

Supplemental Information & Instructions for

Bushed Rocker Arms

Midget 1500, Spitfire MKIV-1500, TR 250, 5, 6

(A) 839-115 Odd (1,3,5,7 four cylinder, 1,3,5,7,9,11 six cylinder)

(B) 839-125 Even (2,4,6,8 four cylinder, 2,4,6,8,10,12 six cylinder)



Anyone rebuilding a rocker shaft assembly for a TR250, 5, 6, Spitfire MK IV/1500, or Midget 1500 will have to deal with rocker arm to shaft clearance. The stock rocker arms were never bushed, and the tolerances specified are based to the cast iron on steel interface. The TR6 and Midget 1500 workshop manuals give the shaft diameter as 0.5607" to 0.5612", and the rocker arm bore is given as 0.563" to 0.564". This translates to a clearance of 0.0028" to 0.0033". If your rockers are worn, they must be replaced. If the bore diameter in the new rocker is on the high side, and your new rocker shaft is on the small side of the range, the clearance will approach the maximum allowed. In addition, the stock un-bushed rocker arms wear more quickly than rocker arms fitted with bushings. This will in time reduce your oil pressure.

Moss decided to address these issues by arranging for special rocker arms to be made. These are identical to the OE rocker in shape, but are fitted with a bronze rocker arm bushing (1a). The challenge was figuring out how to deliver bushed rocker arms that would have the proper clearance when fitted to a new rocker shaft. We know that the optimum clearance between the bushing and the shaft is generally given as 0.002" to 0.003". Rocker shafts are made to a standard dimension, with some tolerance. That means the actual diameter of the shaft will vary a little bit. If we honed these rocker arms to fit a "standard" rocker shaft perfectly, they really would not be perfect when they were installed. The actual clearance would vary from shaft to shaft. That would be ok, but that was not what we were trying to achieve. We supply these rockers with the bushing un-honed, meaning they will not fit any rocker shaft. You will need to have the bushings honed to fit a specific rocker shaft. Tell your machinist you want a finished clearance of 2 thousandths (0.002").

The advantages are numerous. The rocker arms and the rocker shaft will last longer. You will not lose as much oil pressure as you would with the stock un-bushed rocker arms. The other critical area for wear is the tip which comes in contact with the valve stem. The tips are very hard, 50-52HRC (Rockwell C scale), which is the same as new unused rocker arms. Moss also offers matched sets of rocker arms and rocker shafts, with the bushings already honed to give a clearance of 0.002". Order 839-128 for the TR 250, 5 & 6, or 839-138 for the Spitfire MK IV & 1500 and the MG Midget 1500.

We have made a substantial investment to get these made, but we felt that the need for a practical uprated rocker for these cars (short of going to roller rockers) was very real. We hope you agree with us.

Michael Grant, Product manager, Moss Motors.

Any suggestions that will improve the information above (especially detailed installation notes) are welcome. Please use the simple email form on the "Contact Us" page on the Moss website:

<http://www.mossmotors.com/AboutMoss/ContactUs.aspx>

If you prefer, you may call our Technical Services Department at 805-681-3411. So many people call us for help that we are often not able to answer the calls as fast as we'd like, and you may be asked to leave a message. We apologize in advance for the inconvenience. We will get back to you within 2 business days.



Moss Motors, Ltd.

440 Rutherford Street, Goleta, California 93117

In the US & Canada Toll Free (800) 667-7872 FAX (805) 692-2510 (805) 681-3400

Moss Europe Ltd.

Hampton Farm Industrial Estate, Hampton Road West, Hanworth Middlesex, TW13 6DB

In the UK: 020-8867-2020 FAX:- 020-8867-2030