

**FOR YOU ADVENTURE SEEKERS  
THAT ORDERED THE  
"PRO BUILDER'S KIT"  
THIS IS HOW YOUR ORDER  
SHOULD ARRIVE...**

**WE ARE ASSUMING YOU ARE  
A PROFESSIONAL FABRICATOR  
SO NO SPECIFIC INSTRUCTIONS  
ARE PROVIDED FOR THE PRO  
BUILDER'S KITS.  
HOWEVER... DON'T  
HESITATE TO ASK A QUESTION  
IF YOU NEED. THAT'S WHAT WE  
ARE HERE FOR! :)**



**YOU SHOULD RECEIVE YOUR HARDTAIL WITH THE BACKBONE AND  
REAR MOTOR MOUNT STRAPPED IN PLACE AS SHOWN:**



**LATE VERSIONS WILL BE PROVIDED WITH A SUPPORT  
PLATE BETWEEN THE TWO FRONT FRAME RAIL PLUGS**



**BEGIN BY PLACING A REFERENCE MARK EIGHT INCHES  
FROM THE FRONT FACE OF THE BACKBONE.  
THIS WILL BE USED TO ALIGN THE REAR RAIL SECTIONS BEFORE TACK WELDING...**



**SLIDE THE BACKBONE  
SECTION THROUGH THE UPPER  
FRAME RAILS UNTIL THIS POINT  
IS CLOSE TO YOUR EIGHT-INCH MARK**



**WITH THIS NOTCH CENTERED  
ON THE LOWER RAIL**



**ALIGN THE BACKBONE WITH  
THE HARDTAIL BY PLACING  
A REFERENCE LINE FROM THE  
TOP CENTER OF THE BACK-  
BONE TO THE MIDPOINT  
BETWEEN THE AXLE PLATES**



**MAKING SURE THE BACKBONE  
IS STILL ALIGNED AND EVEN  
WITH THE 8" REF. MARK...**



**TACK WELD THE SEAT POST CONNECTION  
STARTING WITH THE VERY FRONT AND  
BACK OF THE CONNECTION TO PREVENT  
ANY SIDE-PULL**

**AFTER THE LOWER SEAT POST HAS BEEN TACKED,  
TACK THE TWO TOP RAILS INTO POSITION AT THE  
TOP-MOST POINT OF THE CONNECTION**



**AFTER TACKLING FRONT - BOTTOM AND  
SIDE TO SIDE...  
VERIFY THAT THE BACKBONE IS STILL ALIGNED  
WITH THE HARDTAIL SECTION.**

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**MAKE ANY NECESSARY ADJUSTMENTS AT THIS TIME.**

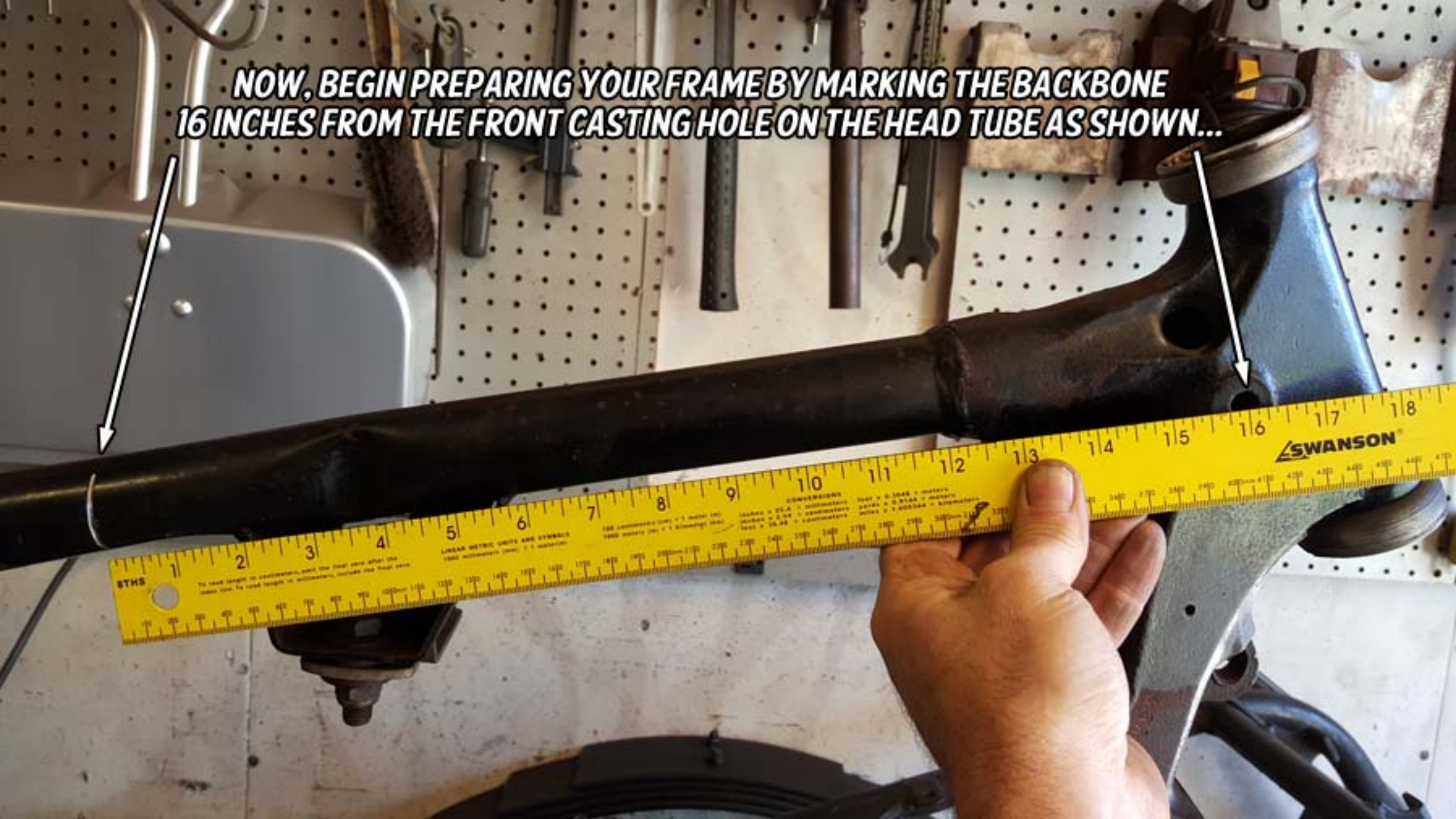
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**ONCE EVERYTHING IS ALIGNED AND LOOKS GOOD,  
COMPLETE ALL WELDS AT THE TOP AND BOTTOM  
OF THE SEAT POST.**

**AS ALWAYS... WE RECOMMEND APPLYING WELDS  
TO THE FRONT AND REAR QUADRANTS FIRST TO  
PREVENT AS MUCH SIDE-PULL AS POSSIBLE!**



**NOW, BEGIN PREPARING YOUR FRAME BY MARKING THE BACKBONE 16 INCHES FROM THE FRONT CASTING HOLE ON THE HEAD TUBE AS SHOWN...**

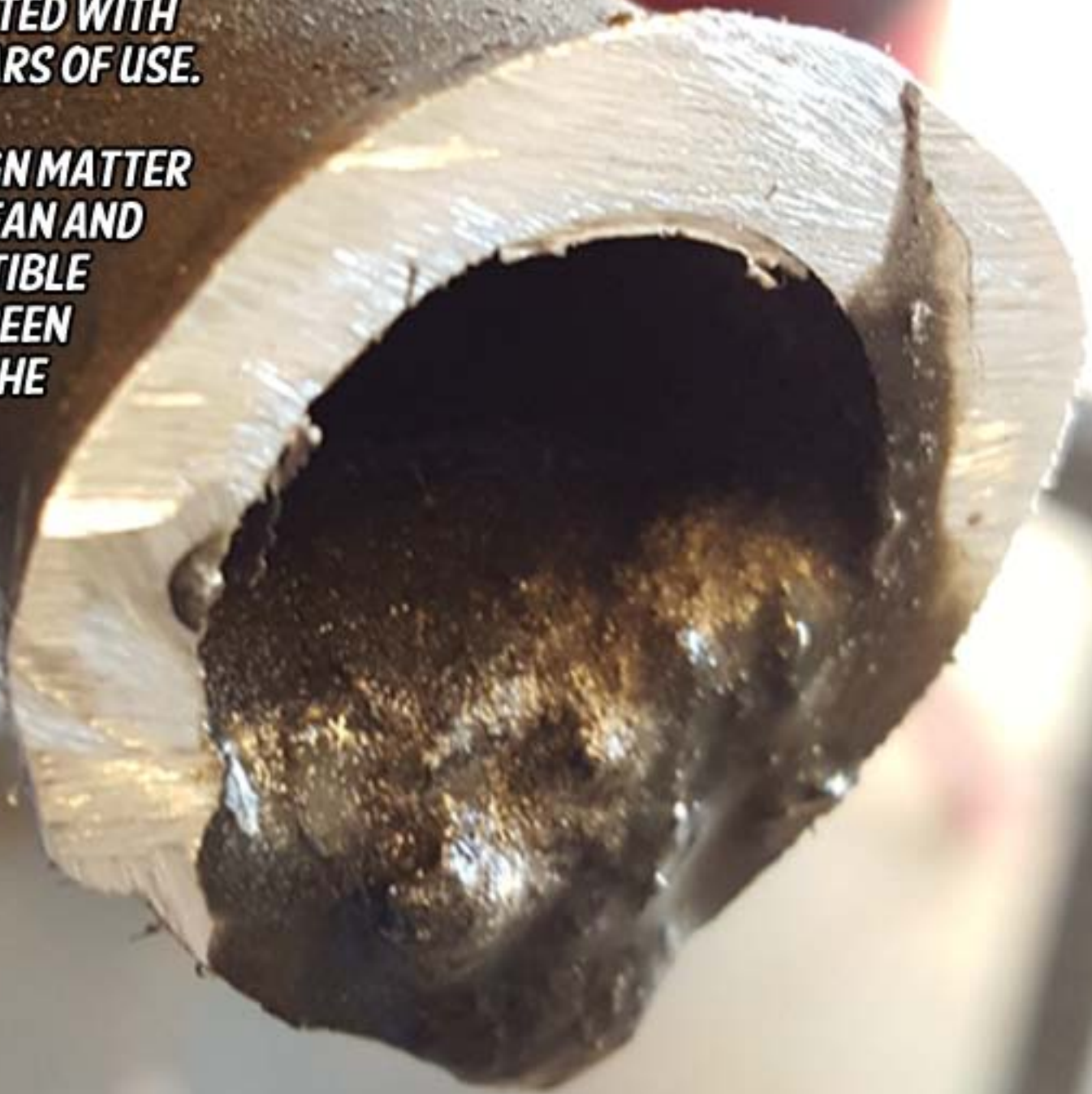


**MARK THE LOWER RAILS APPROXIMATELY 17.5 INCHES FROM THE FORWARD LOWER MOTOR MOUNT HOLES ON THE FRAME. THIS SHOULD PUT YOUR MARK ALMOST DIRECTLY ADJACENT TO THE REAR FRAME CASTING!**



**IT IS VERY COMMON FOR THE FRAME  
RAILS TO BE CONTAMINATED WITH  
DEBRIS AND OIL FROM YEARS OF USE.**

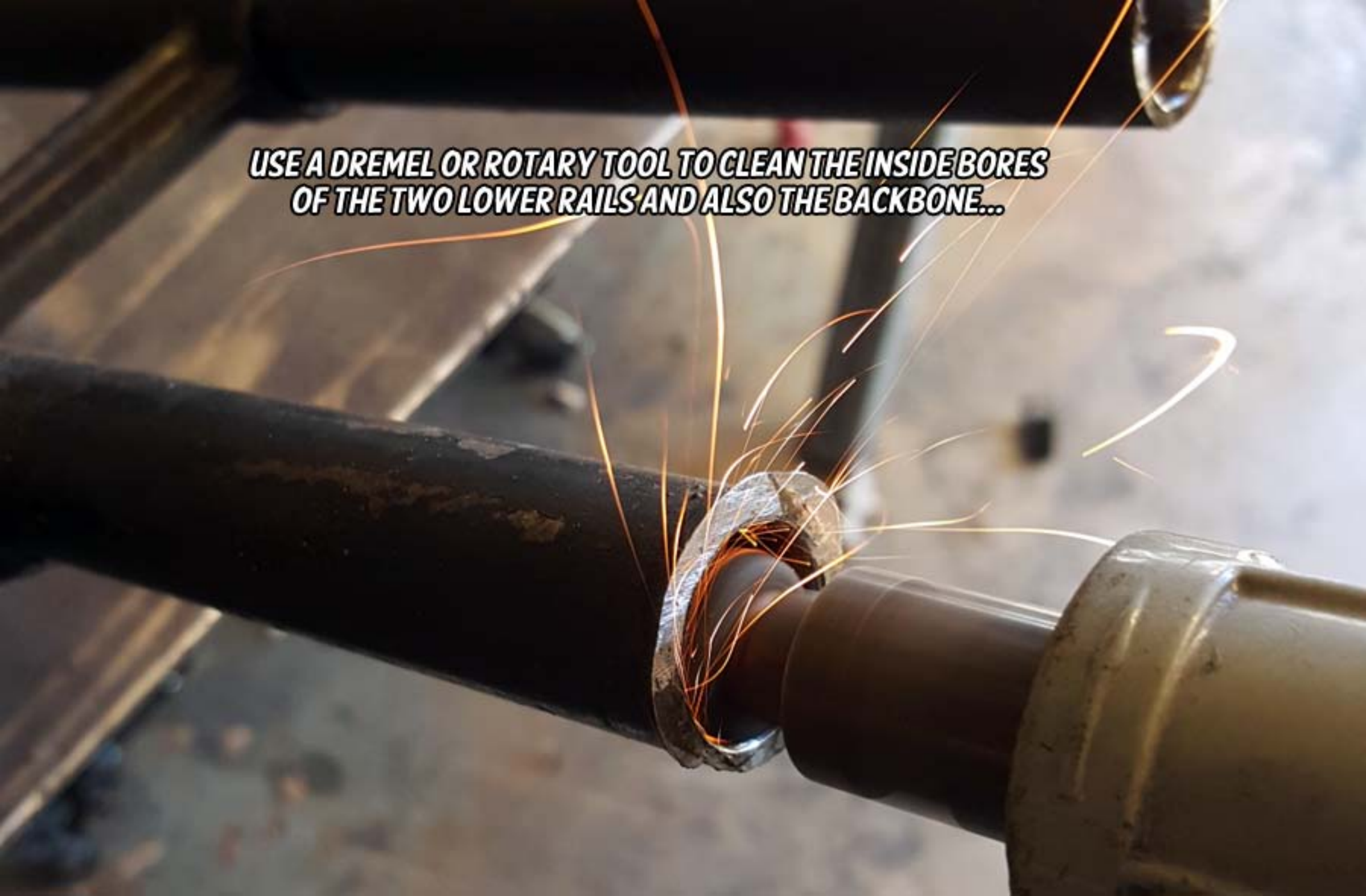
**BE SURE THAT ALL FOREIGN MATTER  
HAS BEEN FLUSHED CLEAN AND  
THAT ANY COMBUSTIBLE  
MATERIALS HAVE BEEN  
REMOVED FROM THE  
INSIDE RAILS!**





**YEP...  
WE WEREN'T JOKING!!!**

**USE A DREMEL OR ROTARY TOOL TO CLEAN THE INSIDE BORES  
OF THE TWO LOWER RAILS AND ALSO THE BACKBONE...**





**AFTER CLEANING THE INSIDE AND THE OUTSIDE OF THE THREE CUT LOCATIONS, DRILL A SMALL (1/4") HOLE NO MORE THAN A HALF INCH AWAY FROM THE EDGE. THIS CAN BE DONE ON BOTH THE TOP AND BOTTOM OF EACH CONNECTION IF DESIRED...**

**AS STATED... DRILL A SMALL HOLE NO MORE THAN A HALF INCH AWAY FROM THE CUT LOCATIONS.**

**NOTE THE "PINCHED" AREA OF THE BACKBONE... SOME YEARS WILL HAVE THIS FEATURE AND SOME WILL NOT. IF THIS IS PRESENT, YOU WILL HAVE TO "SHAPE" THE LARGE BACKBONE SLUG. (SHOWN LATER IN THE INSTRUCTIONS)**

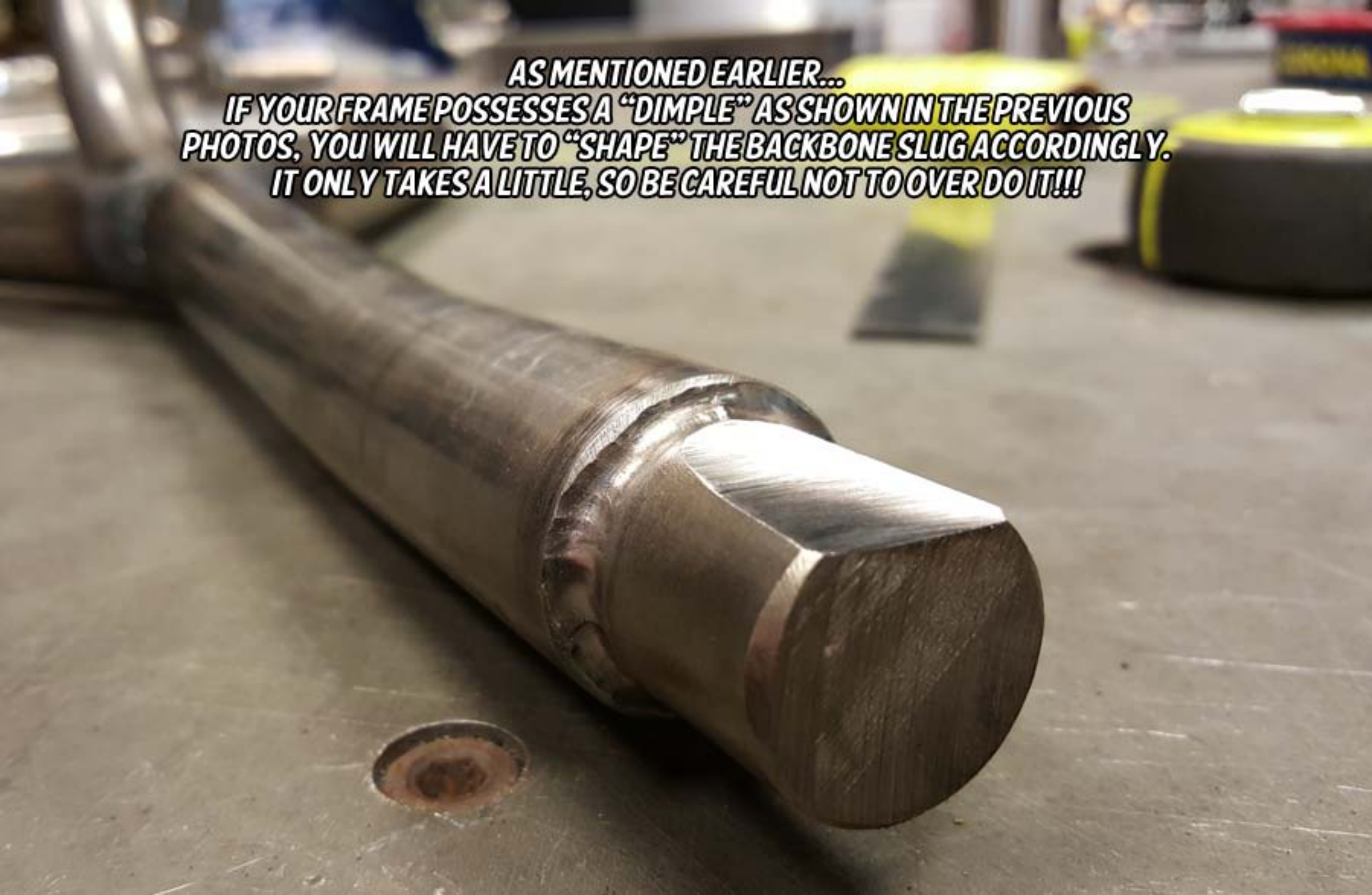


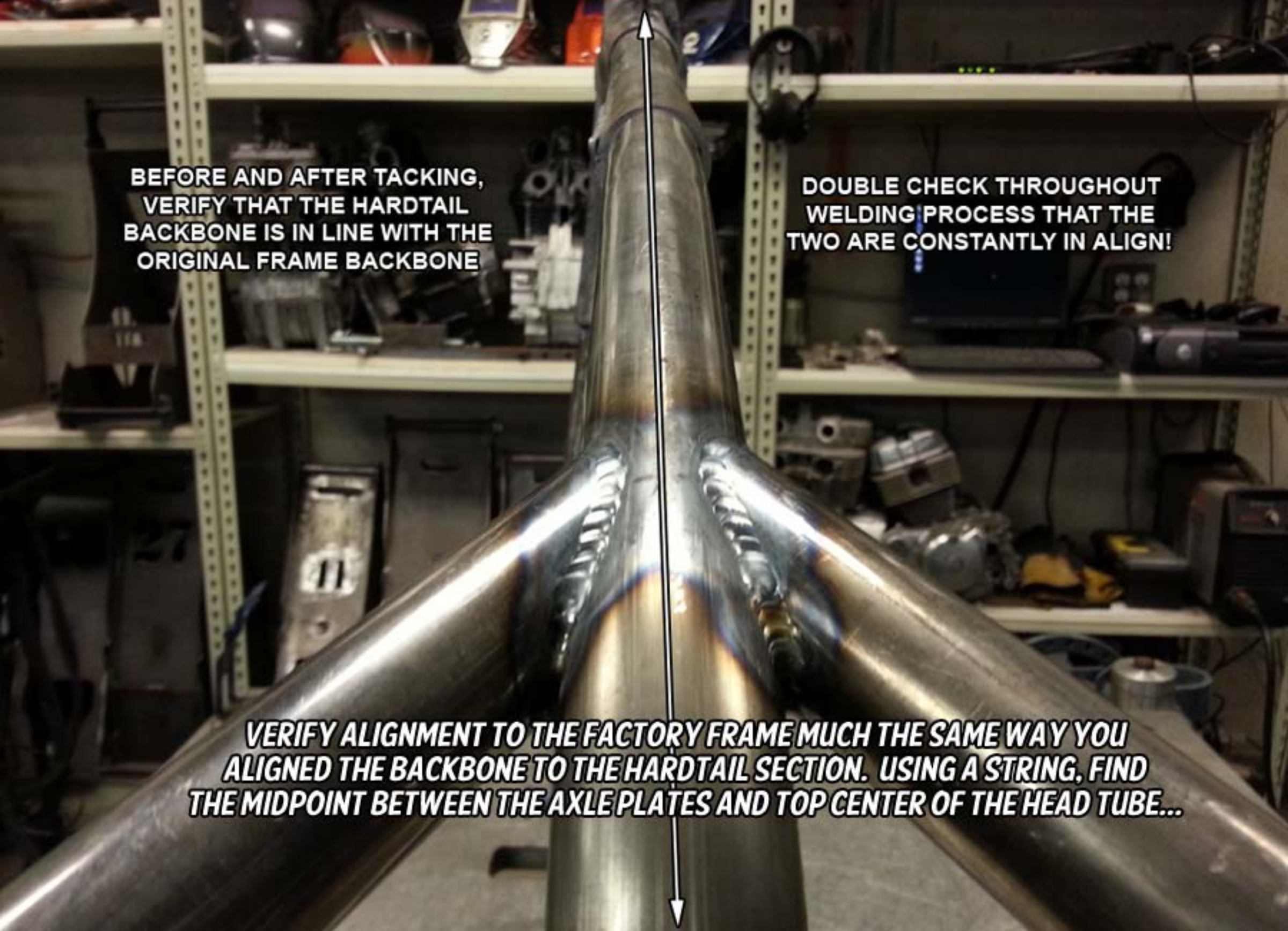


**BEGIN INSTALLING THE ASSEMBLED  
HARDTAIL BY "SNAPPING" ALL THREE  
SLUGS INTO POSITION AND THEN WORKING  
THE ENTIRE UNIT IN TANDEM WITH THE FACTORY  
FRAME UNTIL ALL CONNECTIONS ARE SNUG**



**AS MENTIONED EARLIER...  
IF YOUR FRAME POSSESSES A "DIMPLE" AS SHOWN IN THE PREVIOUS  
PHOTOS, YOU WILL HAVE TO "SHAPE" THE BACKBONE SLUG ACCORDINGLY.  
IT ONLY TAKES A LITTLE, SO BE CAREFUL NOT TO OVER DO IT!!!**





**BEFORE AND AFTER TACKING,  
VERIFY THAT THE HARDTAIL  
BACKBONE IS IN LINE WITH THE  
ORIGINAL FRAME BACKBONE**

**DOUBLE CHECK THROUGHOUT  
WELDING PROCESS THAT THE  
TWO ARE CONSTANTLY IN ALIGN!**

**VERIFY ALIGNMENT TO THE FACTORY FRAME MUCH THE SAME WAY YOU  
ALIGNED THE BACKBONE TO THE HARDTAIL SECTION. USING A STRING, FIND  
THE MIDPOINT BETWEEN THE AXLE PLATES AND TOP CENTER OF THE HEAD TUBE...**



**ONCE THE HARDTAIL HAS BEEN ALIGNED, BEGIN BY TACKING THE LOWER RAILS AND THEN THE BACKBONE CONNECTION.**

**CHECK CONSTANTLY FOR ALIGNMENT WHILE COMPLETING YOUR WELDS AND THEN WELD THE "PLUG HOLES" THAT WERE PREVIOUSLY DRILLED NEAR THE WELD CONNECTIONS.**

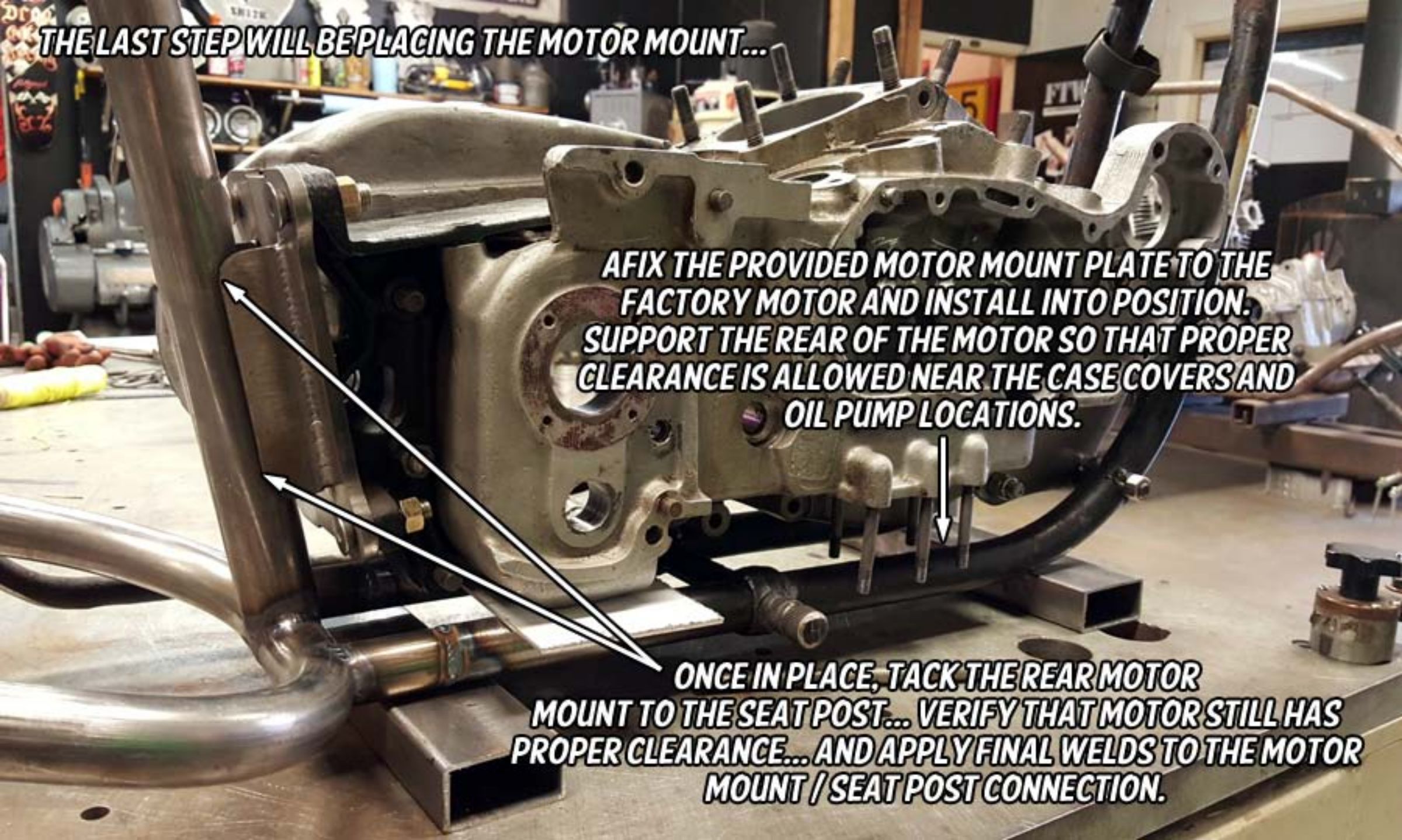
**CONTINUE WELDING ALL  
CONNECTIONS AND YOUR HARDTAIL  
INSTALLATION WILL BE COMPLETE!  
NOW... THE LAST ITEM IS TO SET THE  
REAR MOTOR MOUNT PLATE...**



**THE LAST STEP WILL BE PLACING THE MOTOR MOUNT...**

**AFIX THE PROVIDED MOTOR MOUNT PLATE TO THE FACTORY MOTOR AND INSTALL INTO POSITION. SUPPORT THE REAR OF THE MOTOR SO THAT PROPER CLEARANCE IS ALLOWED NEAR THE CASE COVERS AND OIL PUMP LOCATIONS.**

**ONCE IN PLACE, TACK THE REAR MOTOR MOUNT TO THE SEAT POST... VERIFY THAT MOTOR STILL HAS PROPER CLEARANCE... AND APPLY FINAL WELDS TO THE MOTOR MOUNT / SEAT POST CONNECTION.**





**YOU ARE DONE AND  
READY FOR FINAL ASSEMBLY!**

