

NO. 73/z/2



# Recall Campaign Bulletin

**SUBJECT:**

RECALL CAMPAIGN #B.181  
Incorrect Specification Camshaft

**MODELS:**

**MARINA**

July, 1973

PLEASE READ ENCLOSED "DEALER GUIDE, RECALL CAMPAIGNS"

During routine production line testing, Austin Morris Group, British Leyland U.K. Ltd. determined that a number of 1973 Austin Marina engines, built for the U.S.A. market, had been incorrectly fitted with camshafts designed for the U.K. market.

This camshaft will not allow these engines to meet 1973 Federal Exhaust Emission Standards and must be replaced (see Service Procedure attached).

## VEHICLES INVOLVED

Nationally 232, 1973 Marinas already shipped to the U.S.A. are suspect and must be checked, of which approximately 30% (70 vehicles) will require the camshafts to be changed.

It has been determined the majority of affected vehicles are in Distributor/Dealer stocks, and your Distributor has already been advised by telex to hold, check and modify all affected vehicles in stock.

In addition, your Distributor's Service Department has already contacted affected dealers by telephone and instructed them to do likewise.

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DEALER VEHICLE CAMPAIGN LIST

Enclosed is a "Dealer Vehicle Campaign List" listing all affected vehicles which, according to our records, were invoiced to you. Use this list as a work sheet and check off each vehicle as it is campaigned.

Also enclosed is one computer prepared "Campaign Claim" form for each vehicle listed as in dealer stock. All stock vehicles must be campaigned prior to retail sale.

If a list is not enclosed, then according to our records you did not receive any of the affected vehicles and this Bulletin is for your information only.

If any vehicle listed as in dealer stock has in fact been retailed, the dealer must contact the owner and advise him to return the vehicle for campaign work.

AFFECTED VEHICLES RECENTLY SUPPLIED FROM YOUR DISTRIBUTOR

If any vehicle, that according to our records was in Distributor stock, has in fact been shipped to you, your Distributor will forward to you a suitably prepared "Campaign Claim" form and letter advising this vehicle must be campaigned prior to retail sale.

OWNER NOTIFICATION

Commencing July 25, 1973 (campaign launch date), all owners whose names and addresses appear on the "Dealer Vehicle Campaign List" will be sent recall notifications by certified mail, together with a letter advising them of the suspect condition. (An illustration of the owner's letter is enclosed.)

They will be instructed to contact their selling dealer or nearest authorized Austin/MG dealer and make an appointment to have their vehicle campaigned. They will also be instructed to sign and turn over the "Campaign Claim" form to you at the appointed time.

Three weeks after launch date dealers are requested to contact any owner who has not responded to the recall notification, in an effort to campaign the remaining vehicles.

PARTS INFORMATION

For vehicles requiring new camshafts use the following parts:

<u>DESCRIPTION</u>	<u>PART NUMBER</u>	<u>QUANTITY</u>
Camshaft	88G-303	1
Camshaft Nut Lock Washer	2A-759	1
Crankshaft Pulley Bolt Lock Washer	1G-1319	1

As these are all new vehicles, it is felt replacement gaskets will not be needed.

Your Distributor's stocks of the above have been increased based on the number of affected vehicles in their territory.

Due to the limited number of vehicles by dealer, affected dealers are requested to order their requirements from their Distributor. Quote campaign number B.181 on Parts Order.

CAMPAIGN CLAIMS

Complete applicable "Campaign Claim" form (see Section C, "Dealer Guide, Recall Campaigns").

Insert in the box provided on the "Campaign Claim" form one only of the following repair codes, depending on work performed:

<u>REPAIR CODE</u>	<u>PARTS</u>	<u>LABOR HOURS</u>	<u>DESCRIPTION (See Service Procedure Attached)</u>
CR	None	0.3	Check Only
CS	As Listed Above	5.25	Check and R/R Camshaft (Non Air Cond. Cars)
CT	As Listed Above	6.00	Check and R/R camshaft (Air Cond. Cars)

Do NOT use Warranty Summary Form WAR-51.

SERVICE PROCEDURERECALL CAMPAIGN B.181 - AUSTIN MARINA CAMSHAFT, PART #88G-303CHECKING PROCEDURE

1. Engine cold, set crank to T.D.C. number 4 cylinder firing.
2. Set number 7 rocker (numbering from front) to 0.044".
3. Rotate engine 360 degrees backwards to T.D.C.
4. If all clearance taken up on number 7 rocker, camshaft is O.K. Reset number 7 rocker to 0.013" (12-29-48) and release car.
5. If 0.015" gap exists on number 7 rocker, wrong camshaft is fitted. Change camshaft.

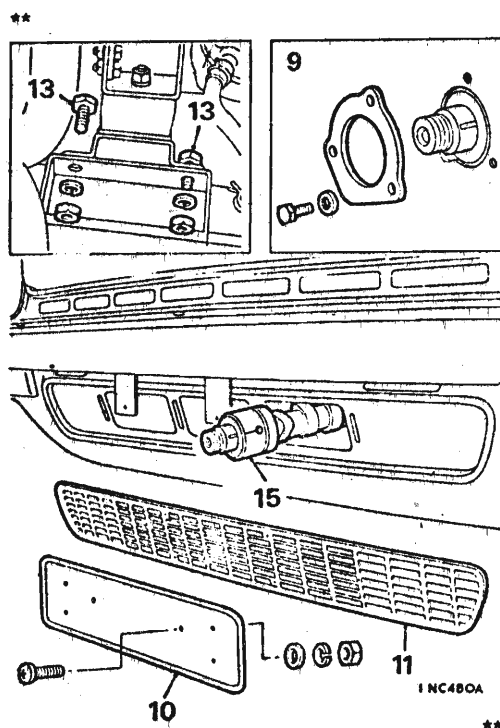
REMOVE AND FIT NEW CAMSHAFT (PART #88G-303)

- NOTE: a) See Marina Shop Manual (AKD-7975) for details of number 1 through 5 and 22 listed below. Details of number 6, 7 and 8 are attached.
- b) See end of section for additional operations required on air conditioned cars.

1. Drain the cooling system. 26.10.01.
2. Remove the radiator. 26.40.01.
3. Remove the rocker shaft. 12.29.54.
4. Remove the distributor drive shaft. 12.10.22.
5. Remove the tappets. 12.29.57.
- 6.\*\*Remove the fuel pump. 19.45.08.
7. Remove the timing gear cover. 12.65.01.
8. Remove the timing chain and gears. 12.65.12.
9. Remove the three screws and shakeproof washers retaining the camshaft locating plate.
10. Remove the number-plate.
11. Drill out the rivets and remove the air intake grille.
12. Support the engine.
13. Remove the bolts securing the engine mountings to the chassis.
14. Lower the engine until the camshaft aligns with the air intake grille mounting aperture.
15. Withdraw the camshaft.\*\*

Refitting

- 16.\*\*Assemble the camshaft retaining plate and chain wheel to the camshaft.
17. Check the camshaft end-float against the figures given in DATA.
18. Renew the retaining plate if the end-float is excessive.
19. Remove the chain wheel and locating plate from the camshaft.
20. Reverse the procedure in 2 to 15, noting:
  - a. Refit and secure the air intake grille with 0-125 in diameter Pop rivets.
21. Refill the cooling system. 26.10.01.\*\*
22. Reset rockers 12-29-48.
23. Recheck ignition timing and carburettor specifications as detailed on the "Vehicle Emission Control" label which is attached to the inner fender panel behind the washer bottle.

ADDITIONAL OPERATIONS ON AIR CONDITIONED CARS

1. Remove air cleaner together with cold and hot air intake pipes.
2. After the radiator is removed, remove condenser and compressor, without discharging system, and lay on the L.F. fender. (Protect fender.)

- NOTE: a) Disconnect compressor (2 bolts) from support stay. Leave stay on bell housing.
- b) Disconnect compressor top bracket from cylinder head and manifold. Leave bracket on compressor.
- c) Remove 4 bolts securing bottom of compressor to lower bracket. Leave bracket on engine.

SERVICE PROCEDURE (CONT'D)  
 RECALL CAMPAIGN B.181 - AUSTIN MARINA CAMSHAFT, PART #88G-303

## \*\*FUEL PUMP

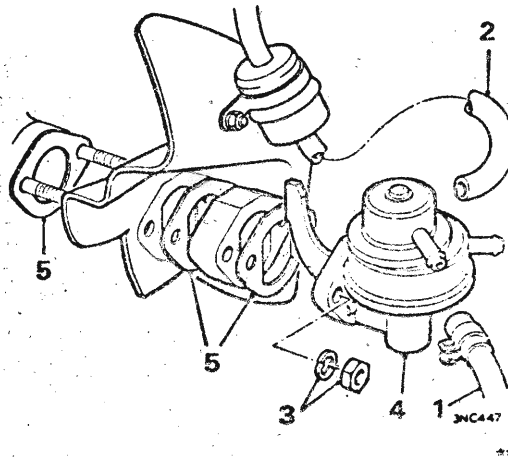
—Remove and refit 19.45.08

### Removing

1. Slacken the clip and disconnect the inlet pipe from the pump.
2. Disconnect the outlet pipe from the pump.
3. Remove the two nuts and spring washers retaining the pump.
4. Remove the fuel pump.

### Refitting

5. Prior to refitting ensure the insulator block inner and outer gaskets and the gasket between the heat shield and engine are serviceable.
6. Reverse the procedure in 1 to 4.\*\*



## \*\*TIMING GEAR COVER OIL SEAL

—Remove and refit 12.65.05

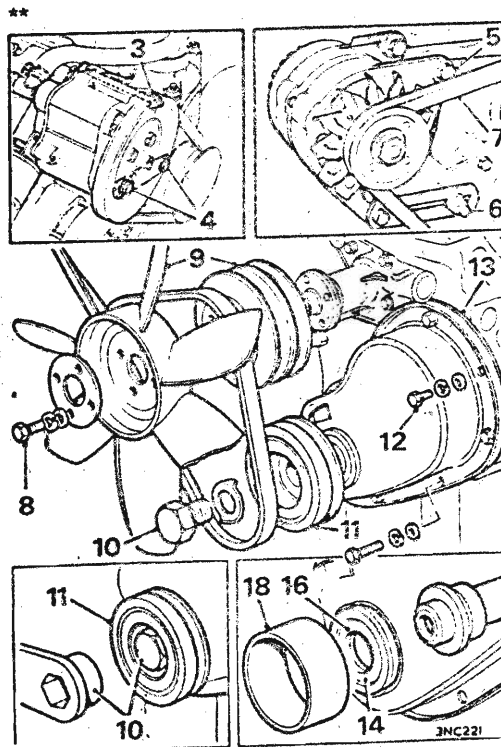
Timing gear cover 1 to 13 and 17 to 22 12.65.01

### Removing

1. Drain the cooling system. 26.10.01.
2. Remove the radiator. 26.40.01.
3. Slacken the nut on the air pump attachment bolt.
4. Slacken the air pump adjusting link pivot screws.
5. Slacken the alternator attachment bolts.
6. Slacken the alternator pivot link nut.
7. Remove the driving belts.
8. Remove the four bolts and spring washers retaining the cooling fan.
9. Remove the cooling fan and pulley.
10. Remove the crankshaft pulley retaining bolt and lock washer.
11. Withdraw the pulley from the crankshaft.
12. Remove the screws, spring and plain washers retaining the timing gear cover.
13. Remove the timing gear cover.
14. Remove the oil seal from the timing gear cover.

### Refitting

15. Dip the new oil seal in engine oil before fitting.
16. Using 18G 134 and 18G 134 BD, fit the new oil seal to the front cover, ensuring that the lips of the seal face inwards.
17. If the front cover gasket is damaged, clean the faces of the cover and engine front plate and fit a new gasket when reassembling.
18. Centralize the oil seal on the crankshaft when fitting the cover using the pulley.
19. Reverse the procedure in 7 to 13, using a new crankshaft lock washer. Lubricate the hub of the crankshaft pulley before fitting.
20. Adjust the alternator and air pump belt tension.
21. Refit the radiator. 26.40.01.
22. Refill the cooling system. 26.10.01.\*\*



## SERVICE PROCEDURE (CONT'D)

## RECALL CAMPAIGN B.181 - AUSTIN MARINA CAMSHAFT, PART #88G-303

**\*\*TIMING CHAIN AND GEARS**

—Remove and refit

12.65.12

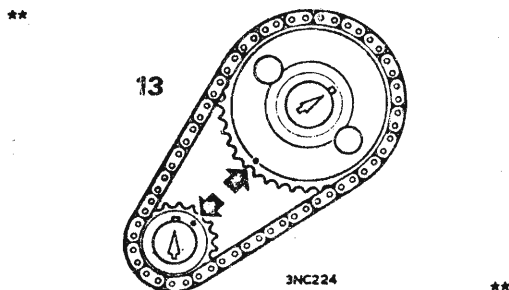
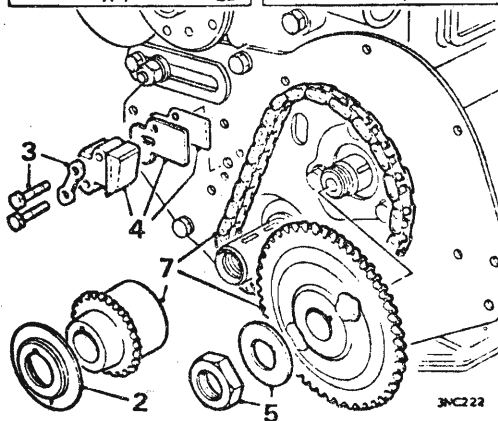
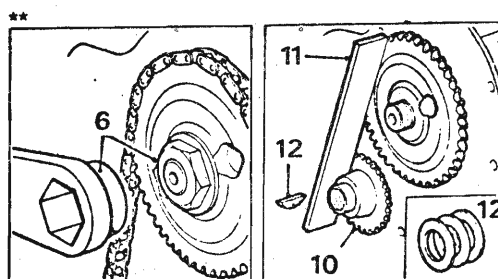
Tensioner 1 to 4 and 15 to 17

**Removing**

1. Remove the timing gear cover. 12.65.01.
2. Remove the oil thrower.
3. Unlock and remove the two screws retaining the chain tensioner.
4. Remove the tensioner and gasket.
5. Unlock the camshaft nut.
6. Using 18G 98 A, remove the camshaft nut and lock washer.
7. Withdraw the timing chain and gears.

**Refitting**

8. Rotate the crankshaft so that its keyways are at T.D.C.
9. Rotate the camshaft so that its keyway is at 2 o'clock.
10. Refit the gears.
11. Check the alignment and gap of the gear wheels, using a suitable straight-edge.
12. Remove the crankshaft drive keys, select and fit shims as required and refit the drive keys.
13. Assemble the timing chain and gear wheels with the timing mark on each wheel opposite each other.
14. Fit a new camshaft gear lock washer, fit the nut. Tighten and lock the nut.
15. Fit the chain tensioner.
16. Fit the oil thrower with the face marked 'F' towards the front of the engine.
17. Fit the timing gear cover. 12.65.01.\*\*





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## BRITISH LEYLAND MOTORS INC.

600 WILLOW TREE ROAD • LEONIA, NEW JERSEY 07605 • Tel: (201) 461-7300 • Telex No.: 135491

July, 1973

Dear Marina Owner:

Austin Morris Group, British Leyland U.K. Ltd., the manufacturer of the Austin Marina, has determined that a condition of non-compliance, with 1973 U.S.A. exhaust emission regulations, exists in a specific range of 1973 Austin Marinas.

This range includes your vehicle as identified on the enclosed "Campaign Form" and, while it is believed that this non-compliance does not apply to all vehicles within this range, it may be found in your car. Therefore, corrective action should be taken.

The non-compliance results from the installation of a camshaft that was not designed to meet the specific requirements of the 1973 U.S.A. exhaust emission regulations.

A camshaft is the part of an engine which operates the intake and exhaust valves. It is designed to open and close these two valves at precisely the correct point during engine operation and to keep them open for a specific period of time. The correct operating sequence of the intake and exhaust valve is critical to U.S.A. exhaust emission regulations, and it is for this reason that camshafts designed for vehicles destined for North America are different to camshafts designed for other countries with less stringent exhaust emission regulations.

We wish to advise that there is no question of safety involved. However, in view of the fact that clean air affects us all, you are urged to contact your selling dealer wherever possible, or if you have moved, the nearest authorized Austin/MG dealer, and make an appointment to have your engine checked and the camshaft changed, if necessary.

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Inspection of the engine for the correct camshaft is a simple operation and takes approximately twenty (20) minutes, and changing the camshaft, which would include resetting the ignition timing and checking the carburetor, approximately six (6) hours.

Modification instructions have already been mailed to all authorized Austin/MG dealers and there will be no charge to you for either service.


The enclosed "Campaign Claim" form identifies your vehicle and verifies to your dealer that your vehicle is one requiring the above campaign service (the vehicle identification number quoted on the "Campaign Claim" form is stamped on a plate on the left windshield post of your car).

Please be sure to sign the form in the space provided and present it to your dealer at the appointed time. He will then process the claim for payment and we can be sure your vehicle has been campaigned.

If you do not now own this vehicle, please refer to the instructions on the last page of the "Campaign Claim" form and, if possible, provide the name and address of the present owner so that we may contact him.

We sincerely regret any inconvenience this may cause you, but we know you will understand this action is taken in the interest of clean air and in the spirit of the U.S.A. exhaust emission regulations.

Yours sincerely,



David J. Hart  
Service Quality Manager

DJH/ad