

# Mounting Hardware for Series 1 Subframe Assembly

By Steve Kemp

## Legal Ramblings

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The content of diagrams contained in Figure 3: Front view of left hand drive car cross member on page 6 and Figure 4: Location of Screws on Bulk Head, Reaction Plate, and Upper/Lower Wishbones on page 11 may still be protected under international copyright laws by Jaguar Cars, Ltd., their subsidiaries or assignees. Other trademarks contained in Figure 1: Some Typical Bolt Head Markings on page 4 are property of their respective owners. All other material is Copyright 1997, Steve Kemp.

## Preface

This paper contains details regarding the hardware used to restore the engine compartment of Series 1 E-Type 876531.

The information contained herein was gleaned from several sources.

- Jaguar Cars Factory Service Manual for Series 1 3.8 E-Type
- Jaguar Cars Spare Parts Catalogue for Series 1 E-Type, Publication J.30, Reprinted June 1963
- Disassembly of four Series 1 E-Types (1962, 1963, 1964 and 1967)
- Notes taken on many more E-Types thought to be in original condition as viewed at numerous events

Only information verified in person or confirmed by factory supplied information has been used herein.

Please feel free to e-mail comments or suggestions for corrections or future improvement to the following address:

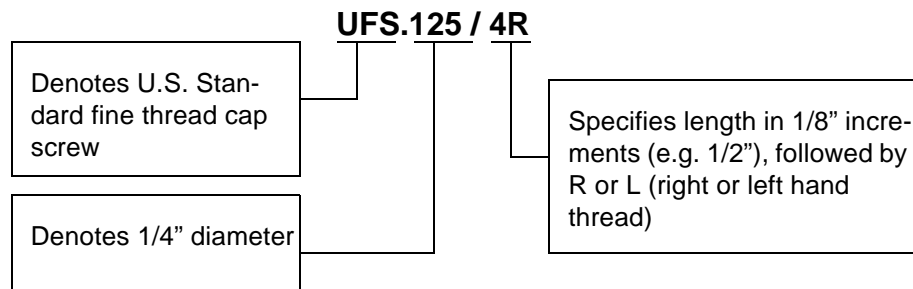
- skemp@sprintmail.com.

## Interpreting Factory Screw and Bolt Part Numbers

Bolt sizes can be interpreted using the following as a guide:

- UFS is U.S. Standard fine thread set (cap) screw (threaded continuously to underside of head)
- UFB is U.S. Standard fine thread bolt (length of thread based on industry standards)
- UCS is U.S. Standard coarse thread set (cap) screw
- UCB is U.S. Standard coarse thread bolt

The following diagram provides a guide to application.



The following table provides a few common part numbers and their respective sizes.

Factory Number	Size
UFx.419 (where <i>x</i> can be <i>B</i> or <i>S</i> )	3/16" diameter with 32 threads per inch (close to #10-32 screw; 0.1875=3/16" versus 0.190=#10 screw)

**Table 1: Common Screw Sizes**

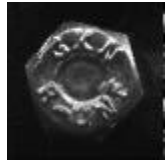
<b>Factory Number</b>	<b>Size</b>
UFx.125	1/4" diameter with 28 threads per inch
UFx.131	5/16" diameter with 24 threads per inch
UFx.137	3/8" diameter with 24 threads per inch
C.8667/1	1/4" diameter nyloc nut with 28 threads per inch
C.8667/2 or UFN.131/L	5/16" diameter nyloc nut with 24 threads per inch
C.8667/3	3/8" diameter nyloc nut with 24 threads per inch

**Table 1: Common Screw Sizes**

### **Common Bolt Scripts**

The following provides some detail on bolt scripts found within the engine bay of E-Type 876531 and found on other E-Types of similar vintage. BEES and GKN were the only ones found holding frame members together on all the cars disassembled by this author, although I have heard of others.

**Figure 1: Some Typical Bolt Head Markings**



Typical GKN head with R-UNF marking. Usually black oxide finish. Coarse thread UFS.125 was found holding wings to bonnet.



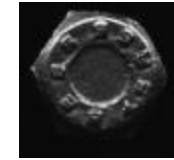
Typical NEWTON head with letter R appearing. All on 876531 were cad plated with pointed tip. Used to hold gas lid to body and boot lid catch to lid.



Typical LINREAD head. Some had letter S in middle, others did not. All were pointed tip, cad finished and used to hold various cad fixings to car (e.g. bonnet latch, accelerator linkage, etc.)



Typical BEES head with tightly spaced script. All found on 876531 were black oxide finished and *only one was found to be coarse thread*. Note "45R55" in script.

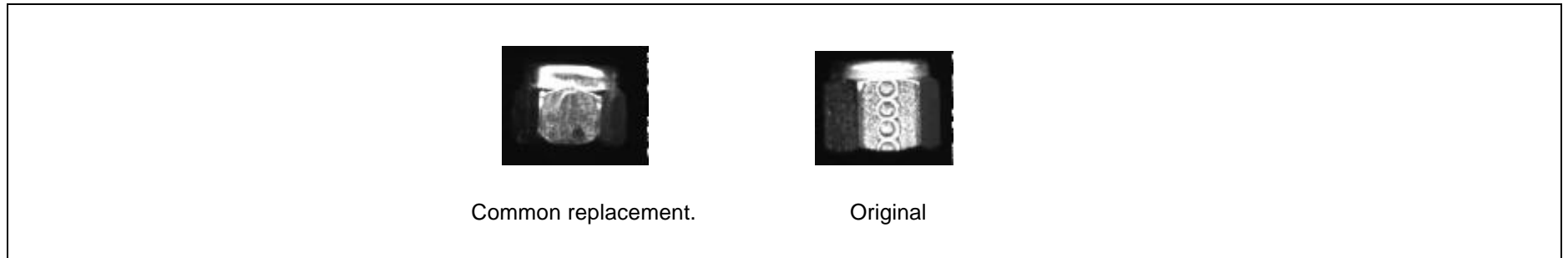


Typical BEES head with widely spaced script. Retains "45R55" in script.

## Nylon Locking Nuts

The following illustrates an two styles of nylon locking nut—an original, as found on 876531, and a replacement commonly found in modern bolt kits. Note the height of the nuts. Other styles include a version with flats somewhat short than the original and taller than the replacement. In addition, the nylon insert can be thin or thick.

**Figure 2: Nylon Nut Styles**

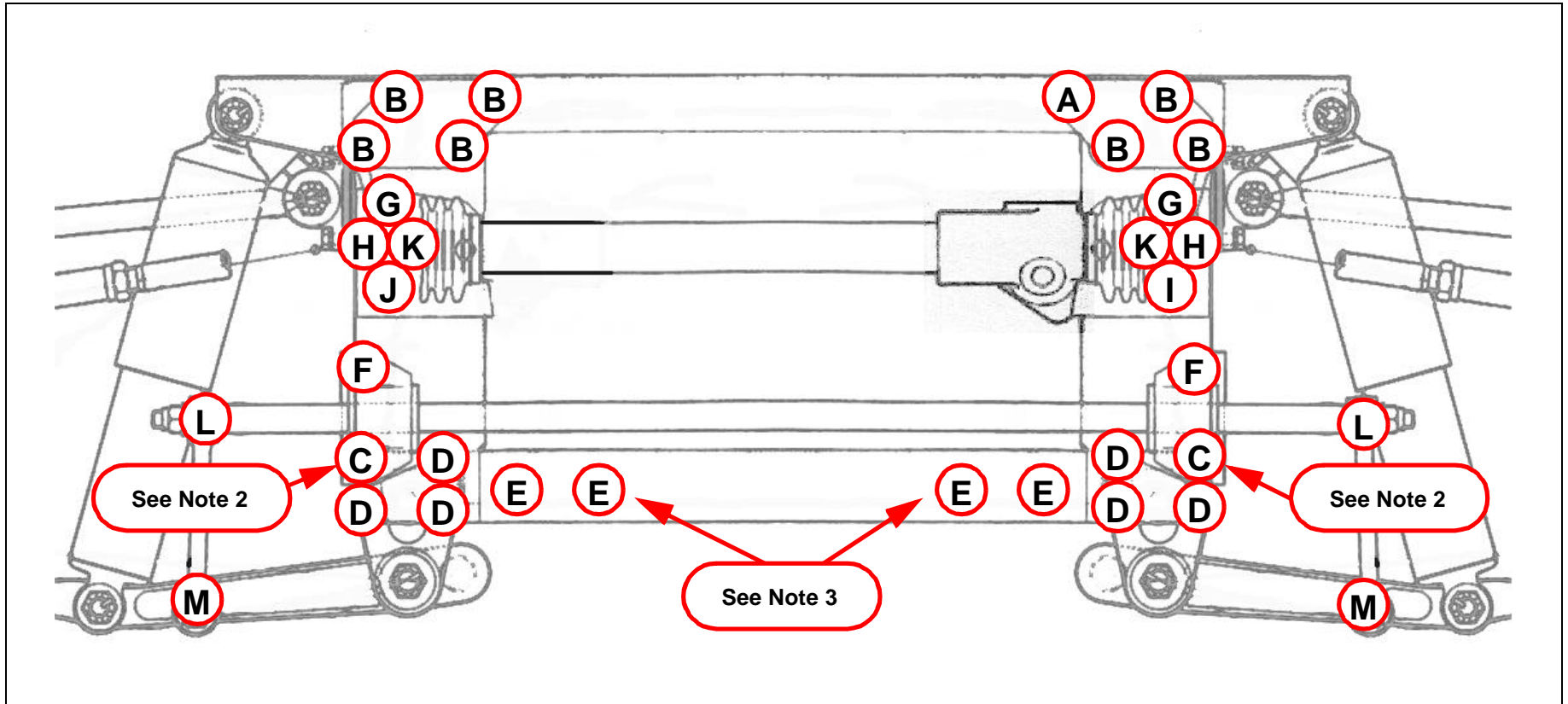


## Mounting Hardware for Series 1 E-Type

### Notes

1. Heads of all bolts are oriented toward front of car except where noted
2. These bolts have head oriented toward rear of car to clear bonnet support frame
3. Ensure oval spacers are placed between side and cross members
4. All orientation assumes left is driver's side and right is passenger's side

Figure 3: Front view of left hand drive car cross member



The following table is to be used with Figure 3: Front view of left hand drive car cross member on page 6 and Figure 4: Location of Screws on Bulk Head, Reaction Plate, and Upper/Lower Wishbones on page 11. Some of the hardware may be similar to later series cars, but it

should be expected that some changes may have occurred due to changes in the suspension and cross member.

Qty	Factory Part Number	Ref.	Where Used	Size
1	UFB.131/25R	A	Upper right corner of upper left hand four-bolt pattern on cross member of left hand drive cars. This holds the cross member to the 3-way brake union, left side member and bonnet support frame.	5/16 x 3 1/8
7	UFB.131/20R	B	All upper four bolt pattern cross member bolts except upper right corner of left hand set on left hand drive cars. These hold the cross member, bonnet support frame and side members.	5/16 x 2 1/2
2	UFB.131/31R	C	Upper left and upper right corner of lower four-bolt pattern on cross member. This holds the cross member to the side members and lower part of anti roll bar. See Notes on page 5.	5/16 x 3 7/8
6	UFB.131/19R	D	All lower four-bolt pattern holes on cross member except upper left and upper right corners. These hold the cross member to the side members and bonnet support frame.	5/16 x 2 3/8
4	UFB.131/18R	E	Four lower middle bolts on middle of cross member holding the cross member to the side members.	5/16 x 2 1/4
2	C.15045	E	Packing plates between cross member and side members at bolts 'E'. See Notes on page 5.	n/a
2	UFB.137/18R	not shown	Bolts securing side members to support channels on bottom of body shell (not shown).	3/8 x 2 1/4

**Table 2: Mounting Positions of Screws and Bolts**

Qty	Factory Part Number	Ref.	Where Used	Size
2	UFS.131/24R	G	Set screw securing front fulcrum block mounting plate, rack mounting bracket and rack to cross member. DISTANCE PIECE MOUNTS UNDER SPECIAL WASHER UNDER SET SCREW HEAD ON LEFT HAND SIDE OF L.H. DRIVE CAR. SPECIAL WASHER, NUT AND LOCK WASHWER MOUNT UNDER HEAD OF SET SCREW ON RIGHT HAND SIDE OF CAR.	5/16 x 3
1	UFB.131/13R	I	Set screw securing rack mounting bracket and rack to cross member. DISTANCE PIECE MOUNTS UNDER SPECIAL WASHER UNDER SET SCREW HEAD ON LEFT HAND SIDE OF L.H. DRIVE CAR.	5/16 x 1 5/8
1	UFS.131/12R	J	Set screw securing rack mounting bracket and rack to cross member. SPECIAL WASHER, NUT AND LOCK WASHWER MOUNT UNDER HEAD OF SET SCREW ON RIGHT HAND SIDE OF CAR.	5/16 x 1 1/2
2	UFS.131/6R	K	Bolt securing rack to rubber mounting block.	5/16 x 3/4
2	UFB.131/18R	F	Bolts in upper position securing anti roll bar and mounting block	5/16 x 2 1/4
2	UFB.143/21R	L	Upper bolts, washers and nyloc nuts on link securing anti roll bar.	
2	UFB.143/22R	M	Lower bolts, washers and nyloc nuts on link securing anti roll bar.	
24	UFS.131/7R	N	Hex cap screws securing side members to bulkhead. All heads are toward engine compartment. Ensure washers are under nuts on inside of cockpit.	5/16 x 7/8

**Table 2: Mounting Positions of Screws and Bolts**



Qty	Factory Part Number	Ref.	Where Used	Size
11	FW.105/T	N	Plain washers under nyloc nuts on cockpit side of bulkhead/dash/firewall. Note that factory claims twelve washers exist, however fuel filter mounting bracket may account for thickness of one washer on right hand side of car. The eleventh washer has been seen under opposite location on some cars.	5/16
4	UFS.131/8R	O	Bolts securing rear fulcrum blocks of upper wishbones to side members. The bolt threads face outwards (heads are toward engine).	5/16 x 1
2	C.15113	O	Washer plates behind cross member for rear fulcrum blocks of upper wishbones (not shown).	n/a
4	UFB.131/16R	P	Bolts securing rear fulcrum blocks of lower wishbones. Bolt heads are toward rear of car. Note that factory parts book calls out C.8737/2 nut on bolts, although standard C.8667/2 was found on 876531.	5/16 x 2
34	C.8667/2		Nyloc nuts on set screws under bulkhead, bolts on cross member, bolts on suspension mounting plates or fulcrum blocks (not shown). Note that factory parts book calls out UFN.131/L on screws G and J.	5/16-24
2	C.8060	Q	Bolts securing torsion bar reaction plate to side members and under body support channels.	
2	C.8667/5	Q	Nyloc nuts securing bolts securing torsion bar reaction plate to side members and under body support channels.	
2	UFB.137/18R	R	Nyloc nuts on bolts securing side members to under body support channels. Washers under nuts.	3/8 x 2 1/4
2	C8667/3	R	Nyloc nuts on bolts securing side members to under body support channels and torsion bar reaction plate.	3/8-24

**Table 2: Mounting Positions of Screws and Bolts**

Qty	Factory Part Number	Ref.	Where Used	Size
4	C.20426	S	Bolts securing torsion bar brackets to reaction plate. Special factory number may suggest a harder than ordinary bolt.	3/8 x 1 1/4
4	C.8667/3	S	Nyloc nuts for bolts securing torsion bar brackets to reaction plate.	3/8-24

**Table 2: Mounting Positions of Screws and Bolts**

Figure 4: Location of Screws on Bulk Head, Reaction Plate, and Upper/Lower Wishbones

