

## **MBB-209 Monsun: Few and Far Between**

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### **BÖLKOW MONSUN REPORT**

There is a well known and reasonably overworked axiom that says “airplanes generally fly the way they look” In otherwords, if an airplane good, it should fly good. That, of course, is not always the case, since there are a reasonable number of good looking airplanes that are born turkeys. By the same token, a frumpy looking airplane is almost always a frumpy flying airplane.

Exactly where the Messerschmitt-Boelkow-Blohm BO-209 “Monsun” fits into this collection of homolies is unknown, since it is one of the few airplanes that flies considerably better than it looks and, depending on who’s doing the beholding, is actually, not that bad looking. The plane is a curious combination of overall pleasing lines with aesthetically jarring hard corners represented by the rectangular fuselage and the “what’s-wrong-with-this-picture” aspect of only having the nose gear retract. From a purely personal point of view, even though the airplanes have been in the country for nearly 20 years (the first one was imported in 1971), the Monsun is just one of those machines that never reached up and plunked the proper heartstrings. Not that I dislike them, I just sort of looked over them. It wasn't until Carl Pascarell came down from a photo mission in Al Whitaker's airplane that I began to take notice: When Pascarell sings the praises of an airplane, it's probably not a bad idea to go see what he is talking about.

Whitaker's yellow and white 209 was one of the ten airplanes imported during 1971 and is unique in several aspects, not the least of which is the 180 horse Lycoming and Hartzell implanted in place of the original fixed-pitch 150 Lycoming. The plane is one of the small number of fixed gear Monsuns converted to handle a retractable nosewheel. Carl and I met Al Whitaker at Oshkosh and when Whitaker went back to Madison, Wisconsin, to continue lawyering, I gave up hope of ever sampling the airplane of which Carl thought so highly. Then, about a month later, I got a call from Art Patstone who was responding to a note I left on his airplane at Oshkosh saying he was headed east to visit some friends and wanted to know if I was interested in flying in his airplane.



*It looks just a little goofy with no nose gear, although it does look a little taildraggerish*

*This old black and white doesn't clearly show the rectilinear lines of the rear fuselage: it is nerly square.*

Patstone, as it turns out, is something of a Monsun buff and went so far as to editing a newsletter for those ten lucky owners in the United States to aid passing along helpful little tidbits of information. In fact, in walking around his airplane at Andover Airplex Airport on an obscenely beautiful, cloud speckled Labor Day, he was dropping so many Monsun tidbits that I had to verbally sweep up after him to assemble some of the historical facts about the breed.

According to Patstone, and what little information I could scrape together, there was only one production run of Monsuns supposedly totaling exactly 100 airplanes. Of those 100, 60 went to Sweden to be used as basic trainers. Ten airplanes were bundled up as part of an abortive attempt to market the airplane in the United States, but came to a screeching halt when the fickle fingers of fudged finances reached in and left a number of folks, including Messerschmitt, standing around with all the tools and jigs crated and sitting on a dock stranded while en route to central Georgia.

A lot of interest was shown by various manufacturing companies, including Piper, who flew the airplane and were impressed enough to consider picking up the bits and pieces and phasing the Monsun into their line. When the boys with the calculators got done figuring what it would cost to build in this country, they threw up their hands and walked away since the 209 appeared to be a losing deal. When imported, the airplanes were selling for \$14,500 which sounds like a bargain today but actually was fairly high when put against the price of a contemporary C-152 at about \$10,000 and a Cherokee at about \$12,500. According to the most accurate information, the manufacturers felt like it might cost as much as \$18,000-\$20,000 to produce the airplane, making it non-competitive in the two-place market.

Those ten Monsuns were left as orphans in the country, depending upon Europe for what few parts they would need for sup-port. Among them was Patstone's airplane which was the factory demonstrator and the only one to be equipped with the 160 horse engine and the constant speed prop. Making it even more interesting, his engine is an IO-320. In other words, it has a fuel injected 160, a fairly rare Lycoming variation.

Walking around the airplane with Patstone, I was being subjected to a firehose of information while my eyes tried to take in what they could of the structure. The fuselage appears unique simply because of its rectangular cross section but, if you look really close, the unit is unique because the rear corners of the fuselage are not as straight as they appear. For what are probably very important reasons, there is a very slight curve to all of the skins making the angles in the corners compound curves. I was beginning to understand why Piper backed away from the airplane's structure.

The 27.7 foot wing is nicely tapered and, at first glance, the flaps and ailerons would appear nothing out of the ordinary until one notices how much of the chord they occupy. The units then begin to assume new dimensions. The aspect ratio is higher than most aircraft, meaning the wing is narrow for its length which not only gives excellent efficiency, but means the flaps and ailerons have much more authority than on a more normally dimensioned wing.

I always prefer to fly the way God meant us to — with the stick in my right and the throttle in my left. As I began to board, I was disappointed to see there were no brakes on the right side of the cockpit. In a second glance I noticed there were no brakes on the left either! As I was trying to assess how well the airplane floated (we have lakes at both ends of the runways), Art pointed out the brake handle which is a small lever with a finger-grooved black knob laying horizontally on the console between the seats. Pulling up on the lever gave both brakes at the same time which left the ground handling duties to the steerable nosewheel. Satisfied, we weren't about to skip across Long Pond like an expensive flat rock; I saddled up on the right.

The engine was still hot so when we got ready to crank, Art mumbled the same thing all owners of fuel injected hot engines say — each word having something to do with "will it or won't it start?" Over the years those of us who own IO-360s in our Pitts have developed foolproof hot start procedures which involve leaving the mixture lean and not touching a thing. Just crack the throttle and crank. This procedure has never failed me in the past and didn't fail us this time. As the Monsun let us know it was waking up, Art smiled, obviously pleased at discovering a new starting technique.

As we taxied out, I was racking my brain trying to think of the last time I was in a nosewheel airplane with a bubble canopy and a control stick rather than a yoke. The one that immediately leaped to mind was the Siai-Marchetti SF-260. Later in the flight, there would be further mental mentions of the Marchetti. On the way out to the end of the runway (which didn't take long, it's only 2000 feet), I tried to hurry up my cockpit familiarization tour to figure out where everything was and was dismayed to find the airspeed marked in some system that initially made no sense. There were no orderly rows of numbers running around a black circular dial in five mile or five knot increments. Instead, the gauge looked more like a temperature unit on an oven in that its circumference was divided into large colored segments with a single giant number on each one of them. In the middle of the gauge, Art had a hand-lettered circle that translated the markings to miles per hour. I was halfway through the flight before I realized those big numbers in the segments were simply five knot increments and the big numbers were on the appropriate cardinal point, *ie*, the big seven is 70 knots. Gee, why didn't they just say so?

Threading throughout Patstone's nonstop commentary were glowing pronouncements of the airplane's wonderfulness at low air speeds and, as we rolled onto the center line, he said he'd like to make this takeoff and show me "something:" Now bear in mind that at this point I still saw the Monsun as a rectangular European variation of a Tomahawk with the tail in the right place. There-fore, as Art yanked us off the ground at 45 knots and then announced he was going to do a hard 2G pullup, both hands came off my lap and headed for the controls. As he sucked the nose up into what seemed to be a made-for-an-accident attitude and held it there, both palms instantly grew cold, sweaty spots. But the airplane did nothing — it obediently held 60 knots and clawed for altitude. Even without my hands on the controls I could tell the Monsun was rock solid. This isn't a European Tomahawk, folks. Later, I was to find myself perfectly happy doing the same maneuver.

Satisfied he had impressed the hell out of me (he had), Art stated it was now my airplane and I was free to go and do what I wanted. Almost as soon as I wrapped my right hand around the stick and bent the airplane around to head toward the practice area, I had the feeling of flying a much larger airplane. We had minor turbulence below the cloud deck and the airplane behaved as if it had a much heavier wing loading than it actually did.

Holding 25 square, the best rate of climb we got out of the airplane was in the neighborhood of 1200 feet per minute during initial climb, but that was somewhere down around 75 knots which puts the nose at a ridiculous angle. I was much happier to put the nose down to a solid 110 knots where I could not only see a lot more, but we were still going up approximately 600 feet a minute.

We had a fantastic day to go flying. The broken deck at about 4000 feet separated two horizontal layers of absolute unlimited visibility. You could see 100 miles on top of the deck and 100 miles beneath it — a condition that is all but unheard of in New Jersey. Normally our puffy CUs are actually toxic whip cream floating on a hot chocolate stew of green air. We had earned that day by weeks of unrelenting rain and the Monsun was the airplane to let me enjoy the weather.

I took my time feeling out the airplane as we climbed up between the mini-CUs and had the feeling I was going to like this airplane. Once on top of the deck I pushed the nose over, leaving the throttle forward to see what kind of speed we would get at the power available (which was only about 65 percent). At that power, we were showing 130 knots which my trusty calculator said was about 152 miles an hour. That speed fits nicely with the factory literature's claim of 158 miles an hour and Art's comment that he always used 150 for flight planning purposes. With 39 gallons hiding out in the wings under those flush mounted caps, that gives something like 600 plus miles of absolute range.

Everything I had read about the Monsun during the period it was being introduced leaned heavily upon aerobatic capabilities. Art, however, said the airplane was really never truly approved for aerobatics and, even if it had, the aerobatic weight was such the Monsun could only carry one person and a few gallons of gas to stay under the aerobatic category weight limit. Keeping that fact in mind and knowing that we were well over the aerobatic limit, I made sure to avoid purposely doing any aerobatics. Unfortunately we did encounter some severe turbulence at the

edge of one of the CUs necessitating high angle, unusual attitude recoveries sometimes segmented into 90 degree arcs.

In normal flight, the controls initially feel quite light when, in reality, what I was feeling was an airplane with relatively solid breakout forces but almost ideal response. When control was displaced, the airplane's reaction is instantaneous, giving the impression the controls are light because the airplane has reacted almost immediately — which is not always the case with American spam cans.

Curious about those long wings and their adverse yaw, I put my feet flat on the floor and racked the stick from one side to the other. I had expected a reasonable amount of adverse yaw but got practically none, proving the machine could probably be flown with the feet removed from the control equation — a nasty way to go flying but indicative the airplane is well-designed.



*Most of the ten Monsuns imported had a 150 fixed pitch and fixed nose gear. It's unknown how many are still registered.*

While we were poking around in the airplane's envelope we were flying through one of the most picturesque skylines of big and little puffs which combined with the absolute unlimited visibility of the airplane, to give us one of the more beautiful days for flying that I've seen in the last few years. Every little nuance the air had to offer was fed through the controls to my right hand. I was impressed by the airplane's control feel, not only the response, but the relative balance between the three axis. Obviously the folks at Messerschmitt-Boelkow-Blohm had done their homework.

Pulling the, power back, I had expected the airplane to deaccelerate a little faster than it did but no big deal since dropping the nose gear out at 110 knots acted as a very effective speed brake. I held the nose several degrees above the horizon as I edged the stick back, patiently waiting for the airplane to stall. When it did stall, the edge of the stall was a little sharpish which, had I known the airfoil was a 64 series Laminar, would have surprised me. The

airplane tried to roll right fairly briskly, so I tried an accelerated stall to the right from about 45 degrees and the airplane once again tried to tuck to the right. I did the same accelerated stall in a left turn and the airplane again (surprise!) wanted to tuck to the right. I think what we have here is a minor rigging problem.

Just for the hell of it, I flew the airplane down to the edge of the stall then increased the power and dropped the nose just enough to bring it a couple of knots out of the stall but leave it in hard buffet. I began making gentle turns left and right and then started making hard turns left and right — soon realizing if the wing was sitting on the right side of the lift curve it was perfectly willing to do anything asked. I spent more than the average amount of time slugging around at much less than 60 knots in bank angles as high as 45 degrees with absolutely no trouble. It was really impressive to see how positive and coordinated both the rudder and elevator were in this exercise since a lot of airplanes wouldn't have been anywhere near as kind as the 209.

It didn't take long before I began inventing reasons to keep the airplane in the air to fly a little bit longer. One of these reasons was to do a series of stability tests — the primary one being to pull the nose 15 knots off trim speed and let go. After four of five cycles, the Monsun had fairly well damped out, but was still searching up and down in a very long period phugoid that would eat up about 300 feet in both directions and showed no indications of damping out past that.

We were up high and close to the airport, so I glanced over at the airspeed noticing the red line was up in the 180 knot range with the yellow arc extending up to around 140 knots. With those kinds of numbers available, I just brought the power back, stuck the nose down and watched the vertical speed indicator wrap around to about 2500 feet a minute down — putting us back at pattern altitude in a fraction of the time it would have taken us in some sort of high-wing

spam can. Those who haven't flown air-planes with aerobatic capabilities and, therefore, high red lines can't appreciate how nice it is to be able to simply poke the nose down and let the speed run up without worrying about overstressing the airplane in turbulence or overrunning the red line. This ability to maintain altitude until close to your destination is really handy and also enables you to stay up in the smooth air longer.

It took a little work to get the airplane down to 110 knots so we could throw the nosewheel out (which, from that point on, acted as a great drag brake). Flying downwind at about 90 knots. I chopped the power opposite the runway, bringing the speed down to the 75 knots indicated that Art recommended. I toggled the flaps about half way out, stopping them on the high side of the 15-degree extension mark on the indicator between the seats. I was reasonably certain those long wings would let the airplane glide like a Schwietzer sailplane, so I moved base leg out a little bit to give some room. Turning final, I ran the rest of the flaps out down to 35 degrees and found I had underestimated the effects of those big boards. The flaps not only added a lot of drag, but brought the airplane out of the air like an anchor.

Throughout the entire flight, I had been mindful of the elevator trim which is a wheel between the seats that was much more powerful than most aircraft. However, even in approach mode I found it no problem to just tweak the wheel a little one way or the other. During the entire flight, it's doubtful the trimwheel moved more than 30-45 degrees full travel because it is so powerful.

Walking around the airplane on the ground. I had noticed the spring loaded tailskid on the fuselage and Art had mentioned it's quite common for pilots to drag the tail on landing so, as we approached the numbers and flared, I was careful to notice where the nose was so I wouldn't overrotate once the mains touched. The airplane sat in ground effect and gave plenty of time to maintain an attitude as I held it off until the mains forcefully squeaked on and the nose stayed in the air. Lowering the nose for a go-around, Art said "watch this" and reached over and shoved in the throttle. As he did, we levitated off the ground in level attitude because the flaps were fully extended. The airplane didn't seem to care and just kept on trucking. We had only about 50 feet of altitude when Art reached over and toggled the flaps all the way up with a single motion, rather than milking them in slow-ly. The airplane was accelerating so fast that as the flaps came in, the Monsun gained the necessary speed. Even though I was flying the airplane, it did nothing to let me know they had been retracted. That's impressive. Subsequent landings confirmed what I had seen on the first landing — the Monsun's an absolute pussycat to land and capable of tremendous precision.

On one approach, Art showed me how effective the flaps actually were by maintaining nearly 800 feet of altitude onto a very, very short final — so short in fact, I wasn't certain we could even dive and hit the numbers, much less land on them. At that point, Art ran the prop pitch full in and simply dropped the nose. The drag on the airplane was so fierce with full flaps that we picked up maybe 15 knots and then stabilized at that speed while we were coming down at a truly awesome angle. I monitored the airspeed while he flared at the bottom end and noticed it obediently came right back to proper approach speed while he was bringing the nose up to level for the runway. If those aren't enough ways to lose altitude, the 209 also slips like a fiend with the flaps out. This is one airplane for which there is no excuse in overshooting a runway.

After a few go-rounds on our 2000 foot strip, we were about 3/4 of the way down the runway on the final one. I said "Okay Art, you better get on the brakes;" totally forgetting neither one of us had brakes. And he laughingly reminded me I had the brakes between the seats and I reached down to pull them up smoothly, slowing to a halt- before either one of us had to don our water wings.

The MBB-209 (too much is being made of the Messerschmitt lineage) is, to put it bluntly, one hell of an airplane. The Monsun flies like a heavy airplane, has the sporting spirit of a small fighter and is a great 150 mph cross-country machine. Unfortunately with only ten in the country (and only eight of those are still flyable), that puts the airplane out of the reach of most of us. However, it's intriguing to consider what has happened to the other 90 air-craft which were produced and are still in Europe. Reportedly over 60 of the aircraft were being used as trainers for the Swedish Air Force. Whether these are 150 horse or 160 versions or possibly even the 115 horse model is unknown. What is equally

unknown is whether the Swedes are still using them and how soon they will be disposed of the trainers. Is there a possible stockpile of these aircraft soon to be available to civilian pilots or have they already been surplused and absorbed into the growing Europe-an sport aviation market? If they haven't been turned loose yet, who knows? Maybe the time will come when the American dollar is once again worth something and we can bring a few over here. Turnabout is fair play, considering the number of our air-planes going abroad.

The airplane presents a tremendously wide fun utility ratio and its usability is expanded even further considering the wings are designed to be folded alongside the fuselage so the Monsoon can be towed home behind a car with the nose gear retracted. Art states folding the wings is not simply a matter of pulling a pin here and there. He says it's a relatively major operation that makes doing it on a daily basis impractical.

Will we see more 209's flitting around in American skies in the future? Maybe, but only if the American dollar turns around. Will we see the airplane produced? Probably not, unless some European consortium (or maybe even MBB itself) decides to get back into the little airplane business. If they do, they have a fine design and if the price could be kept within reasonable limits they would probably find a ready market worldwide.

There is always Art Patstone's airplane. Will he sell it? Not only would he not sell it, he won't even discuss the matter. So don't bother calling. I already have. **BD**

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#### **SPECIFICATIONS Bo-209 Monsoon**

		0-320	10-320	0-235	
Engine Lycoming					
	HP	150	160	125	
Performances:*)	mph	200	200	200	
Never exceed speed					
Maximum speed, SL	mph	168	170	146	
Cruising speed	mph	155	158	139	LOAD FACTORS
(75 percent, 8200 ft					ALL MODELS
MSL)					NORMAL- +3.8G
Rate of climb, SL	ft/mn	1040	1180	748	
Service ceiling	ft	16,400	17,000		-1.9G
Take off roll	ft	620	590	820	
Landing roll	ft	660	660	660	UTILITY- +5.0G
Range, without reserve	SM	623	747	685	-3.0G
Maximum endurance	h	4.25	5.0	5.15	AEROBATIC-+6.0G
Fuel consumption	gal/hr US	8.70	7.40		-4.5G
Fuel capacity	gal US	39.2	39.2	39.2	

Dimensions and weights:	ft	21.6		
Length				
Height	ft	7.3		
Span	ft	27.7		
Wing area	sq ft	110		
Aspect ratio		6.8		
Empty weight	lbs	1045	1067	925
Fuel and oil	lbs	236	236	236
Baggage, parachutes and additional equipment	lbs	187	165	173
2 occupants	lbs	340	340	340
Gross wt.	lbs	1808	1808	1674
Wing loading	lbs/sq ft	17	17	
Power loading	lbs/HP	12.5	11.7	

\*) The performances are based on the equipment with retractable nose wheel.