item 26), an administration/engineering building (item 8), a final assembly building (item 13), four subassembly buildings (items 5, 6, 15, and 22), a paint hangar (item 16), five shop buildings (items 10, 12, and 23 through 25), a steam/heatplant (item 4) with an associated POL facility (items 1 through 3), a compressor building (item 9), a security building (item 14), a pumphouse (item 20), a vehicle maintenance building (item 21), a bus terminal/cafeteria (item 28), a laundry (item 27), and eight storage buildings (items 7, 11, 17 through 19, and 29 through 31). An associated employee parking lot (Figure 2) is adjacent to and outside the southwest fenceline. Employee access to the plant from the parking lot is through the security

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building (item 14). An associated open-air engine test area (Figure 2) is in the northeast corner of the plant. It consists of a small circular hardstand with a locking mechanism for a portable engine test stand.

5. A functional breakdown of the plant floorspace present presented in the following table. 25X1

Function	Floorspace (sq m)	Percentage of Total Floorspace
Production	26,462	60.9
Administration/engineering	5,105	11.8
Production support	8,563	19.7
General support	3,317	7.6
	43,447	100

Aircraft Assembly Activity

6. The first identification of aircraft assembly activity at the plant was made when two Soviet-produced KA-25 (HORMONE) and six HORMONE aircraft fuselage shipping containers were observed. All eight HORMONE aircraft had departed the plant and no further evidence of HORMONE assembly has been observed. 25X1 25X1 25X1

7. The first indication of the assembly of indigenously produced aircraft at the plant when two UTVA-60/66 aircraft were observed (Table 2). Both the UTVA-60 and UTVA-66 are propeller-driven, single-engine, multifunction monoplanes; y. Since both the UTVA-60 and UTVA-66 are major products of the UTVA aircraft factory at Pancevo[2] (Pancevo Airframe Plant it seems likely that the UTVA-60/66 observed at Batajnica were being assembled rather than produced there. The UTVA-60 (Figure 3) is produced in five versions—utility/airtaxi (U-60-ATI), trainer (U-60-AT2), agricultural (U-60-AG), ambulance (U-60-AM), and floatplane (U-60H). All versions except the U-60H are capable of carrying underwing rocket pods, and all versions are equipped with a 270-horse power (hp) Lycoming GO-480-131A6 engine.[2] The UTVA-66 (Figure 4) is a follow-on to the UTVA-60 with an upgraded engine, the Lycoming GO-480-B1J6, and is produced in three versions—utility/glider towing (UTVA-66), ambulance (UTVA-66-AM), and floatplane (UTVA-66H).[2] Sightings of UTVA-60/66 at the plant indicate that one or both of these aircraft are still being assembled in limited numbers, probably one or two per month. 25X1 25X1 25X1 25X1 25X1 25X1 25X1

8. A second aircraft assembled at Batajnica is the indigenous GALEB/JASTREB (Table 2). The three production models have not been identified individually at the plant and are collectively designated GALEB/JASTREB in this report. All three variants—the SOKO G2-A GALEB, the SOKO J-1 JASTREB, and the SOKO TJ-1 JASTREB trainer—are major products of the SOKO Aircraft Plant at Mostar[3] (Mostar Airframe Plant SOKO, and it is likely that the GALEB/JASTREB observed at Batajnica are assembly rather than production items. Both the G2-A GALEB (Figure 5) and its export twin, the G-2A-E, are two-seat basic trainers equipped with the Rolls-Royce Viper II (MK 22-6) turbojet engine. Both have a secondary ground-attack capability and can carry rocket pods, bombs, or cluster bombs.[3] The J-1 JASTREB (Figure 6) is a single-seat, light-attack version of the GALEB equipped with the Rolls-Royce Viper 25X1 25X1 25X1

531 turbojet engine, three 0.5-inch Colt-Browning nose machine guns, and underwing attachment points for 250-kilogram bombs, cluster bombs, napalm tanks, rocket pods, or photo flares. Three versions of the basic J-1 JASTREB are the export version (J-1-E); a reconnaissance version (RJ-1); and its export twin, the RJ-1-E. The TJ-1 JASTREB trainer (Figure 7) is a two-seat version of the basic J-1 JASTREB.[3]

9. [redacted] A third aircraft assembled at Batajnica is the SA-341 GAZELLE (Table 2), which is produced under French license. The first GAZELLE assembly activity was observed at Batajnica [redacted] Limited observations since that time suggest that only a small number of GAZELLE are being assembled at the plant. The majority of the GAZELLE produced in Yugoslavia are produced at Mostar Airframe Plant. The SA-341 GAZELLE (Figure 8) is a five-seat, light-utility helicopter powered by a Turbomeca Astazou IIIA turboshaft engine. Armament options include rocket pods, wire-guided missiles, machine guns, flares, and smoke markers.[3] 25X1 25X1

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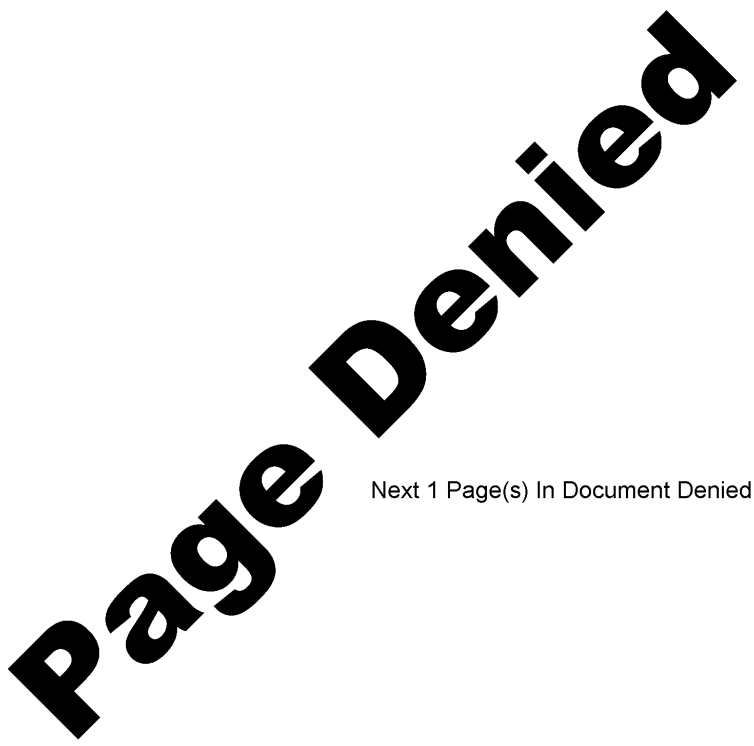

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Prototype Testing

10. [redacted] At least two aircraft have been prototype tested at Batajnica Airfield, the flyaway field for the plant. The first was the jointly developed Yugoslav-Romanian JUROM (ORAO). A JUROM was first observed at the plant [redacted] during the early stages of the JUROM program. A second JUROM was subsequently sighted [redacted] Although numerous production problems have plagued the JUROM program since its inception, preseries production could begin, probably at Mostar Airframe Plant, by mid-to-late 1980.[4] The JUROM (Figure 9) is a single-seat, light, multifunction combat aircraft powered by a Rolls-Royce Viper 632 engine. These engines will be produced in-country under British license at Sarajevo Aircraft Engine Plant [redacted]

11. [redacted] The second prototype aircraft tested at Batajnica was the UTVA-75 which was sighted at the plant [redacted] The UTVA-75 (Figure 10) is a side-by-side, two-seat, single-engine monoplane used for training, glider towing, and utility. It is powered by a 180-hp Lycoming IO-360-B1F engine and is capable of carrying bombs or underwing rocket pods.[5] Limited production of this aircraft began in mid-1977[3] at Pancevo Airframe Plant.

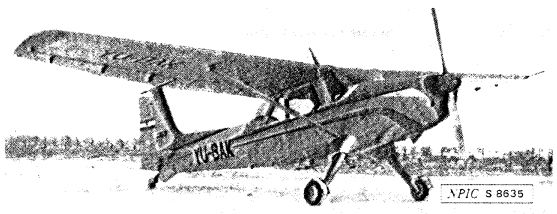

FIGURE 3. YUGOSLAVIAN UTVA-60 AIRCRAFT

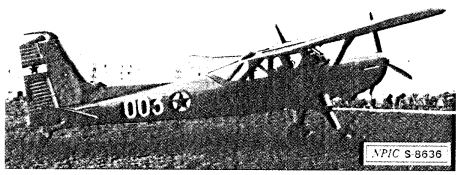

FIGURE 4. YUGOSLAVIAN UTVA-66 AIRCRAFT

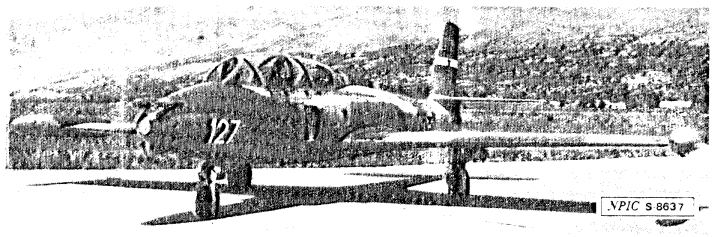

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FIGURE 5. G2-A GALEB AIRCRAFT

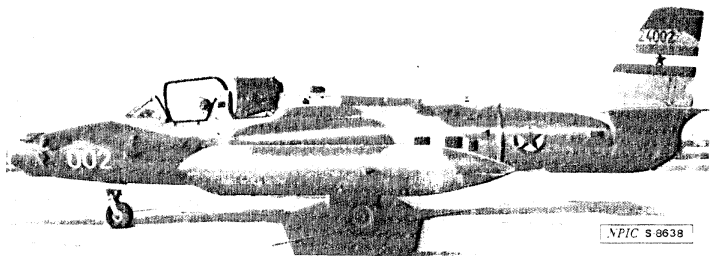

FIGURE 6. J-1 JASTREB AIRCRAFT

Aircraft Repair

12. [redacted] The repair of both Soviet and indigenously produced aircraft has been a major plant function since early 1975. Photographic observations (Table 2) of Soviet LI-2 (CAB) and MI-8 (HIP), as well as indigenous SOKO KRAGUJ and CIJAN KURIR aircraft, indicate that all of these have been repaired at the plant. Since early 1979, however, only HIP helicopters have been repaired at the plant. The observation of a Sudanese-marked C-130 at Batajnica Airfield (Figure 11) and the presence of camouflage-painted HIP C helicopters at the plant (Figure 12) indicates that Sudanese HIP C have been repaired at the plant since at least May 1979. Collateral information reveals that the Sudanese have reached an agreement with Yugoslavia for the overhaul and maintenance of the Sudan inventory of HIP C.[6] Six other aircraft have been observed in limited numbers (Figure 2) suggesting that repair of a variety of aircraft may be possible at the plant. These aircraft include Soviet-produced AN-12 (CUB), YAK-40 (CODLING), AN-2 (COLT), and MI-2 (HOPLITE); the Czech Z-326 Trener Master; and the indigenous Aero-3. However, the limited amount of plant coverage precludes confirmation of the repair of these aircraft.

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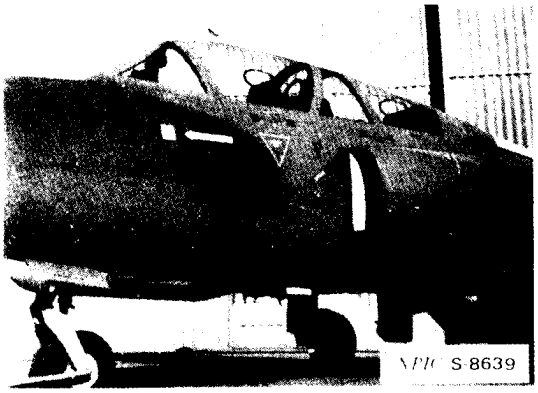

FIGURE 7. COCKPIT SECTION OF TJ-1 JASTREB TRAINER AIRCRAFT

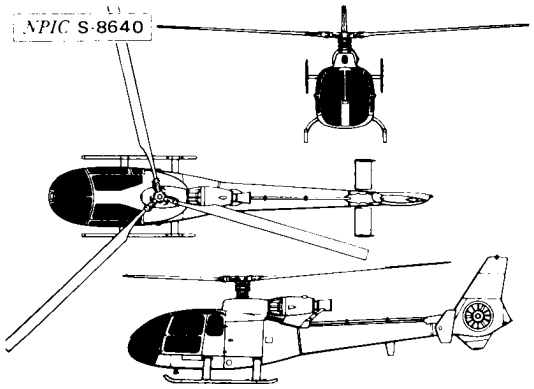

FIGURE 8. SA-341 GAZELLE AIRCRAFT

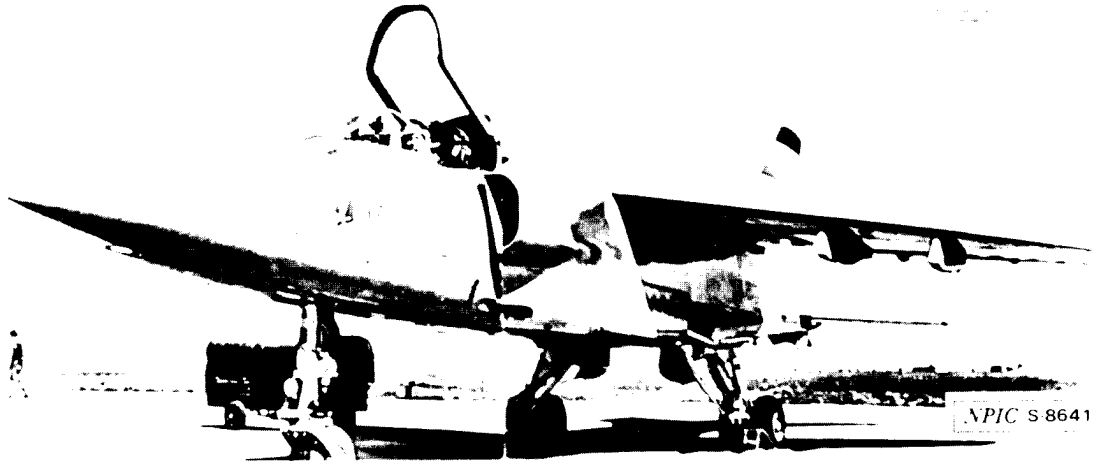

FIGURE 9. JUROM (ORAO) AIRCRAFT WITH YUGOSLAV MARKINGS

FIGURE 10. YUGOSLAVIAN UTVA-75 AIRCRAFT WITH UNDERWING ROCKET PODS

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Table 2.
Aircraft Sightings and Plant Activity at Batajnica Aircraft Assembly Plant Since June 1975

AIRCRAFT SIGHTINGS*

	Aircraft Being Assembled			Prototype Testing		Aircraft Being Repaired				Random Sightings (Poss Repair)					
	GALEB/ JASTREB	UTVA-60/66	GAZELLE	JUROM	UTVA-75	SOKO KRAGUJ	CAB	CIJAN KURIR	HIP-C	CUB	CODLING	COLT	Z-326	Aero-3	HOP-LITE
	3	1							4	1	1				
	3	2							3						
	1	1	2						4						
	1	1	1						3						
		3	1												
		3	1					1							
	1	2	2					2							
	1	1				1		2				1			
	1					1		2	1						
	1	1			1			2	1				1		
		1		1**			1	6	1						
	1	3					1	3	1						
		1		1**		1								1	1
		2					4***		1						

*Complete Coverages
**At Batajnica Airfield
***Fuselages

REFERENCES

[redacted] 25X1

Small-Format Imagery

Figure No	Source*
3	*The Aircraft of the World*, MacDonald & Co, London, 1965
4	*Jane's All the World's Aircraft*, 1971–1972
5	*Aviation Week & Space Technology*, 8 Apr 1968
6	*Aviation Week & Space Technology*, 8 Apr 1968
7	*Jane's All the World's Aircraft*, 1978–1979
8	*Jane's All the World's Aircraft*, 1978–1979
9	*Front Magazine, Belgrade, Yugoslavia*, 9 May 1975
10	*Jane's All the World's Aircraft*, 1978–1979

*All sources are UNCLASSIFIED.

MAPS OR CHARTS

US Air Target Chart, Series 200, Sheet 0251-16, scale 1:200,000 (UNCLASSIFIED)

DOCUMENTS

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2. Jane's All the World's Aircraft, 1971-1972 (UNCLASSIFIED)
3. Jane's All the World's Aircraft, 1978-1979 (UNCLASSIFIED)
4. DIA [redacted] *Foreign Aircraft Production Communist World*, Nov 79, p67 (TOP SECRET R [redacted]) 25X1 25X1
5. DIA [redacted] *Foreign Aircraft Production Communist World*, May 79, p50 (TOP SECRET R [redacted]) 25X1 25X1
6. NPIC [redacted], PIR-066/79, *Maintenance Program for Sudanese HIP C in Yugoslavia*, Aug 79 (TOP SECRET R [redacted]) 25X1 25X1

*Extracted material is SECRET only.

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REQUIREMENT

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