

FLYING THE NORTH AMERICAN MUSTANG



By Kieran Timmons

Flying the North American P51d Mustang has been at the top of my wish list for years. I believe the Mustang is the greatest plane of the Second World War and it played a major role in liberating Europe from Fascism. It was the first aeroplane to use a laminar flow wing and its radiator installation was so advanced it actually provided nominal thrust. With a combat radius of over 1,000 miles using drop tanks it routinely flew missions of 6 to 7 hours and contributed to the destruction of the Luftwaffe thus allowing the allies total air superiority as the war came to its inevitable end.

The Mustang came about as a counter proposal from North American Aviation to the British to design an alternative to the P40 which they had been requested to build under licence. On 24 April 1940 a telegram was sent to North American to submit a proposal for an alternative aircraft and 24 hours later the engineering team presented an outline design for a mass produced single seat fighter based on the same Allison engine used in the P40. The prototype rolled out a mere 102 days after the contract was signed. However it was not until a British test pilot suggested fitting the supercharged Merlin engine in place of the original Allison engine that the legend was born.

Many years ago I read Chuck Yeager's autobiography and my admiration for this special aeroplane grew. This was an air superiority fighter which routinely took off from England and flew to Berlin and back (including negotiating some business along the way). I'd seen the movies and read the books and after years of

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dreaming I finally decided it was time to fly this ultimate piston aircraft. It is the end of October 2010 and the Florida temperature has cooled 6 deg centigrade from yesterday's seasonal record 33°C. I am sitting in the plush briefing room of Stallion51 in Kissimmee Airport with instructors John and Steve who are preparing me and another amateur pilot, Mark, to fly the pair of TF51's, the two seat version of the P51. Also in the room are my brother Paul and Mark's wife Cheri. I am to fly Crazy Horse Two the polished aluminium twin of the silver painted Crazy Horse.

John leads the briefing and is assisted by Steve. The briefing is precise but relaxed and really positive. Safety first, fun second and learning third. John takes us through the planned flight. We will take off as a two ship "Mustang flight" with Steve and Mark leading in Crazy Horse (Mustang 5) and John and me following in Crazy Horse2 (Mustang 4). Once away from the pattern we will separate to do our own thing before re-joining the pattern (no "circuits" here) as a pair, this time with us in front. Briefing over, we descend to the immaculate



hanger where the twin horses sit nose high gleaming in the bright sunshine. Although twins they are not identical aircraft;

Crazy Horse2 is fitted with wing mounted guns and the bubble canopies are slightly different. We do a walk around and pretty soon I am strapped in to my parachute and harness.

John shows me around the cockpit and we

verbally rehearse the bailout procedure which is to duck while the canopy is discarded, release the seat harness, dive over the right hand side and pull the ripcord out to full arm's length. I put on the blue helmet and John plugs me into the intercom. He then climbs into the front seat and we are towed out to the sun soaked ramp where Steve and Mark are already waiting in Crazy Horse. After the usual checks the engine is fired up and we are ready for taxi.

As John goes through his procedures I consciously relax my arms and legs and breathe deeply, I don't want to feel any tension when I take the controls. Today we are using runway 33 so we have a long taxi from the threshold of 15 to the South end of the sun scorched field. Cleared across 33, right turn onto taxiway Alpha then cleared to cross 24. As we taxi down Alpha John calls "you have it". I begin to press the rudders first left and then right and the plane S-curves

down the taxiway. I'm surprised at how good the view is to either side as the nose swings but I become aware that I'm turning too much and need to "increase the wavelength" of my sine wave as we are falling behind. I'm

aileron but six degrees of right rudder. After the run up we wait while a Cherokee is cleared ahead of us and we then line up ready for take off. John will do the take-off as I can't spare a million dollars just now and take-off presents so many opportunities to wreck this beautiful bird. This is my first taildragger flight but I have studied the many ways things that can go wrong in the ground roll and I'm happy to sit this one out. First you've got the precession from the massive prop as the plane pitches nose down to level attitude to run on the mains, then the

beginning to get the hang of it when John takes over and we soon catch up with Crazy Horse. We turn into wind at the holding point r/w 33, our backs to the runway. I note that John sets the trim as zero pitch, zero

slipstream tries to run you off the runway not to



Stallion's Crazy Horse 2 inverted flight

mention the asymmetric prop effect with the nose pointed up and then there's the torque effect trying to roll the plane. If you fail to catch this yaw the aircraft will rapidly swing as the yawing moment exceeds the rudder's ability to correct. Not being able to see over the nose doesn't make life any easier.

Crazy Horse is using the left hand side of the runway and we are on the right, slightly behind and upwind of Steve. We are cleared for takeoff and John moves the throttle forward, keeping just behind Steve. At 55 knots the tails are up and at 100 we are flying in ground effect with the gear coming up. As we climb Steve turns gently left and we follow. John calls "you've got it" and I feel John relax the stick. The Mustang feels smooth and stable. Out of the pattern John takes control again and moves very close to Crazy Horse. What a

beautiful sight, the big silver-blue bird just ahead off our left side.

As I look in admiration Crazy Horse slowly floats above us and the huge platform fills the canopy as it floats gently from left to right over our heads and then back again until we are again in the slot to his right. In fact it is we, as wing man, who is moving relative to Crazy Horse as the lead ship flies straight and level.

John moves us away from overlapping wings and then says again "you've got it". I take control and immediately begin to porpoise up and down in slow motion as I over-control. I make ever smaller movements of the stick, while trimming constantly, and maintain a

fairly stable position with the lead ship. As we drift horizontally I use rudder to steer us to position whilst

"OK take us away to the right". I press the right rudder quite firmly and watch as the gap increases then I bank away to the right. We are off to do our stuff. I

trying to keep the wings level. It needs a good firm push of right rudder to keep separation but very little left to float in towards crazy horse. My eyes are fixed on Crazy Horse but for a split second I notice we are in a slow left turn before I refocus on the lead.

I'm beginning to get the hang of this and am flying in reasonably close formation with a Mustang when John says "OK take us away to the right". I press the right rudder quite firmly and watch as the gap increases then I bank away to the right. We are off to do our stuff. I am about to get the



Crazy Horse 1 & 2 playing above the clouds

chance to feel how a Mustang flies. We are South of Orlando and the view is predominantly yellow/brown and green with many lakes as we head to a military training area which is generally off limits but accessible to Stallion51 when the military are not active. I'm a low hours, single engine, VFR, recreational pilot who has usually flown Cessna singles and now flies a

Diesel powered Robin DR400 at Skytrace in Weston. This is my first time in a warbird and I try consciously to watch and feel what is happening.

Unlike modern aerobatic aircraft, such as the Red Bull racers, the Mustang is very stable and smooth. It flies on rails and does what you ask, but it is heavy and I find I'm constantly using pitch trim and a little rudder trim even through short manoeuvres. The power from the roaring Merlin up front sounds impressive even with ear plugs and a helmet. We do some

aileron rolls, smooth and sweet! then a couple of loops, some wing over's and steep turns (normally 60 degree for me) then with John's blessing I crank it over until the wing is pointing straight down, trimming all the way. A couple of barrel rolls and split-S manoeuvres follow before we try some stalls. The stall is quite gentle but with a rapid left wing drop, no worries at this altitude. We do a "base to finals" stall at high level so I can see that yes it will kill you on final as the left wing ploughs a furrow in the runway. Let's try inverted, I half roll left and level the wings with the hazy horizon. My shoulder harness is not quite tight and I part company with the seat by a few millimetres. I play with roll and pitch for a moment and then half roll upright again. The Mustang can not fly inverted for more than 10 seconds without suffering oil pump starvation. John takes control and starts pulling G's.

Every pilot is familiar with the mild effect of 2 g's (from 60 degree turns) and as John pulls 4g's it feels much more than double that. The force was not sustained long enough to notice grey out but certainly the "heaviness" was profound.

I'm flying again, the Sun is shining and the sky is ours. My left hand is on the big (high) throttle grip of a Rolls Royce Merlin engine rated at around 1500 HP and we are being filmed by 3 onboard cameras – so if all goes well I'll be able to relive this back home. (If the cameras fail that's just considered bad luck!).

I just can't get the grin off my face!

Time to return, we head west and John takes over as I scan the horizon. I see Crazy Horse, a little black dot at 11 o'clock slightly above us and call it out to John. We start a right hand



rate-1 orbit. Steve confirms he has us and turns left to approach our orbit on his right and slowly closes making his turn tighter and tighter as he matches our speed and height. Now he's slotted in below us to our right and close behind. John counts down and on "one" both aircraft roll out on a heading to take us back to Kissimmee.

"You've got it". I make all turns and descents slow and smooth so Mark can stay in formation. I recognise the landmarks as we make our way back and we line up with the runway. As we approach I hear "I've got it" and follow John on the controls. We are over the centre line of runway 33 at 1,000 feet ready for a "run a break" approach and John keys the mike "confirm left break?" "Mustang Flight – left break 33 you're no 1" confirms the tower. (You don't want confusion as to which way to break!)

We're over the runway mid-point and abruptly John pulls the stick up and left and seconds later Steve follows to slot in behind us. "You've got it"

I'm turning left onto downwind for 33 at 130 knots. "Power back a little" and we set up a gently rate of descent. John goes through the downwind checks while I watch the speed and height and try to maintain a good pattern. We slow to 110 and turn



base and onto final and I roll out on the centre line "more rudder" and I see the nose is not quite straight down the runway. "Power back.... back more" we slow to 100 knots and I gently pull the lever back until John calls "Power back all the way" I remember to make sure my heels are on the floor with my toes well away from the brakes. My focus is on the runway and our relationship to it and I continue pulling back until this "big beautiful doll" settles on terra firma and John takes over the tricky part, the roll out. As we slow I look forward and try to judge our position by focussing on the runway edges in my peripheral vision. We leave the runway and taxi the very short distance to Stallion51's hangar. We stop in the same position as we started an hour ago and shut down.

Now that we are stopped and the air is quiet I notice the heat and realise I was not only unaware of the temperature but felt completely comfortable in the back seat throughout. Although there is more space in the front seat I am not sure how six to eight hours over enemy territory in this small environment would feel especially given that the sky held the threat of sudden death at any time. But then the pilots were mere kids of 21 or 22 and at a good deal more than twice that age I can only guess at how that felt.

We return to the briefing room and John plays some film from the other Mustang.

John signs my logbook and we are presented with photos and certificates (mine now hangs proudly in my hallway). The video is a great reminder of a great day and you can see some still grabs in this article.

... a fantastic once in a lifetime experience. Every pilot or aviation enthusiast would thoroughly enjoy this trip.

Stallion51 are currently researching an upgrade of their video equipment but currently issue US standard video which I had to have converted. The soundtrack does not resemble the fantastic roar of two Merlins but Paul did get a sense of it using a small camera and I have posted this on YouTube:- <http://www.youtube.com/watch?v=CVqchnYzYvw>.

It is an enormous privilege to experience something of a history which unfolded before I was born but

which threw the world into a turmoil the result of which is still unwinding today.

So I've flown a Mustang, how good does that feel? Now I know. If you are keen and have the resources Stallion51 will

train you, check you out and sign you off on a P51. Meanwhile I think I'll get some tail dragger time and dream of what might be! The people at Stallion51 are a great bunch and they go that extra mile to ensure that your once in a lifetime Mustang flight is a fantastic experience. While I'm sure John was following me on the controls at critical times I never felt his input and I'm sure that as long as I did nothing abrupt or unexpected he was happy to left me fly. Every pilot or aviation enthusiast would thoroughly enjoy this trip. It is not cheap (you could have a good two week holiday for the price of one hour) but then private pilots know we don't fly to save money. Think of it this way, it is less than the cost of two pints of beer a day for one year. Now that makes sense! I wish to thank John, Steve, Julia in reception and the ground crew for a wonderful day and for making us feel special. I hope I will be one of the 1/3 of those who return to fly the Mustang again.