MIDGET MUSTANG - MODEL M-I

IMPORTANT INFORMATION   MANUAL REVISIONS

AVOID CONTINUOUS OPERATION AT 2600 RPM.

This is to avoid a harmonic vibration condition.

Fuselage Transverse bulkhead between stations 117.5 % 182.0 should not have a access hole in it. With the elemination of the access hole it will be necessary to rivet in the bulkhead after all other components are installed. Also, a AN 366-1032 plate nut must be used for fin rear spar lower bolt attachment.

Hole Reaming Technique. Where a reamed hole fit is called out it should be recognised that all AN bolts will be slightly undersize. It is therefore necessary to use a adjustable reamer, or a solid reamer that has been ground undersize. Especialy on the wing attach bolt fitting it is necessary to fit the individual bolts as they may each vary in diameter.

Fuselage Forward top skin (sta. 52 to 73.75) is a structural item and must be attached securely. Proper dimpling and countersinking, and the use of AN 366 plate nuts is required.

Control Stick top 6 inches should angle forward 30°. This is best acomplished by cutting out a "V" section and welding. This is a "Crashworthiness" improvement, and is important.

Tail Wheel forward attach bolt at sta. 177.5 is in need or rienforcement as rough ground operation has caused cracks at the bolt bracket attaching rivets. A rienforcing "washer" type plate of either .032" steel or .063" aluminum should be riveted to the belly skin around the tail spring attach bolt. This rienforcement should be aproximately 2 in. diameter and is to be a ZERO clearance fit on eigher the bolt or fitting bushing, whichever protrudes through the skin. When the newer "rod" type tail wheel spring is used the above rienforcement is not required.

Forward Facing fuel tank vent as per fuel system schematic is required on all gravity fuel systems.

TECHNIQUE TO FILE EDGES OF ALUMINUM SHEET:

Using a mill or smooth file held square with the edge of the sheet, the aluminum is dressed down untile the cut edge is completely shinny. Experience will show the amount of pressure to exert on the file. Too mucy pressure will result in galling. Too little pressure will take too mucy time. This dressing down of the edge will leave a slight burr on the edge of the sheet. This burr is removed by running the file lightly down the edge, with the file held at a 45 degree angle. It is not intended to radius the edge of the sheet. If the aluminum is protected with a sheet of paper the paper must be removed prior to the deburring operation or a burr the thickness of the paper will remain.

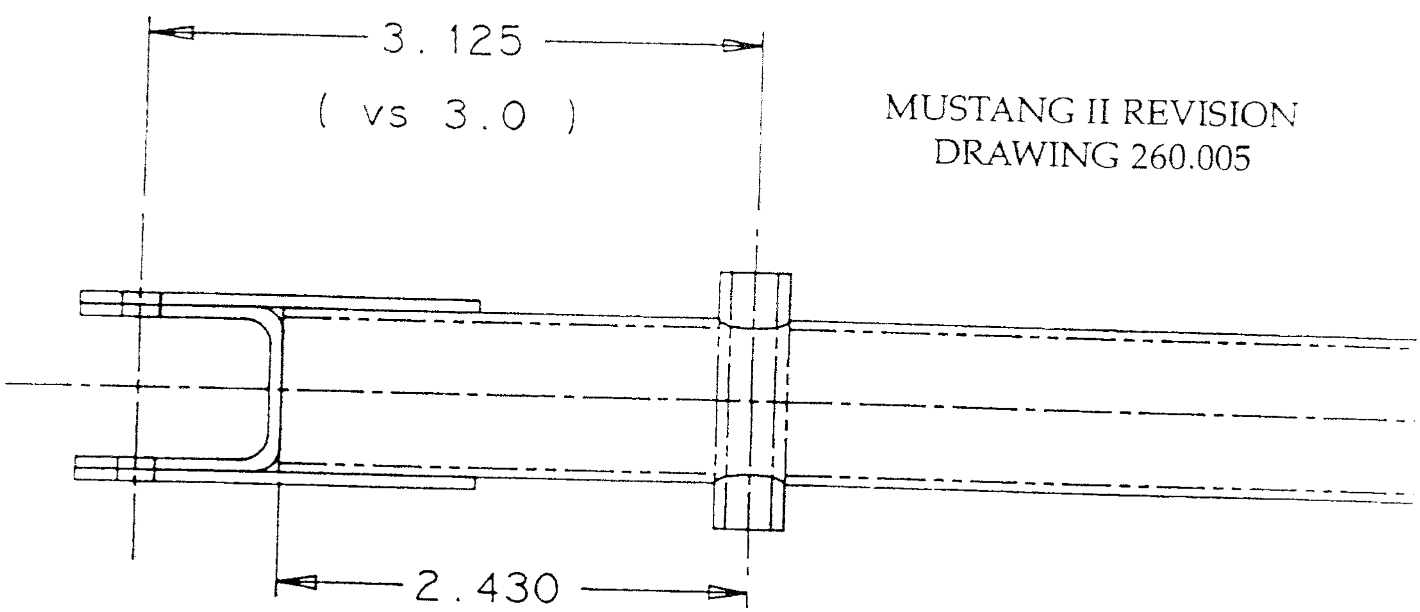
(continued from page 4)

Midget Mustang Aileron & Flap Attachment – In a previous newsletter a builder asked about Midget Mustang aileron and flap attachment sequence. We have found that it is easiest to install the flap first, and then the aileron.

Rudder & Elevator Attachment – The best way for removing and installing the tail group control surfaces is by using a ratchet with extensions long enough to reach the hinge bolts from the tip. First the elevator and rudder tips need to be removed. A slotted screwdriver is then used to hold the nut (or bolt if reversed) on the inboard side of the hinge. If the castle nut is used on the inboard side of the hinge it is easier to hold than the bolt.

Midget Mustang Gas Tank Hold Down – The turnbuckles should be adjusted so that the tank is close to where the top skin will be before attaching the skin. A welding rod or coat hanger with a bent end can then be used to tighten the turnbuckles after the skin is attached. The coat hanger or welding rod will determine how tight the tank will be wedged in automatically. It should be "snug" enough to prevent vibration and movement.

Riveting – A builder asked about cracks developing while dimpling for an AN509 screw. Cracks are **never** allowed. A properly deburred hole should not have this problem. If after proper cleaning of the hole it cracks while dimpling, try using a different #30 drill. Drill bits wear over time and become undersized. If this does not work, you can try a #29 drill bit.



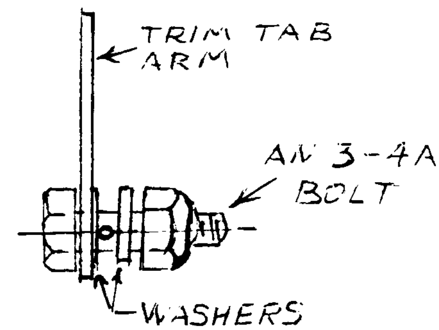
MUSTANG II REVISION
DRAWING 260.005

Control Stick Assembly

P/N 260.102

DWG. NO. 36 - TRIM RAB: CONTROL WIRE ATTACHMENT.

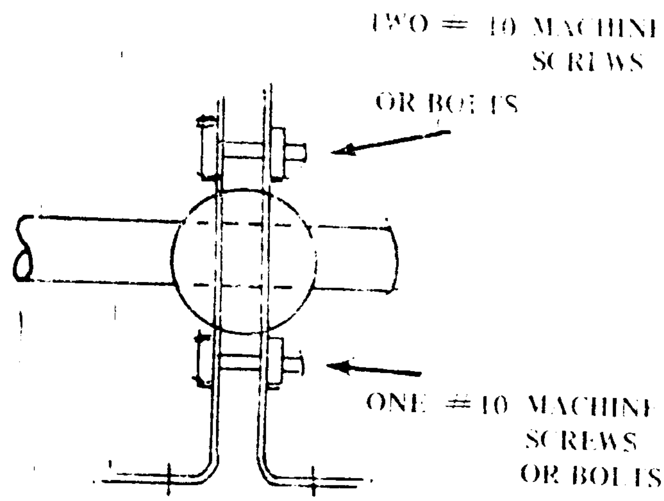
The .062 dia. hole drilled in the AN3-4A bolt for attaching the trim control wire is to be located .125" from the bolt head. The trim tab control arm is located between the bolt head and the wire. The control arm must be free to swivel without binding. A AN960-311 or 316L washer may be used to reduce excessive play of the arm. A AN960-316 washer and AN365-1032 nut are used to complete the installation. The nut is drawn tight to secure the control wire.

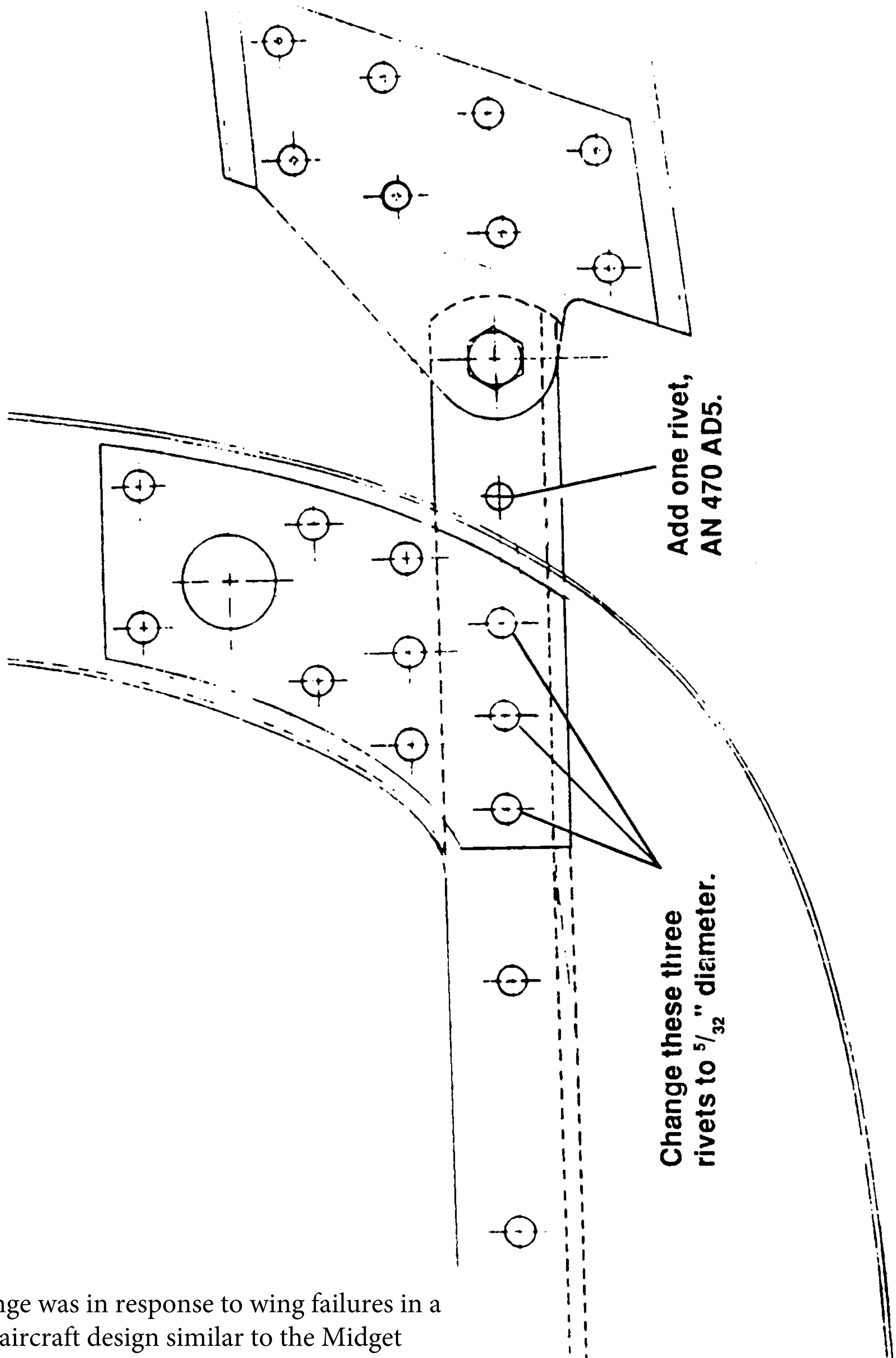


DWG. NO. 33 - AILERON TORQUE TUBE INBOARD MOUNT.

A builder suggested alternate method of mounting the aileron control torque tube at the fuselage end. (Ref. dwg.33) This method uses a MOONEY aircraft part which is a micarta ball of aprox. 1½" O.D. with a 3/4 dia. center bore. The micarta ball is mounted by means of two simple angle brackets three in. long fabricated of .040 al. with a 1" dia. hole for mounting the ball. On in stallation the mircarta ball is self aligning on the tube. Tightening the 3 clamping bolts makes this a rid- gid installation.

The micarta balls are available from BUSHBY AIRCRAFT INC.





Midget Mustang Station 99.35 Revision
Left side shown. Modify both sides.
Detail from drawing No. 9

Add reinforcement of 0.063 2024-T3 aluminum, 1 inch wide by 24 inches long. Position the reinforcement between the bulkhead and the carry-through angle. Change the three outboard rivets to AN 470 AD5 rivets. Add an additional rivet as shown.

This change was in response to wing failures in a different aircraft design similar to the Midget Mustang. There have been no failures in the Midget Mustang but proper edge distance of the wing rear spar attach bolt should be verified. If flown within given weight limits and built per specs this change would not need to be made to existing aircraft as more harm may be done than good.

Midget Mustang Revision

Station 73.75 Bulkhead

There are reports from the field of cracks developing in the station 73.75 bulkhead. The crack starts at the top outboard corner of the angle carry-through member, emanating from the cut out for the wing fitting clearance. Examination of this area may also show a bulge in the bulkhead web. It is suspected that the crack and bulge is caused by high inertial loads created by high "G" landings.

Installation of the doublers shown in the illustration would be a satisfactory repair. Installation of the doublers is recommended for new manufactured Midget Mustangs to prevent future operational difficulties.

NOTE: The doublers MUST be mounted with lower edge in contact with the carry-through angles.

The doubler is made of 0.063" aluminum and is to be placed both fore and aft of the bulkhead (total requirement 4 pieces.) Use AN 470 AD 4 Rivets.

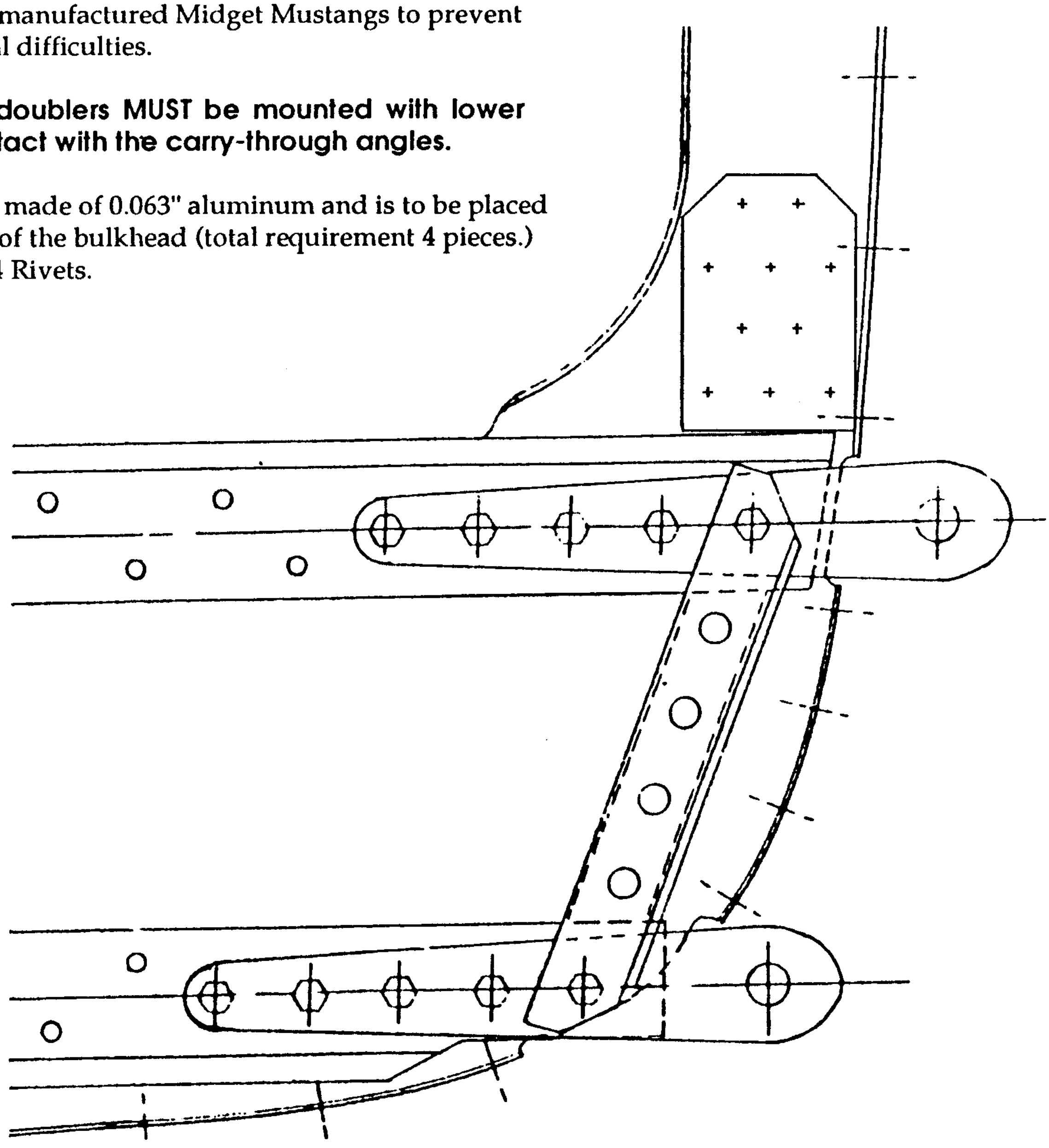
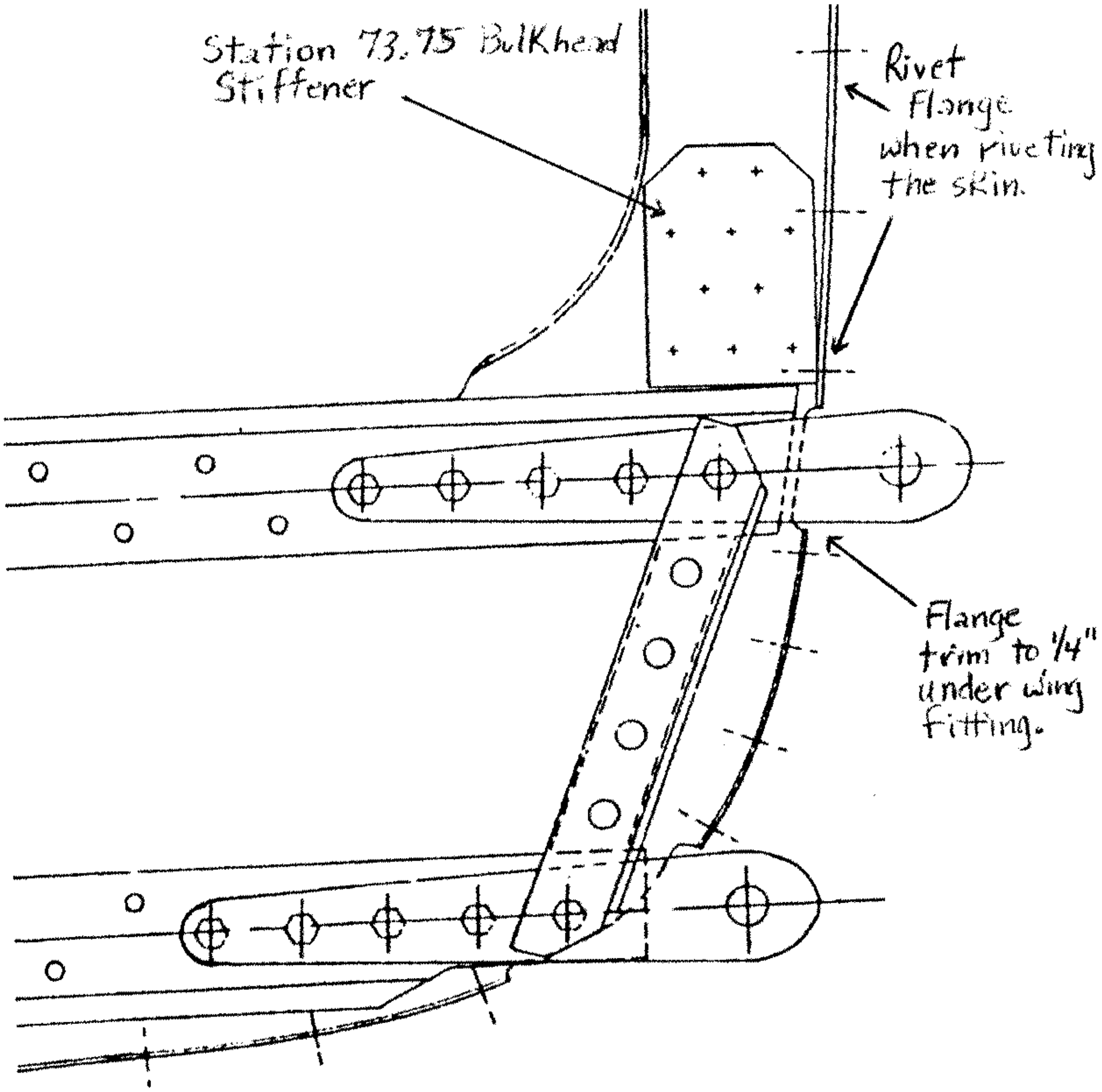


FIGURE #5



Station 73.75 Bulkhead
Stiffener
Rivet
Flange
when riveting
the skin.
Flange
trim to 1/4"
under wing
fitting.

MIDGET MUSTANG MANDATORY CHANGE

Reports are still being received relating to failure of the fuselage transverse bulkhead. This is the small bulkhead positioned horizontally between bulkheads at stations 177.5 and 182.0.

Many years ago all drawing owners were notified that the lightening hole should be eliminated from this bulkhead so that this will be a solid piece. At that time, it was left to the discretion of the builder whether to change the bulkhead. <u>It is now considered mandatory to replace the bulkhead with a solid bulkhead.</u>

This bulkhead must be inspected carefully at annual inspections, and more often if the airplane is flown in aerobatics. It is believed that failures occur because of eccentric side loads during aerobatics, or by moving the airplane by pushing on the fin and rudder. If, during preflight inspection, motion is detected when the fin is pushed sideways, DO NOT FLY THE AIRCRAFT.

Failure of this bulkhead in flight can be catastrophic. It was reported that a plane was able to land and that the fin was held on only by the forward attach bolt and rudder cables. After the failure the fin was able to be flexed sideways 30 degrees. It is also possible the same condition would exist on the Mustang II as well.

Bob.

In lieu of replacing the transverse bulkhead to eliminate the lightening hole, a .040" doubler may be riveted to the bulkhead.

Every preflight should included checking for any movement between the vertical fin rear spar and the horizontal stabilizer rear spar which would indicate cracking of the bulkhead.

M U S T A N G   A E R O N A U T I C S ,   I N C .

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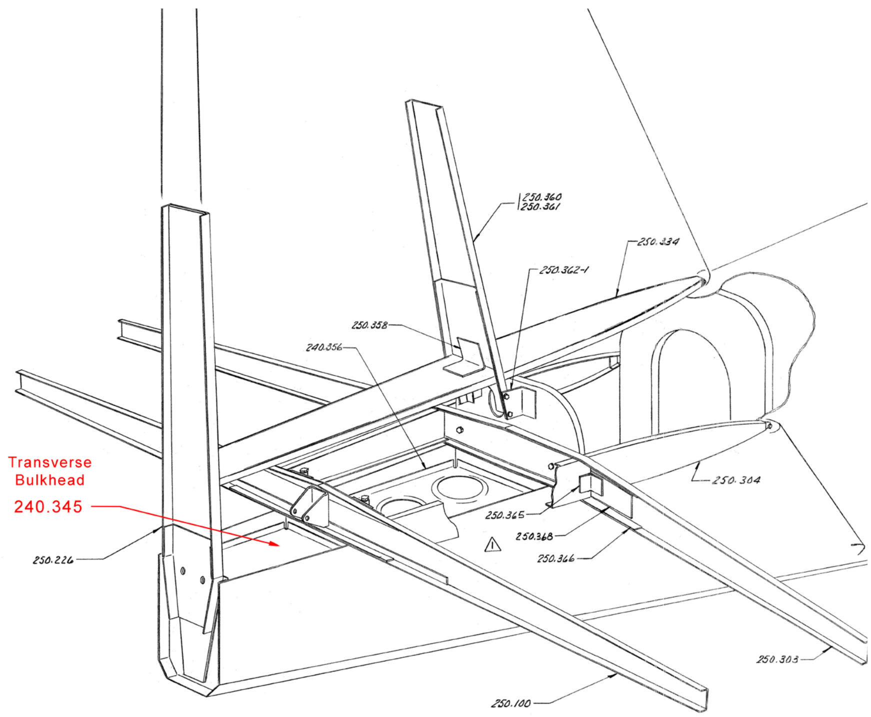
http://mustangaero.com/downloads/Mustang_Revisions

Mustang II & Midget Mustang Service Letter

Date: 7/30/2019

Subject: Inspection of the tailcone transverse bulkhead p/n 240.345 (M-II) or p/n 140.356 (M-I)



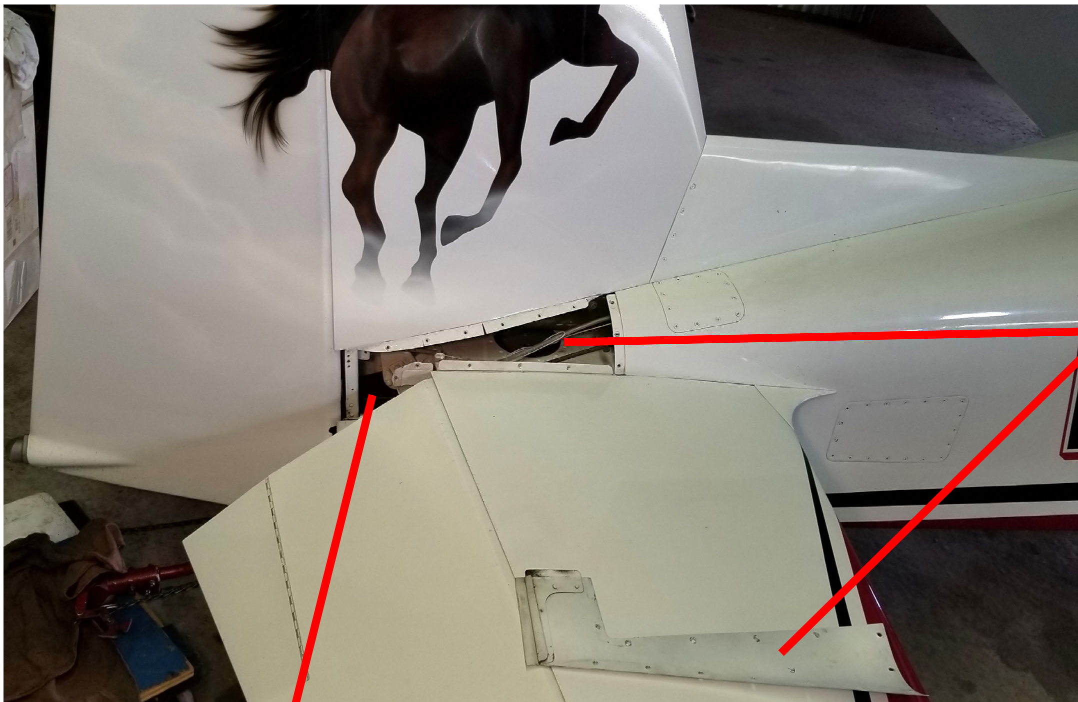
We have had another report of a failed Transverse Bulkhead (p/n 240.345) in an older Mustang II. No Mustangs with the design changes to the Transverse Bulkhead in May of 1993 have had cracking issues. The Midget Mustang has a similar design (p/n 140.356) and should follow the same inspection methods. A simple preflight check should reveal a crack in the transverse bulkhead before the aircraft is flown and should be done before every flight of all Mustangs. See page 4 for the preflight inspection procedure.

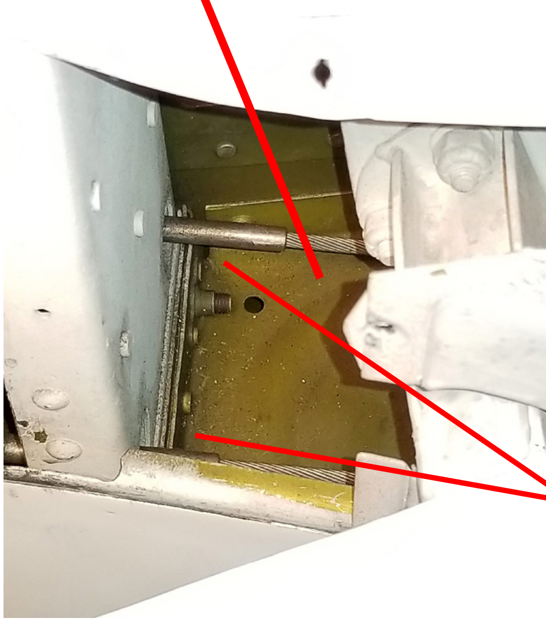
The small Transverse Bulkhead is a critical attach point for the vertical fin as it has 2 of the 3 lower fin rear spar attach points. Refer to construction drawing #29 for the Midget Mustang and drawings 240.021 and 240.023 for the Mustang II.

The affected aircraft suffered a fatigue crack in the transverse bulkhead emanating from the aft two corners whose flange is attached to the sta 209.5 bulkhead in the Mustang II. In the Midget Mustang the affected Transverse Bulkhead flange attaches to the sta. 182 bulkhead. Previously issued updates and repeated inspection recommendations have not always been adhered to. Improper manual ground handling has been the primary cause of the failures that we have seen. The original design is sound if the aircraft is not subjected to unapproved/nonstandard loads.

Repeatedly moving the aircraft on the ground by lifting the tail of the airplane by the horizontal stabilizer or applying a side load to the vertical fin can put excessive torsional loads on the Transverse Bulkhead. Mustangs should never be lifted or moved by applying force to the empennage. Instead steer the airplane manually on the ground by pushing on the side of the tailcone at a bulkhead, by lifting the tailwheel and pulling the airplane around by it, or by a tow bar connected to the tailwheel or nose wheel. Snap rolls can also put excessive loads on the transverse bulkhead. If aerobatics are performed in aircraft without the updates the aft tailcone inspection cover should be removed and the transverse bulkhead inspected more than once per year. Snap rolls are not approved in the Mustang II. Proper installation of the 3 AN3 bottom fin rear spar attach bolts is also critical.

A transverse bulkhead failure typically leaves only the vertical fin leading edge attach bolt, the single bottom lower fin rear spar attach bolt, and the rudder cables to hold the vertical fin on the aircraft. While a loss of the vertical fin has not occurred, serious structural damage has resulted from the failure of this bulkhead. In June 1987 the lightening hole was eliminated from the Transverse Bulkhead and inspections recommended. After another bulkhead failure this change was made mandatory and written up in the Mustang Newsletter Vol 9 No 3 (May 1993). The bulkhead was changed from .025” 2024-T3 to .032” in the Midget Mustang and changed from .032” to .040” in the Mustang II. In May 2006 a doubler was added to the bulkhead and the update was published in the Vol 16 No 5 issue of the Mustang Newsletter.





Midget and Mustang II Revisions

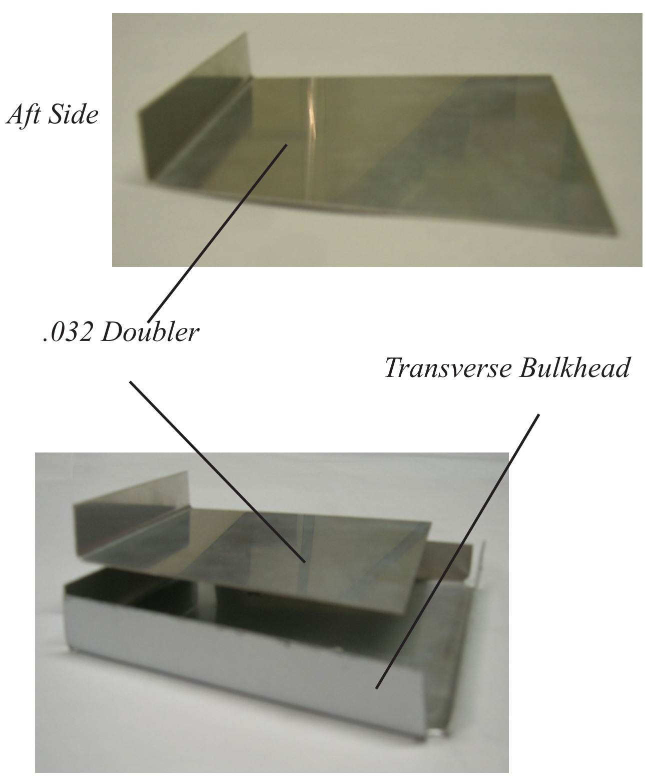
[From Mustang News & Views Vol 16 No 5 - May 2006]

Transverse Bulkhead Doubler

We had a report that a Mustang II had a failure in the Transverse Bulkhead p/n 240.345 although this was probably the result of a missing bolt from the lower fin attach point. In a previous revision this bulkhead had been changed to thicker material and the lightening hole eliminated. This particular airplane has over 1200 hours and does not have this revision. For new airplanes we are adding an additional doubler just as an extra precaution. This is not a mandatory change. A good preflight should include checking the stiffness between the fin and horizontal stabilizer. Excessive movement is an indication that there is a problem.

For the Mustang II a lightening hole can be cut in the center of the new doubler to allow it to lay flat against the transverse bulkhead. The doubler is riveted to the bulkhead at the corners using 3/32” universal head rivets on 5/8” spacing, staggering rows 1/2” apart.

If you are building a Midget Mustang or do not have the stiffening bead in the bulkhead, the doubler can be attached to the bulkhead without the hole using 1/8” rivets on 7/8” spacing, staggering rows 5/8” apart.



Preflight Inspection Procedures

As a part of **every** preflight inspection in a Midget Mustang or Mustang II the aft transverse bulkhead should be checked for cracks by preforming the following procedure:

Video published on YouTube: https://youtu.be/83DoBZV8WpQ

Holding onto the tip of the vertical fin rear spar (not the fiberglass tip) in one hand and tip of the horizontal stabilizer rear spar in the other (not the fiberglass tip) gently pull them towards each other with a small amount of force. The Midget Mustang will have a slight give as it does not have the front spar carry through in either the vertical fin or horizontal stabilizer. The Mustang II should not have any give between the tail surfaces. The important thing to notice is any change over time. If there is more give than normal remove the aft tailcone inspection cover and examine the aft transverse bulkhead and the fin attach points carefully for any cracks.

Annual Airworthiness Inspection Procedures

During the annual airworthiness inspection and more often as needed, the aft transverse bulkhead should be visually inspected by removing both of the aft tailcone covers between the vertical fin and horizontal stabilizer. A close examination of the transverse bulkhead (p/n 240.345 / 140.356) for any cracks and the steel elevator control arms (p/n 250.210 / 150.210) for cracks around the welds is an important part of every airworthiness inspection.

WEIGHT AND BALANCE COMPUTATION

The aircraft must be weighed to determine its weight and center of gravity location. The aircraft is weighed in level flight attitude by use of a scale under each wheel. This must be done in a closed hanger, as a slight wind over the aircraft will effect the scale readings.

After placing a scale under each wheel the aircraft is blocked up on the scales into level flight attitude. The weight of blocking, or "tare" is subtracted from the gross scale reading to obtain the net aircraft weight. A level is placed on the top fuselage side stringer aft of sta. 73.75 for longitudinal leveling, and on the sta. 73.75 top angle assembly for latteral or span-wise leveling.

After leveling the fuselage it is necessary to determine the location of the wheel axle centers, or weighing points, in terms of fuselage stations. As the aircraft will be completely assembled for weighing the most convenient point from which to measure is the forward face of the firewall, which is station 52.0. To determine the station location of the main wheel weighing points drop a plumb bob from the firewall to the floor. From the plumb bob point on the floor measure back to a line connecting the centers of the two main wheel axles. Add this measurement to 52.0 to determine station location of main wheel weighing points. In a similar manner determine the weighing point location of tail wheel. This method of measurement will put all distances and moment arms relative to Station Zero.

The aircraft EMPTY WEIGHT is the sum of the three scale NET readings.

Determine empty weight CENTER OF GRAVITY as follows:

1. Multiply the total net weight on the two main wheels times the main wheel weight point station location.
2. Multiply the net weight of the tail wheel times it's weigh point station location.
3. Add together the products of steps 1 & 2, and divide this sum by the aircraft empty weight. The resulting figure is the station location of the EMPTY WEIGHT CENTER OF GRAVITY.

After determining the aircraft empty weight center of gravity the most forward and most rearward flight C.G. locations must be determined. The acompanying Weight & Balance Report form should be used for this purpose. This form should be made a part of the aircraft records.

THE AIRCRAFT MUST BE OPERATED AT ALL TIMES
WITH THE CENTER OF GRAVITY WITHIN THE
PRESCRIBED LIMITS.

Weight & balance computation (continued).

The basis of center of gravity computations are weights, distances or moment arms, and moments. The following values and terms will be used in the center of gravity computations.

Fuel - 15 gal. @ 6.0 lb/gal. - located at station 61.0.

Oil - 7.5 lb/gal. - Use engine capacity and location applicable to engine installed.

Pilot - 170 lb. (Or use actual weight). located at sta. 91.5.

Baggage - 20 lb. max. - located @ sta. 105.0.

Minimum fuel - 45 lb. - used for rearward C.G. computation.

DATUM is an imaginary vertical line from which all measurements are taken. Datum used for MUSTANG I is STATION ZERO.

MOMENT ARM is horizontal distance from datum to center of gravity of the item.

MOMENT is product of the weight of a item and its moment arm.

EMPTY WEIGHT CENTER OF GRAVITY IS THE CENTER OF GRAVITY OF THE EMPTY AIRPLANE AS DETERMINED BY WEIGHING.

CENTER OF GRAVITY LIMITS are the most forward and rearward permissable center of gravity locations. These limits are Station 69.25 to Station 72.25.

CENTER OF GRAVITY RANGE is the distance between the C.G. limits in which the operating C.G. must fall.

TARE is weight of blocking on scales used to level aircraft. Tare weight is to be subtracted from gross scale weight.

Although other methods and formulas can be used for C.G. computation I find the above method most desireable as the C.G. is obtained directly in relation to fuselage stations, and it is applicable to both nose wheel and tail wheel type aircraft. Complete information relative to weight and balance is printed in FAA publication AC 43.13-i, and is available from Government printing office.

WEIGH AIRCRAFT in level attitude, in CLOSED hangar, and with brakes released.

Weight and Balance Report

Midget Mustang M-I

Registration No.________________ Serial No. M-I-______________ Date_________________

Datum used is Fuselage Station Zero. Station Zero is located 52.0" forward of the firewall.
Location of Main Wheel weighing point is Sta.______________
Location of Tail Wheel weighing point is Sta.______________

AIRCRAFT WEIGHTS AS FOLLOWS

	Scale Reading	Tare	Net	Station	Moment
Left Wheel					
Right Wheel					
Tail Wheel					
TOTALS	Aircraft Empty Weight				

EMPTY WEIGHT C.G. = Total Moment / Total Weight = Station ______________. {typ. ~sta 67.0}

Most FORWARD C.G. Determination

ITEM	WEIGHT	STATION	MOMENT
Aircraft Empty Weight			
Oil (max. qts.)			
Fuel Main (max. capacity)			
Pilot			
TOTALS			

FORWARD C.G. = Total Moment / Total Weight = Station ________________.

Most REARWARD C.G. Determination

ITEM	WEIGHT	STATION	MOMENT
Aircraft Empty Weight			
Oil (min. qts.)			
Fuel Main (min.)			
Pilot			
Baggage			
TOTALS			

REARWARD C.G. = Total Moment / Total Weight = Station ___________

CENTER OF GRAVITY LIMITS are **STA. 69.25 TO STA. 72.25 (20% to 26.5% MAC)**

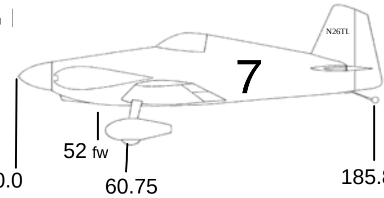
Useful Load = __________lb. (Gross wt.) - __________lb. (Empty wt.) = __________lb

A listing of all equipment items included in the empty weight should be attached to this form.

1/12/00 CKT

BUILDER SAMPLE

WEIGHT & BALANCE DATA, MM1 SER 171 Date 7/18/98
MIDGET MUSTANG



DATUM used is Fuselage Station Zero (tip of spinner)
Location of Main Wheels weighing point is Sta. 60.75
Location of Tail Wheel weighing point is Sta. 185.8

AIRCRAFT WEIGHTS AS FOLLOWS

Painted with Polyurethane base coat, Top coat 7/98, also several fairings included in this weighing.

	scale reading		tare	net	station	moment
battery added 3/96						0
alternator added 3/96						
Left wheel	306			306	60.75	18589.5
Right wheel	308			308	60.75	18711
Tail wheel	15			15	185.8	2787
totals	629			629	63.73	40087.5

EMPTY WEIGHT C.G. = 63.73

MOST FORWARD C.G. DETERMINATION

item				WEIGHT	STATION	MOMENT
AIRCRAFT EMPTY WT.				629	63.73	40087.5
OIL				11	39	429
FUEL				90	61.92	5572.8
PILOT				180	92.6	16668
BAGGAGE				0	110.6	0
TOTALS				910		62757.3

FORWARD WEIGHT C.G.= 68.96

MOST REARWARD C.G. DETERMINATION

item				WEIGHT	STATION	MOMENT
AIRCRAFT EMPTY WT.				629	63.73	40087.5
OIL				11	39	429
FUEL				0	61.92	0
PILOT				180	92.6	16668
BAGGAGE				20	110.6	2212
TOTALS				840	70.71	59396.5

REARWARD WEIGHT C.G.= 70.71
FORWARD WEIGHT C.G. = 68.96
CENTER OF GRAVITY LIMITS ARE STA.. 68.7 To STA, 72.25
USEFUL LOAD= 281 lb

a listing of all equipment items included in the empty weight should be attached to this form.

Midget Mustang / M-I

Aircraft Design Specifications

Suggested Gross Weight (Aerobatic Category)	900 pounds
Suggested Gross Weight (Normal Category)	1,000 pounds
Baggage Capacity	30 pounds
Power Recommendations	85 to 160 hp
Wing Loading @ 1,000 pounds	14.7 lb/ft^2
Wing Aspect Ratio	5.0
Power Loading (100 / 160hp)	10.0 / 6.3 lb/hp

Wing Span	18' 6"	Height	4' 6"
Fuselage Length	16' 5"	Max. Fuselage Width	21”
Max. Prop Diameter	64”	Wheel Tread	5' 1"

Wing Area	68.0 ft^2	Fin Area	3.6 ft^2
Flap Area	7.7 ft^2	Elevator Area	5.1 ft^2
Aileron Area	4.8 ft^2	Rudder Area	3.3 ft^2
Stabilizer Area	8.8 ft^2	Trim Tab Area (elevator)	0.3 ft^2

Flap Travel	40 deg maximum Down
Aileron Travel	20 deg Up, 15 deg Down
Elevator Travel	20 deg Up, 20 deg Down
Elevator Trim Tab Travel	20 deg Up, 40 deg Down
Rudder Travel	20 deg Right, 20 deg Left
Wing Angle of Incidence	+1.0 deg
Stabilizer Angle of Incidence	-1.5 deg
Wing Wash Out (geometric twist)	+2.5 deg
Wing Dihedral (outer panels)	+5.0 deg
Airfoil (modified)	64A212 (root), 64A210 (tip)
Thrust Line Above Fuselage Horiz. Reference Line	0.0 in

Center of Gravity Limits	20% to 26.5% MAC

Never Exceed Speed (V_{ne}, smooth air)	230 mph
Max. Structural Cruise Speed (V_{no})	195 mph
Max. Maneuvering Speed (V_A)	150 mph
Maximum Flap Extension Speed (V_{fe})	100 mph
Stall Speed Clean at 1,000 lbs (V_s)	62 mph
Stall Speed Full Flap at 1,000 lbs (V_{so})	57 mph

Maximum Structural Loading - Aerobatic Cat.	+ 6/-4 g's yield

FLIGHT TESTING THE MUSTANG

Persons intending to fly the tail wheel equipped MUSTANG should have prior tail wheel flying experience. The two characteristics of the MUSTANG that would tend to cause difficulty are common to all small aircraft - this is directional sensativity on the ground, and also sensitivity of the elevator control. This sensitivity is completely forgotten by MUSTANG flyers after a few hours flying, but it does require attention on initial flights.

A smooth sod runway is prefered over a hard surface for two reasons. First, the directionl sensitivity is practically eleminated. Secondly, the landing roll distance is reduced to about half that required on a hard surface runway.

A few taxi runs at high speed are recomended. During these taxi runs the tail should be raised two or three inches. Slow initial acceleration is desirable. On a hard surface urnway 1400 to 1600 RPM will be sufficient as air speed should not exceed 50 MPH. Slightly more power will be required on sod. One caution - Due to slow acceleration the right rudder used to counteract torque effect is fed in gradualy, and in most cases is un-noticed by the flyer. The effect of this is that if the throttle is cut abruptly the flyer finds he is holding right rudder which is not needed., and imediately overcontrols with left rudder - thereby making " S " turns down the runway. The throttle should be reduced slowly to prevent this.

I definitely recomend that you lift off and land straight ahead on the runway several times prior to full flight. I believe the best method of performing these lift offs, as it eleminates the need for attitude and control changes is as follows:

Accelerate down the runway using a intermediate amount of power (about 1800 RPM) with tail raised slightly off the ground. Your taxi runs will have given an idea of how much runway is required to accelerate and decelerate. Allow PLENTY of reserve runway. If at this RPM the aircraft does not become airborne, try again using slightly more power. When the plane is felt to be airborne slowly retard the throttle. As the plane is in the landing attitude it will settle back to the runway and roll out will be similar to a normal landing. As this type operation is entirely in ground effect you will find the air speed to be lower than anticipated. These lift offs will familiarise you with control responses, and also detect any misalighment of the landing gear.

Perhaps the one major differance in landing the MUSTANG as compared to most factory made planes is that the landing FLARE must me made much LOWER than you are used to doing. This is due to the fact that when you are sitting on the ground in the MUSTANG your eye level is much lower than in most standard type aircraft.

As a safety precaution in case of a unplanned go-around it is suggested that the plane be fully ready for flight, with sufficient fuel, during these taxi tests.

CAUTION - DO NOT blast down the runway with lots of power and with the stick full back during these tests.

Unless you are an experienced flyer I do not recomend that you simply take off on the first flight without the lift-off experience. In the event of engine operating difficulty you may need to make a quick return to the field, and would have no real idea as to approach speed, float characteristics, or runway required.

On the first flight feel out an APPROACH to a stall. This will give you a indication of the stall speed. Use about 20 MPH additional for final approach speed, slowing to 10 MPH more for a over the fence speed. I believe the main aspect of the landing, as with any landing, is to break the glide or "flare" as low as possible. (Remember you are sitting closer to the ground than you are generaly accustomed to.) I suggest using a little power for the initial landings, 1100 to 1200 RPM. This will flatten the glide and give more positive control of the approach.

After the taxiing and lift-offs you will be familiar with the three point attitude of the airplane. This will make three point landings simple. The method recommended is to use full flaps and a little power. Flare out the landing glide as normal, and after the flare set up the three point attitude. A slightly nose high attitude is satisfactory. After attaining the three point attitude just hold it there and let the plane settle in. If your flare is high and you feel the plane is settling too fast an additional 100 RPM will reduce the rate of deeent. If you feel the plane is floating too far, or wants to "balloon", slack off the power. I have watched a person make a good landing in a MUSTANG although he flared 12 ft. high, by just maintaining the attitude and regulating the rate of decent with power. He did use a lot of runway however.

As the above described approach using partial throttle (although only a small amount of power) results in a flat approach a clear runway approach is necessary. A completely power off aproach is fine, but things happen a little quicker.

A go-around with full flaps down is satisfactory, and acceleration is quick. It is not necessary to raise the flaps.

One more comment on the above described three point landing proceedure. The ground attitude is approximately 5° less than the stall attitude. That is why this method works well. However, if you were to become too engrosed in easing the plane down from a too high level off position it is easy to raise the nose high enough to get a stall. Caution should be used in this respect.