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 E-MAIL INFO@RGMOTORS.CO.UK. WORK TO DIMENSIONS, DO NOT SCALE. UNTOLERANCED DIMENSIONS +/- 0.0050"

The fitting and use of aluminium petrol tanks is a matter that requires a degree of thought and care. Essentially vibration is the problem. Harmonic resonance can be present and is a particular problem with alloy panels, and aluminium is not a material that will resist vibration particularly well. Consideration should be given to both the issue of minimizing the vibration generally present, through balancing to suit the frame should the engine not be designed for the frame in question, careful mounting of the engine using correctly sized fastenings, careful attention to state of tune, timing etc. and complete isolation of the petrol tank from the frame.

The notes and diagrams to the right are the details supplied from the manufacturer, and if followed will work very well. In view of the rather unsightliness of the neoprene we have produced our own finned rubber insulators as pictured, part number RTM1 taking great care regarding the shore rating of the rubber, and we have found this to work well. Of course rubber can eventually harden and should be checked and replaced from time to time.

Whichever method you choose care must be taken not to over tighten the tank. And the tank should be checked at all RPM's to see if vibration is present. And steps taken to eliminate any vibration detected. I have had an alloy tank on a Commando for quite some years and of course this has never given problems. At the end of the day it is the responsibility of the machine builder to take the appropriate steps to ensure a trouble free installation.

Other items we have that may be of interest include Norton and Triton decals, nice vinyl black and red striping, fuel taps, fuel lines, and stainless/rubber tank straps.



When installing aluminium fuel tanks onto featherbed style frames the following must be carried out.

Tanks must be mounted on soft neoprene.

Do not skimp on padding, vibration is a very destructive force, particularly to aluminium.

Aluminium structures can suffer fatigue failures (usually alongside welded seams) quite quickly if not isolated from engine vibration. Do not have the centre retaining strap tight, pirelli webbing is the best material. If using stainless steel straps with overcentre locking clamps use soft rubber

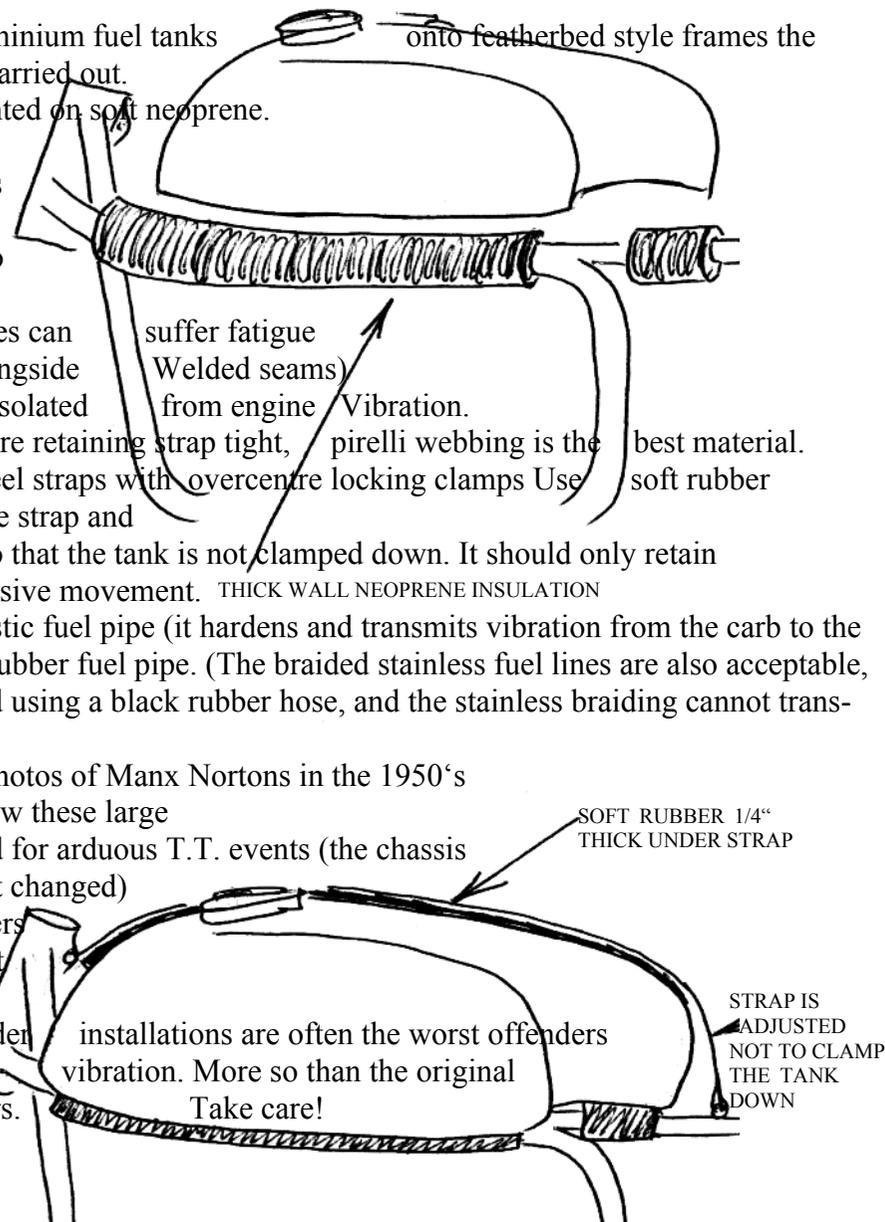
(neoprene) under the strap and adjust the tension so that the tank is not clamped down. It should only retain the tank from excessive movement. THICK WALL NEOPRENE INSULATION

Also, do not use plastic fuel pipe (it hardens and transmits vibration from the carb to the fuel tap) Use black rubber fuel pipe. (The braided stainless fuel lines are also acceptable, they are constructed using a black rubber hose, and the stainless braiding cannot transmit vibration)

Study early racing photos of Manx Nortons in the 1950's and 1960's. Look how these large tanks were mounted for arduous T.T. events (the chassis and frames have not changed)

Those engineers/riders knew how to protect their tanks.

Note that twin cylinder installations are often the worst offenders for high frequency vibration. More so than the original Manx Norton motors. Take care!



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DESCRIPTION	MATERIAL	HEAT TREATMENT	FINISH	PART NO
Alloy petrol tank fitting notes.				