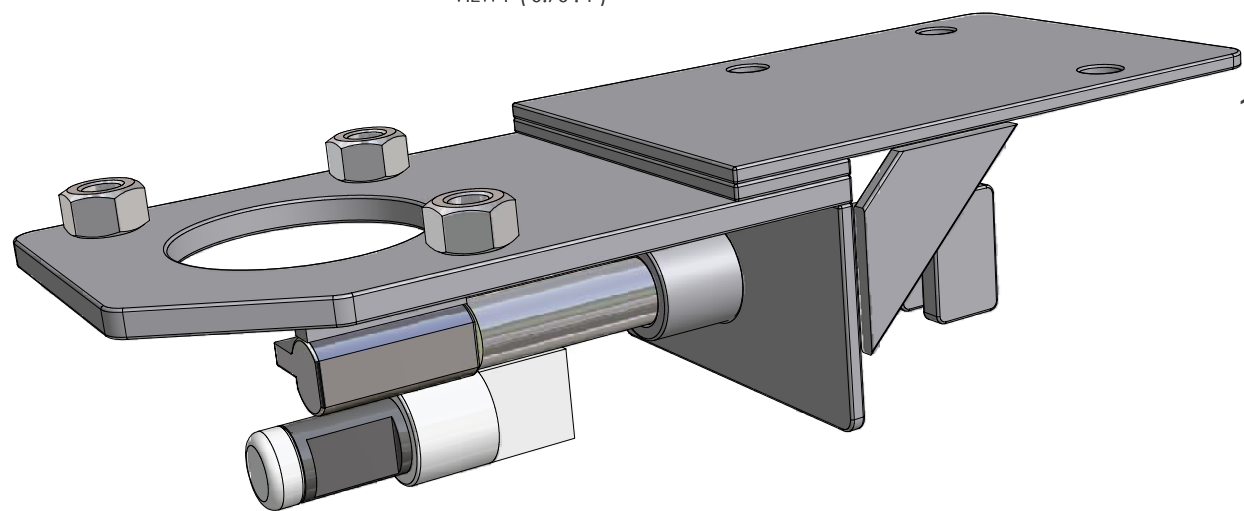
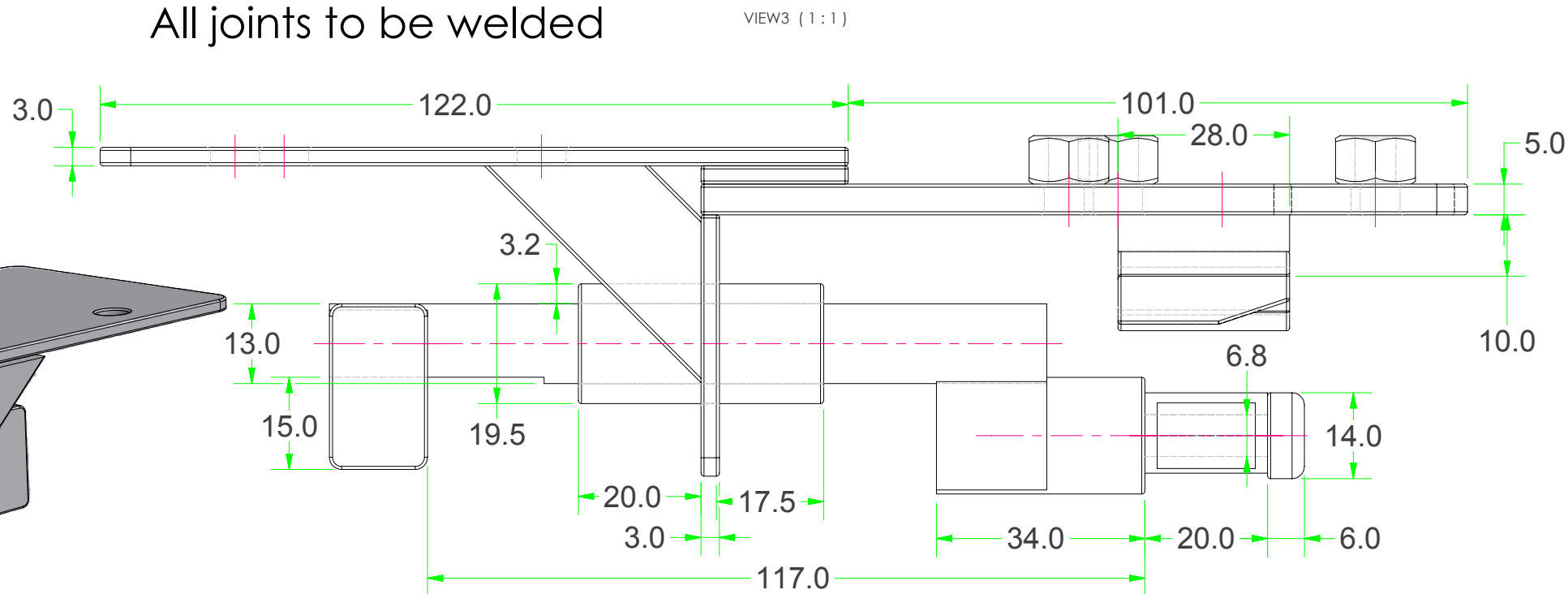


All joints to be welded

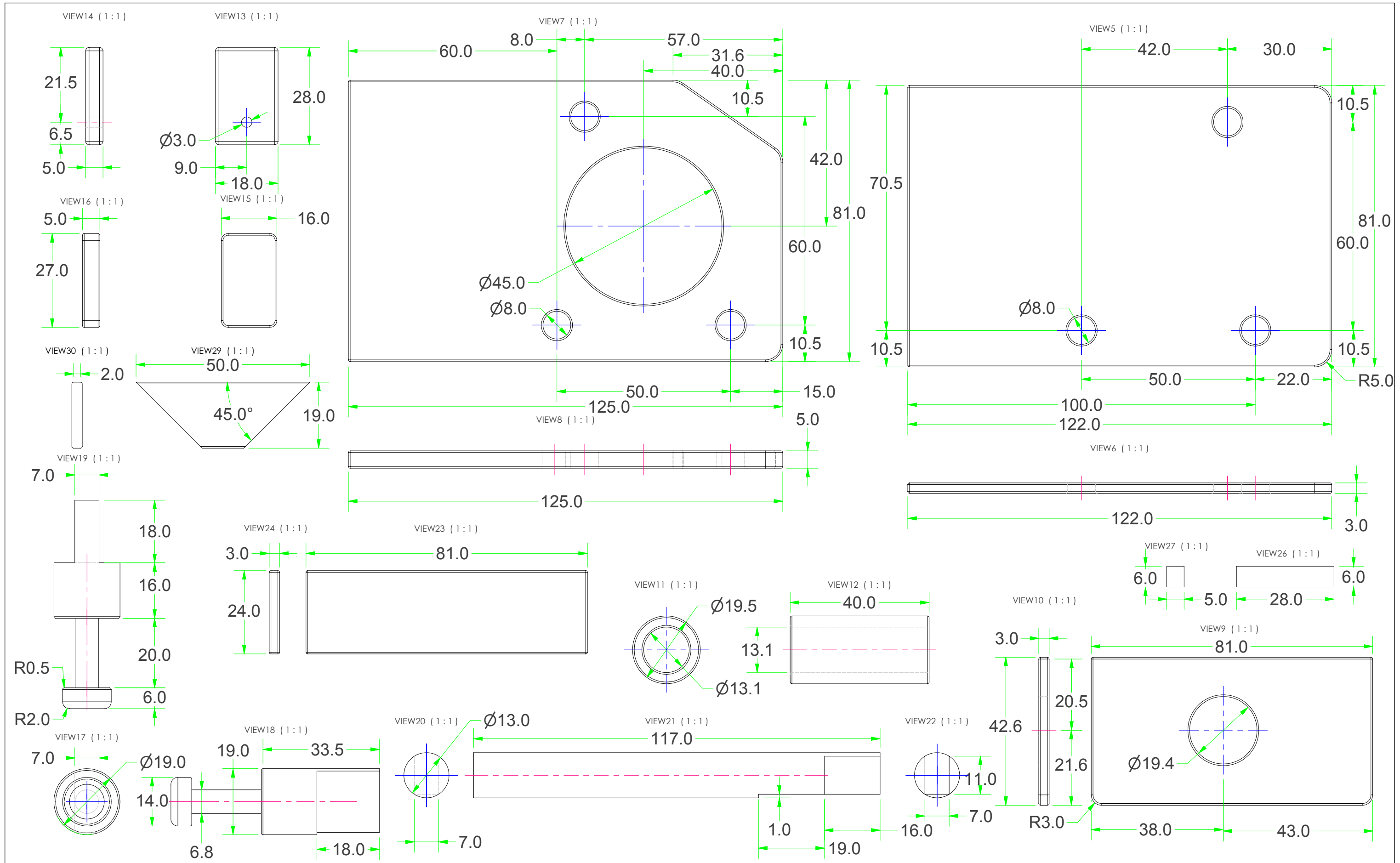


Client  
 This is a design concept and actual manufactured parts may vary.  
 Drawing created using Autodesk Inventor

Third Angle  
**IF IN DOUBT ASK!**

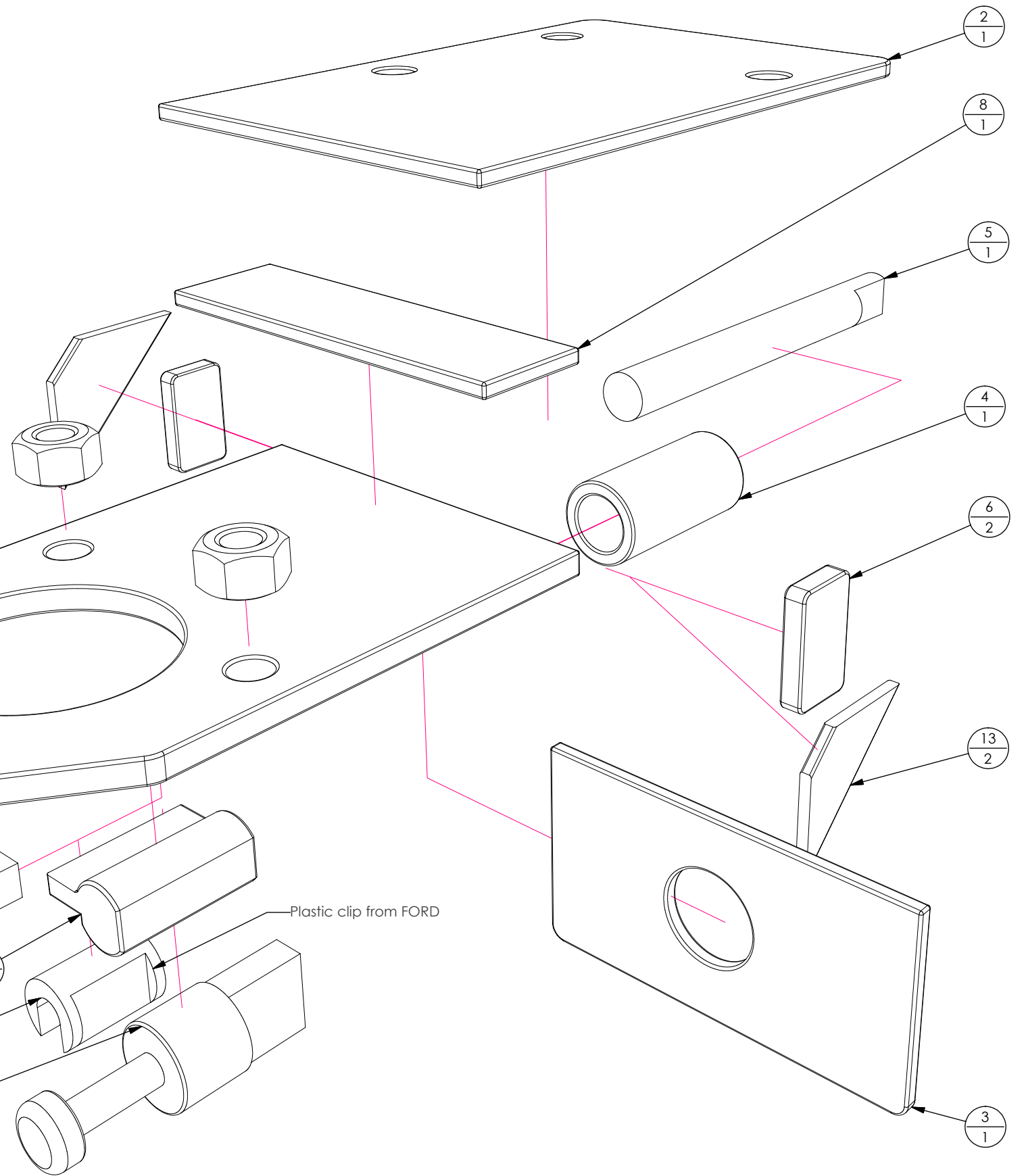
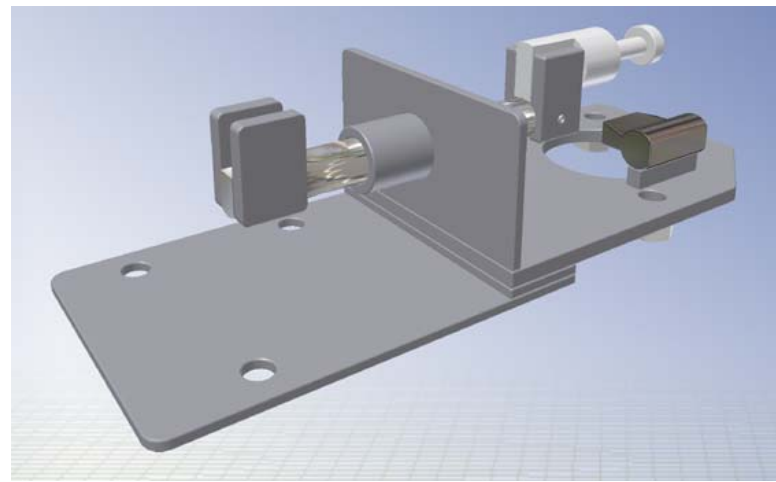
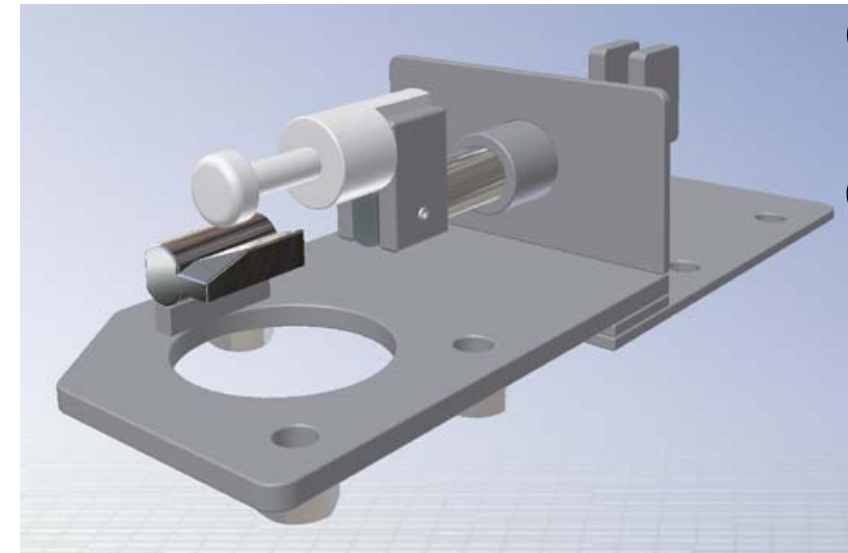
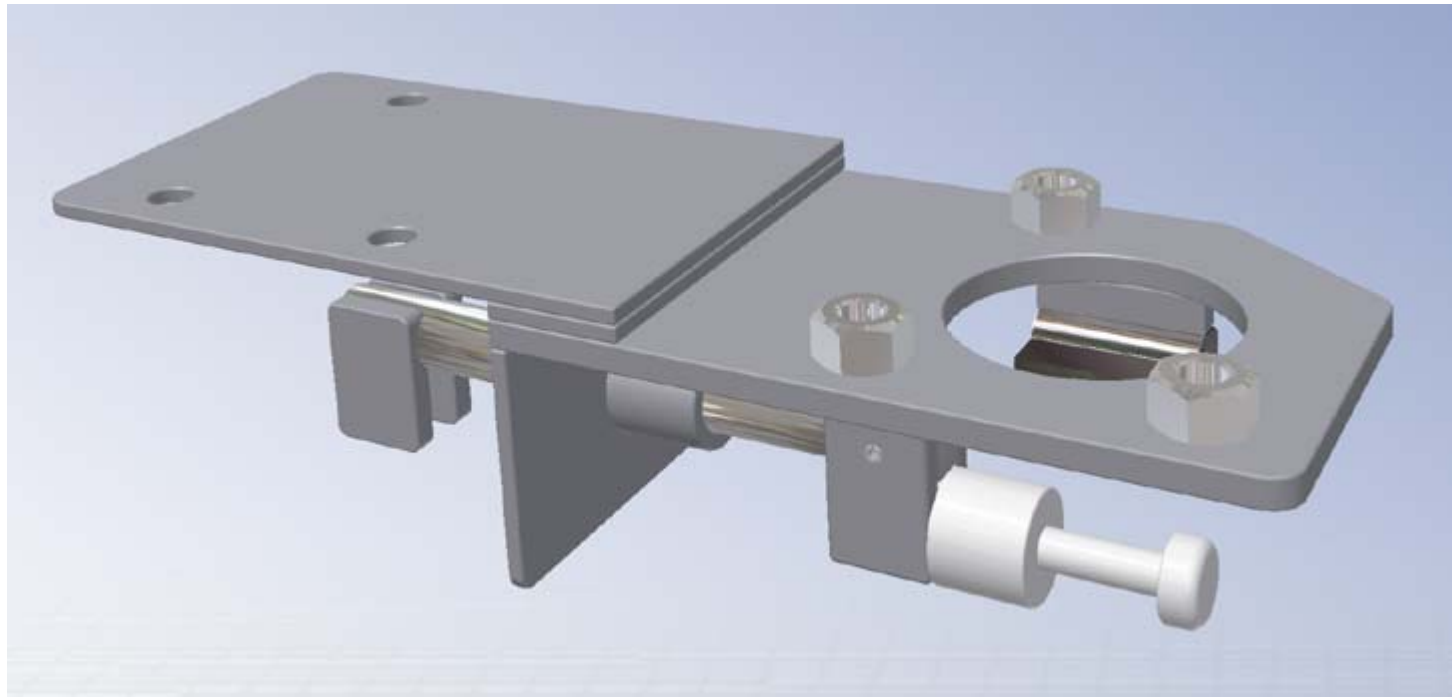
ALL WELDING COMPLETED TO PROCEDURES

Designed by	Checked by	Approved by - date	Date 27/08/2003	Tolerances 2 mm - 300 mm ± 2 mm 301 mm - 3000 mm ± 5 mm 3001 mm - + ± 10 mm
<small>COPYRIGHT. This drawing is the property of . Unauthorised use, copy or disclosure not to be made without written permission.</small> <b>REMOVE ALL SHARP EDGES</b> All Dimensions Metric.				Description <b>Avon Gearbox Extension</b> Drawing Number <b>Tiger Avon Gearbox</b>
Paper size A3		Revision 1	Sheet 1 / 5	



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Drawing created using Autodesk Inventor	Third Angle	IF IN DOUBT ASK!		Description <b>Avon Gearbox Extension</b>	
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		All Dimensions Metric.	Sheet 2 / 5		

Paper size A3



Planet Platforms Parts List

ITEM	QTY	DESCRIPTION
1	1	Top Plate.ipt
2	1	Bottom Plate.ipt
3	1	Vert Plate.ipt
4	1	Slide Tube.ipt
5	1	Slide Bar.ipt
6	2	Selector.ipt
7	1	Selector_gearbox.ipt
8	1	Infill Plate.ipt
9	3	M8 Hex Nut.ipt
10	1	Reverse Stop.ipt
11	1	Reverse Stop Support.ipt
12	1	Plastic clip.ipt
13	2	Miter.ipt

Plastic clip from FORD

Client \_\_\_\_\_

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Third Angle **IF IN DOUBT ASK!**

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Tolerances  
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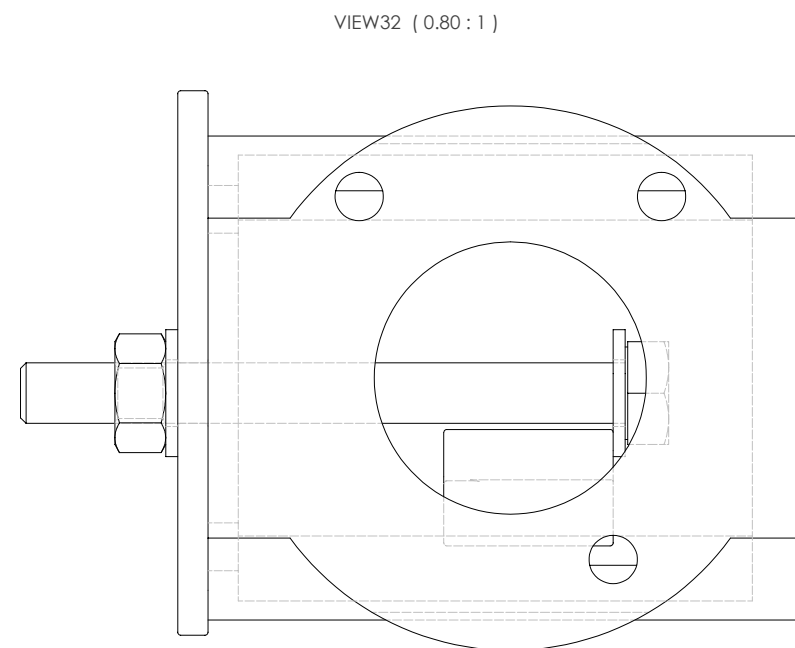
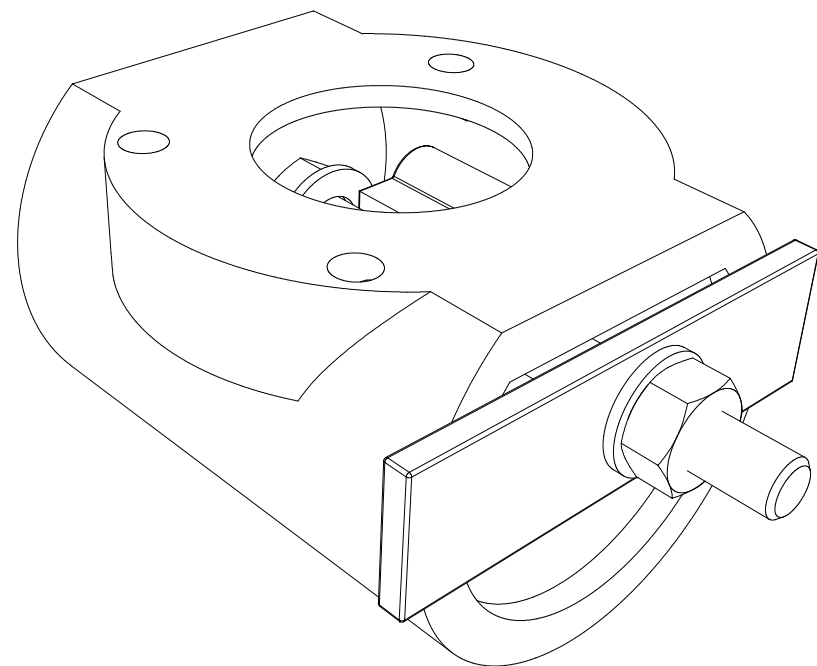
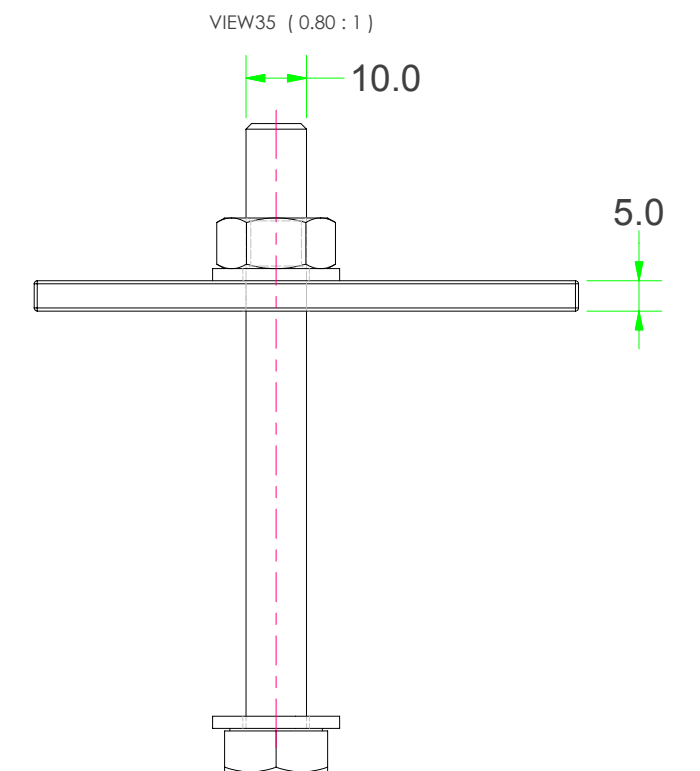
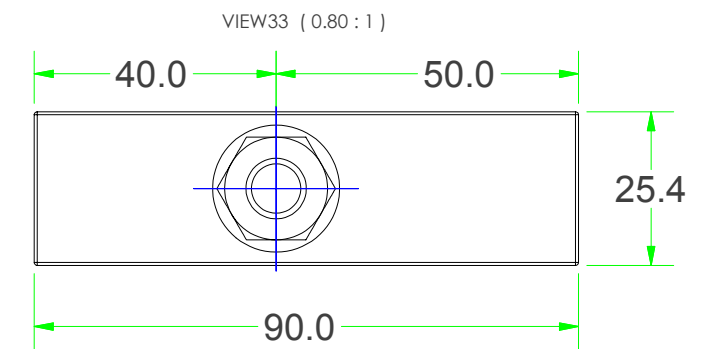
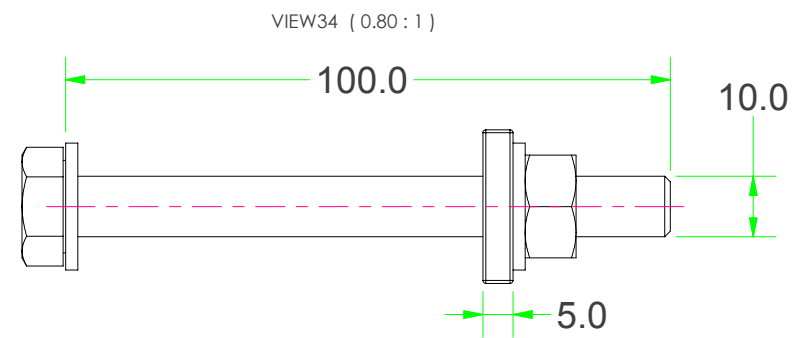
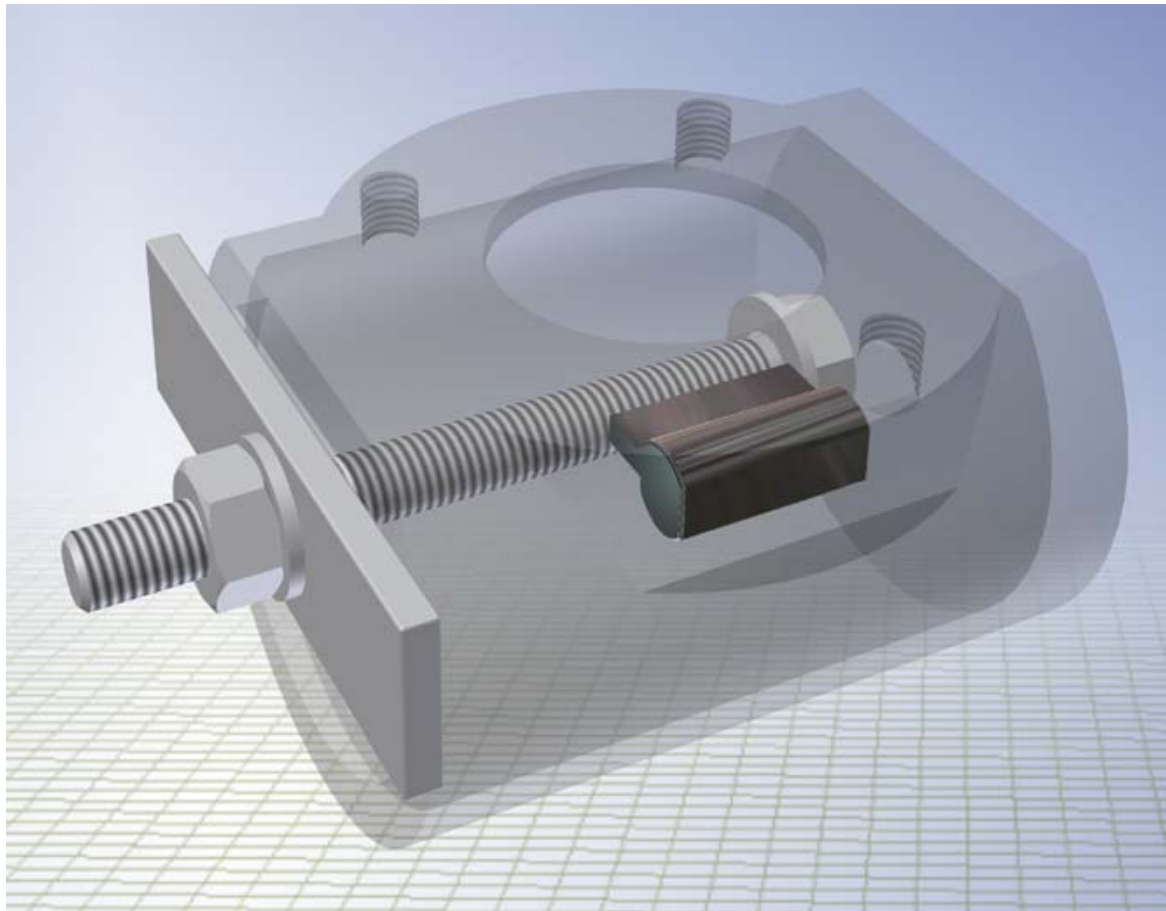
All Dimensions Metric.

Description  
**Avon Gearbox Extension**

Drawing Number \_\_\_\_\_ Revision 1 Sheet 3 / 5

Tiger Avon Gearbox

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Drawing created using Autodesk Inventor		Third Angle		REMOVE ALL SHARP EDGES		Description		Avon Gearbox Extension	
		IF IN DOUBT ASK!		All Dimensions Metric.		Drawing Number		Revision	Sheet
ALL WELDING COMPLETED TO		PROCEDURES		Paper size A3		Tiger Avon Gearbox		1	4 / 5

**Making a Quickshift**

Fed up with bashing your knuckles on the dashboard of your RH7, or with knocking your elbow on the handbrake? Do you render your passenger unconscious every time you select reverse - you need a quickshift! . But hold on, are you not keen to pay 25-70 pounds for a quickshift? Why not make your own.

**Materials required**

- 3 M10 nuts (not nylocks) as spacers (7mm thick)
- 3 M8 x 25mm bolts
- Use of a vice, or two blocks of wood/bricks
- A small amount of araldite or car body filler

A quickshift for the Ford 4 and 5 speed boxes works by moving the fulcrum point of the gear lever upwards, thereby decreasing the lever advantage of the lever and therefore shortening its throw. Inevitably this means that the lever action will be heavier than standard, so be prepared to accept this. The quickshift kits that you can buy for 25-30 pounds simply adapt the standard lever, but in my opinion, they move the fulcrum too high and ruin the quality of the change, which with Ford gearboxes is usually very good. First off there is nothing intrinsically wrong with the standard gear lever unless the rubber mount is knackered. If it is, throw it away and get another lever from a scrapyard (mine cost £2).

To convert the standard gear lever you must first remove it and clean it with a degreaser such as Jizer, so that all the working surfaces are clean, any build up of grease, or other shite must be removed. Test the motion of the gearlever when removed and cleaned through every plane to ensure that it is smooth and easy. If it is not then investigate why, it may be that the ball joint is pitted, scratched or damaged, if it is then obtain an undamaged one from a scrapyard. The way the lever is converted is to move the plastic sphere which acts as a ball joint 7mm or so further up the lever, and to space the lever attachment flange by the same amount. This should shorten the throw of the lever by about 25 percent.

To modify the lever, place the lever with the linkage downwards on the top of a vice with the linkage between the jaws and with the bottom of the plastic sphere resting on the jaws of the vice either side. The jaws of the vice need to be 20-25mm apart. Ensure that the sphere is level on the jaws (the lever will be angled as it is when the lever is in neutral). Tap down on the top of the lever smartly. This should drive the lever down through the ball joint; keep tapping until the sphere has moved by about 7mm. If you go too far, turn the lever upside down, open the jaws of the vice and place the mount flange on the jaws with the lever down between them, tap gently until the position is restored.

When this is done, using the 3 M10 nuts as spacers (and longer m8 bolts!) re-attach the lever to the gearbox mounting and try the gearchange. It may be stiff into the reverse gate or across the normal gate; this is because moving the fulcrum has also put increased tension on the rubber spring. To release this tension, simply trim about 5mm from the top of the rubber spring where it meets the retaining collar at the top of the lever ball joint.

**Standard Gearlever before modification**

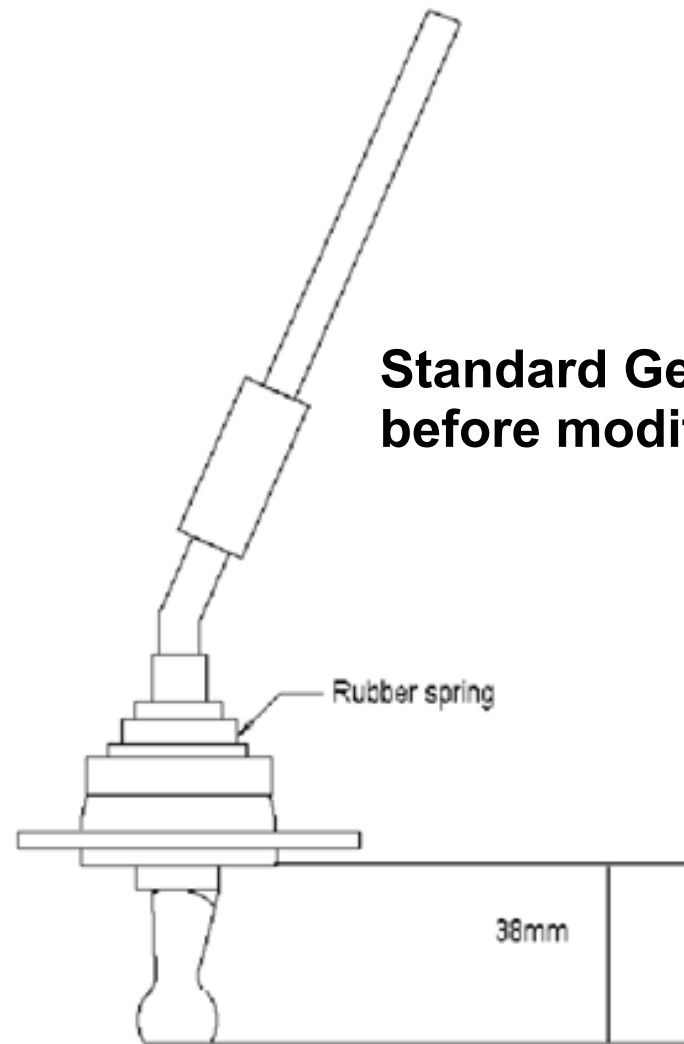
If you have difficulty engaging gears following modification then it is likely that the distance the sphere has moved on the lever is different from the distance spaced at the flange, so check this is OK. If reverse has no distinct 'gate' then it is likely that the spacing between the flanges is not enough, or the sphere has been pushed too far up the lever. If on the other hand reverse is very difficult to engage even after trimming the spring then either the spacing is too great or the sphere has not been pushed up the lever enough. If the lever action is still too long, the sphere may be moved further up the lever provided that the amount moved matches the thickness of the spacers used between the flange on the gearbox and the flange on the lever.

When you are happy with the gearchange, use Araldite or similar to fill the gap in the underside of the lever between the sphere and the lever, ensure that the surfaces are clean before applying. When the lever is perfect, lubricate the metal part of the linkage with moly grease, and the plastic ball joint with a small dab of grease or EP90 gearbox oil, make sure it is properly lubricated, including under the plastic shield below the rubber spring.

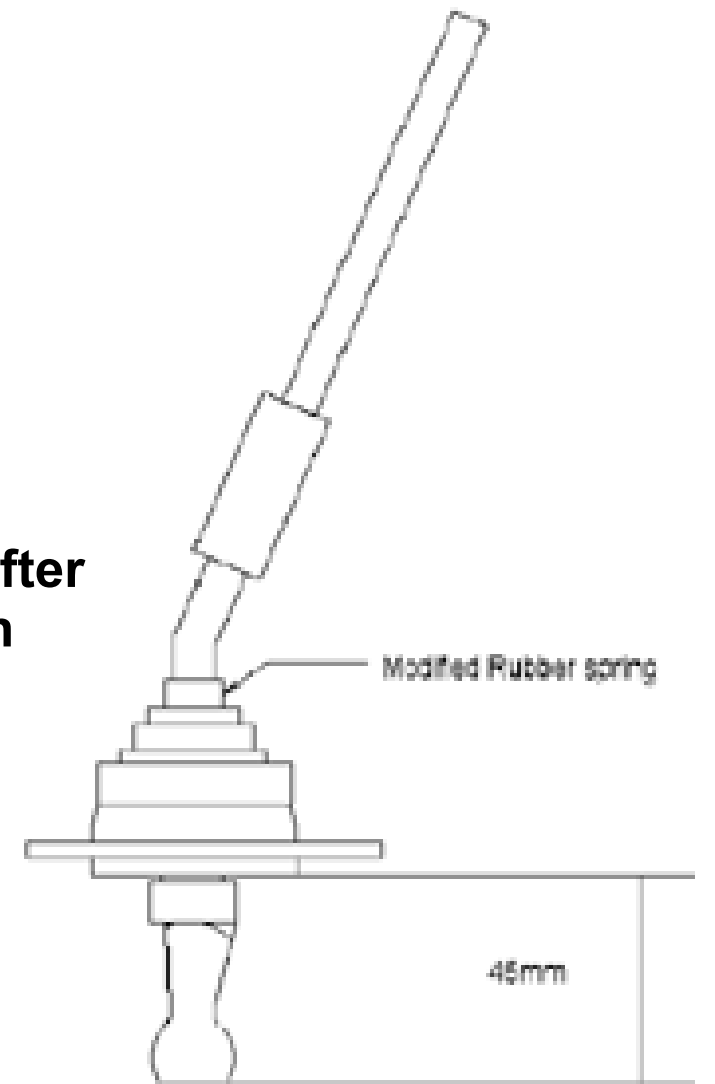
**Gearlever After Modification**

Voila - no more bruised knuckles or unconscious passengers! If experience of using the gearchange shows that it still has too much movement or not enough then the ball joint and spacing can be varied too suit.

Approximate cost - less than 1 pound.



**Standard Gearlever before modification**



**Gearlever After Modification**

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