



Recall Start March 1995

**1995 Protege
Engine Valve Spring
[Recall 59503]**

TO: All **Mazda** Dealers

ATTENTION: All General Managers, Service Managers, and Parts Managers

SUBJECT: **Recall Campaign 59503**
1995 Protégé – Engine Valve Spring

Dear **Mazda** Dealer:

Mazda Motor Corporation has decided to conduct a recall campaign for replacement of the engine valve springs on certain 1995 Protege models.

It has been determined that due to a manufacturing defect, some of the valve springs used in the assembly of 1.5 liter engines may break at very low mileage levels. The breakage of one or more springs is accompanied by pronounced engine chatter and a loss of engine power. In a small number of cases, continued operation of the vehicle may result in damage to the engine pistons. In this case, the engine may stall and will not restart.

Detailed information regarding this Recall Campaign is provided in Attachment I, repair procedures are shown in Attachment II.

In the interest of minimizing the negative impact of this campaign and increase customer satisfaction with Mazda products, it is recommended that the following two items be performed:

- Wash and vacuum the vehicle before returning it to the owner.
- Call the owner of the vehicle within 48 hours of the completion of the recall repairs to ensure that the vehicle is performing satisfactorily. If there are any unresolved customer concerns, schedule an appointment to correct their concerns.

The National Traffic and Motor Vehicle Safety Act prohibits selling or leasing any subject vehicles without performing the necessary repair for defects or failures. Failure to perform applicable recalls before sale can result in extensive fines and penalties from the Federal Government. Therefore, you must complete this recall for all affected new and used vehicles in your inventory prior to sale or lease.

Please make certain that the appropriate personnel in your dealership are familiar with the details of this recall campaign before responding to customer inquiries. Should you have any questions please contact the **Warranty Hotline at (800)-662-6779**.

We apologize for any inconvenience that this program may cause you and your customers. Your understanding and support in carrying out this campaign is greatly appreciated.

Sincerely,

MAZDA NORTH AMERICAN OPERATIONS

CONDITION OF CONCERN

Due to a manufacturing defect, some of the valve springs used in the assembly of 1.5 liter engines may break at very low mileage levels. The breakage of one or more springs is accompanied by pronounced engine chatter and a loss of engine power. In a small number of cases, continued operation of the vehicle may result in damage to the engine pistons. In this case, the engine may stall and will not restart.

SUBJECT VEHICLES

Model Year & Model	VIN Range
1995 Protégé 1.5 L (LX & DX)	JM1BA141*S0136017 – JM1BA141*S0139677 JM1BA141*S0143244 – JM1BA141*S0146226

Note: 1) The asterisk symbol "*" can be any number or the letter "X".

OWNER NOTIFICATION

Owners of affected vehicles will be notified beginning March 8, 1995, by first class mail.

PARTS INFORMATION

Part Description	Part Number	Quantity
Engine Valve Spring.	Z501-12-125 -TT	16
Authorized Modification Label	9999-95-065A-00	1

Dealer Parts Shipments

MMA will drop ship 16 engine valve springs for each vehicle a dealer has in stock or has retailed. Shipments will commence the week of March 6. MNAO will also drop ship a special tool to perform the repair during the same time period.

Please verify that you have the necessary parts before making an appointment to perform the recall campaign on a customer's vehicle

Authorized Modification Labels are supplied at no charge and are available in 8 1/2" X 11" sheets containing 18 labels. Please use MStore for ordering additional labels.

REPAIR PROCEDURES

Please refer to Attachment II.

WARRANTY CLAIM PROCESSING INFORMATION

	Valve Spring Replacement
Process Number	A5043D
Warranty Type Code	R
Symptom Code	99
Damage Code	99
Part Number Main Cause	Z501-12-125 -TT
Quantity	16
Labor Operation Number	XX0725RX
Labor Hours	2.7

1995 PROTÉGÉ [RECALL 59503] VALVE SPRING REWORK

A. VEHICLE INSPECTION PROCEDURE

1. Verify vehicle model, model year and VIN is within the following range:

Year & Model	VIN Range
1995 Protégé 1.5 L (LX & DX)	JM1BA141*S0136017 – *S0139677 JM1BA141*S0143244 – *S0146226

- If vehicle is within the affected ranges, proceed to STEP 2.
- If vehicle is outside of the affected ranges, return vehicle to customer or inventory.

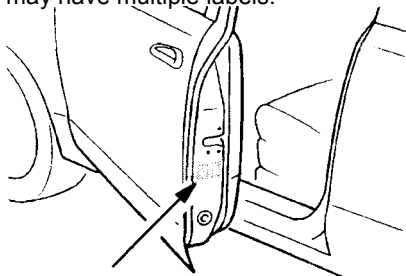
Note

- To verify build date day, perform a **Warranty Vehicle Inquiry** using your **MDCS SYSTEM**.

2. Perform a **Warranty Vehicle Inquiry** using your **MDCS System** and inspect vehicle for an Authorized Modification Label **RECALL 59503** attached to the drivers side door. Refer to illustration below.

Note

- Be sure to verify the recall number as the vehicle may have multiple labels.



**AUTHORIZED
MODIFICATION LABEL
59503**

- If **MDCS** displays **RECALL: 59503 Open** and an Authorized Modification Label is **not present**, the recall has not been performed. Proceed to "**B. VALBE SPRING REPLACEMENT.**"
- If **MDCS** displays **RECALL: 59503 Open** and an Authorized Modification Label is **present**, contact the Warranty Department at (800) 662-6779. They will update the vehicle history.
- If **MDCS** displays **RECALL: 59503 Closed** and an Authorized Modification Label is **not present**, proceed to "**C. AUTHORIZED MODIFICATION LABEL INSTALLATION.**"
- If **MDCS** displays **RECALL: 59503 Closed** and an Authorization Modification Label is **present**, the recall has already been completed. Return the vehicle to the customer or inventory.
- If **MDCS** does not display **RECALL: 59503 Open** or **RECALL: 59503 Closed**, this recall does not apply to the vehicle. Return vehicle to the customer or inventory.

A round "Pink" sticker is present on the driver's side door .indicates vehicle was repaired at the factory.

NOTE: Some vehicles were repaired at the factory, these are listed in the **MDCS system** and may not have a recall or pink label

B. VALVE SPRING REPLACEMENT

PREPARATION

1. Turn the steering wheel clockwise to the stop position.
2. Remove splash shield (two (2) bolts and one (1) nut) to gain access to crankshaft pulley locknut.
3. Cover fenders, radiator and headlights with fender covers.
4. Record preset audio stations and disconnect negative battery cable.

CYLINDER HEAD COVER REMOVAL

1. Disconnect PCV and ventilation hose.
2. Disconnect high tension leads from cylinder head cover.
3. Remove spark plugs.
4. Remove power steering hose bracket from cylinder head cover.
5. Remove cylinder head cover.

UPPER TIMING BELT COVER REMOVAL

1. Remove engine oil dipstick.
2. Remove upper timing belt cover.

TIMING BELT REMOVAL

1. Turn the crankshaft until the marks on the front cam cap align with the slots on the chain gear. No. 1 piston should be at TDC. Refer to Fig. 2
2. Slightly pull the timing belt toward the idler pulley to relieve tension between the belt and the camshaft pulley.
3. Loosen the idler pulley bolt.
4. Remove the idler pulley and the timing belt from the camshaft pulley.

NOTE: Do Not twist the idler pulley during removal from the cylinder. This may cause damage to the aluminum cylinder head.

CAMSHAFT REMOVAL

1. Remove front camshaft caps.
2. Remove chain adjuster bolts.
3. Remove all cam caps.
4. Lift the front of the camshaft assembly (including the chain and chain adjuster).

NOTE: This procedure will help to disengage the exhaust camshaft from the distributor key.

5. Remove the camshafts assembly.
CAUTION: Do Not remove the cam chain from the camshafts.

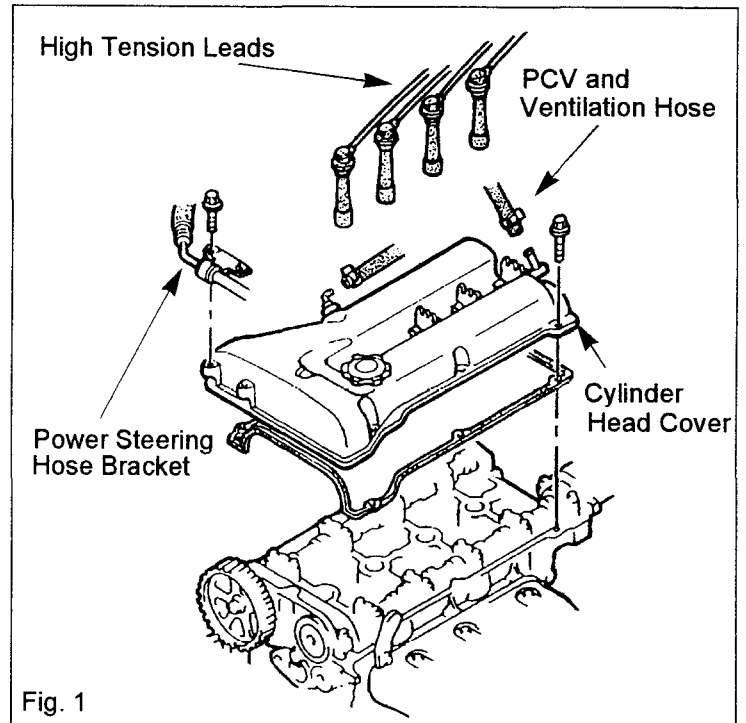


Fig. 1

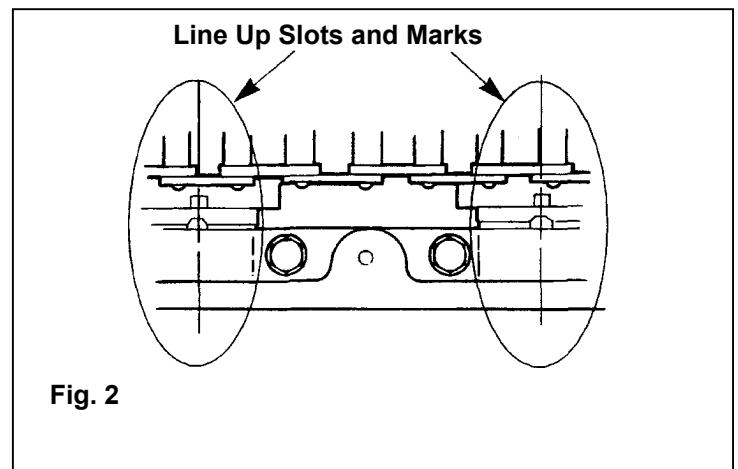


Fig. 2

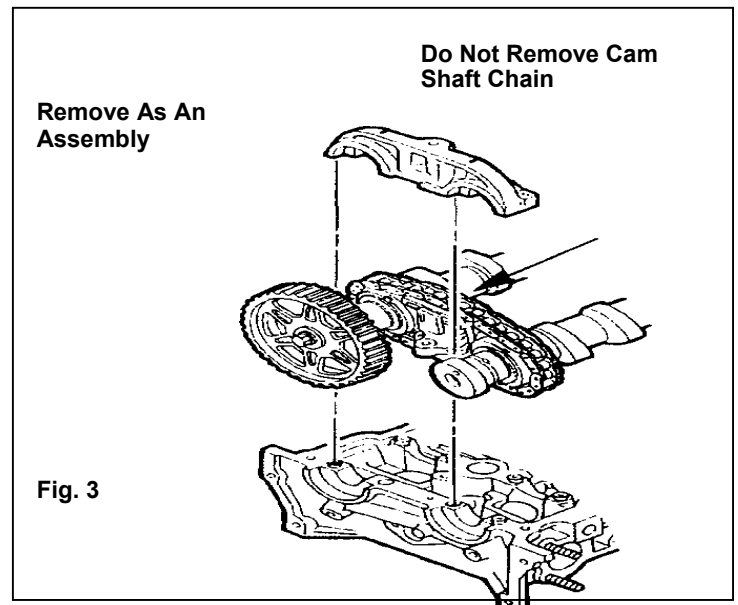


Fig. 3

6. Inspect the camshafts and cylinder head for damage.
NOTE: Repair or replace any damaged components.

VALVE SPRING REPLACEMENT (No.1 and 4 Cylinder)

1. Cover exposed areas of the cylinder head with rags to avoid dropping/losing valve keepers into spark plug and oil return holes.
2. Remove tappets on No. 1 cylinder.
NOTE: Do not remove shims from the tappets. Mark the shims to ensure they are reinstalled in the same position.
3. Press the upper seat down using the special tool.
4. Remove the valve keeper using a magnet and remove the upper seat. (Two persons are required). Refer to Fig. 4
5. Remove the valve spring.

CAUTION: Do Not mix the removed valve springs with the replacement springs.

6. If the valve spring is broken, move the valve and check that it moves smoothly in the valve guide. Refer to Fig. 5

NOTE: If the travel of the valve is stiff or if head damage is present, remove the head and inspect the cylinder. Repair or replace as necessary.

7. Install the new valve spring with the "Orange" mark "UP".
8. Set the valve keepers in the upper seat and place it on the new valve spring.
9. Gently press the upper seat down with the special tool.
10. Install the valve keepers on the valve stem using a flat tipped screwdriver if necessary.
11. Confirm that the keepers are in place by tapping each with a screwdriver. Refer to Fig. 6
12. Gently install tappets on spring's valve.

CAUTION: Do Not apply excessive force on tappets. Tappets will go down smoothly if correctly aligned.

13. Repeat steps 1 through 12 for the other three (3) valves on No. 1 cylinder and four (4) on No.4 cylinder.

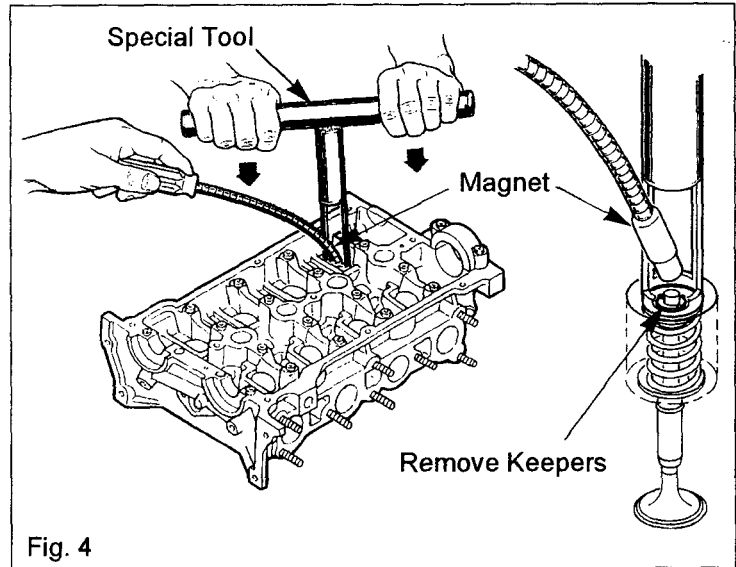


Fig. 4

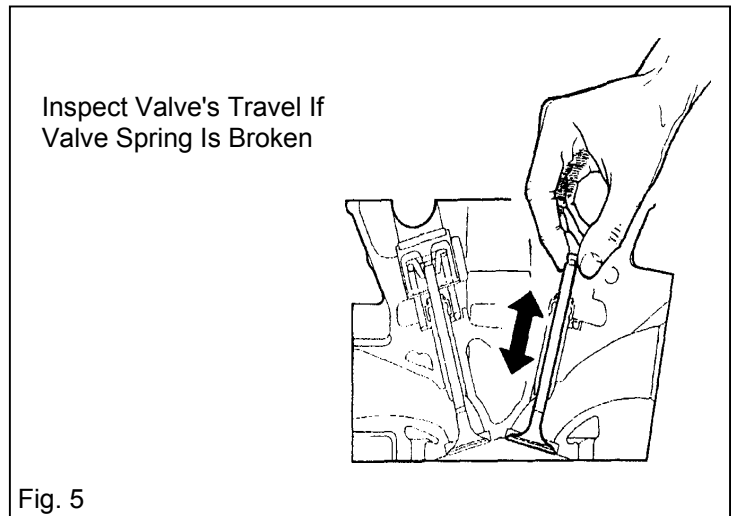


Fig. 5

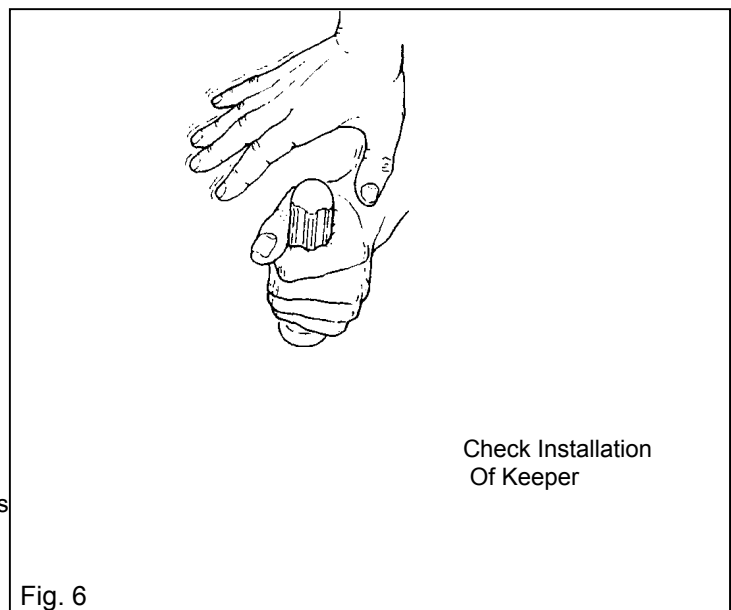


Fig. 6

VALVE SPRING REPLACEMENT (No.2 and 3 Cylinder)

1. Put dipstick in the No. 2 cylinder spark plug hole.
2. Turn the crankshaft clockwise to set No. 2 cylinder at TDC.

NOTE: The dipstick will be at its highest point when No. 2 piston is at TDC.

3. Repeat procedures 1 through 12 from "Valve Spring Replacement (No.1 and 4 Cylinder)" to replace the valve springs on cylinders 2 and 3.

INSTALLATION OF CAMSHAFT ASSEMBLY

1. Remove sealant from cylinder head.

CAUTION: Do Not drop sealant or any debris into the rocker case.

2. Clean cam journal bearings on the cylinder head and coat with fresh engine oil.
3. Clean the camshaft oil seal area on the cylinder head.
4. Turn the crankshaft and align the yellow mark on the crankshaft pulley with the "T" mark on the timing belt cover. Refer to Fig. 8
5. Confirm the distributor key is facing "UP".
6. Place the camshaft assembly with chain and chain adjuster in the following order.
 - Align the key groove of the exhaust camshaft with the distributor key.
 - Lower the camshaft assembly onto the cam journal bearings.
7. Install the two (2) bolts of the chain adjuster. Tighten bolts.
8. Tightening Torque: 0.8 -1.1 kgf-m (70 - 95.4 in-lbs)
9. Gently push the camshaft all the way to the distributor side.
10. Apply sealant to the cylinder head. Refer to Fig. 9
11. Apply fresh engine oil to the front cam cap journal bearings on the camshafts. **D.**

C. AUTHORIZED MODIFICATION LABEL INSTALLATION

- Complete an "Authorized Modification Label" with the recall number **50503** written on the sticker and affix to driver's side door under the door latch. Refer back to the illustration under "A. VEHICLE INSPECTION PRECEDURE" on page one.

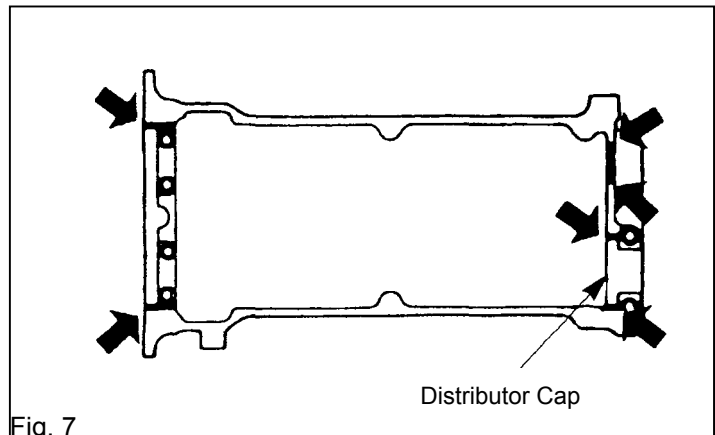


Fig. 7

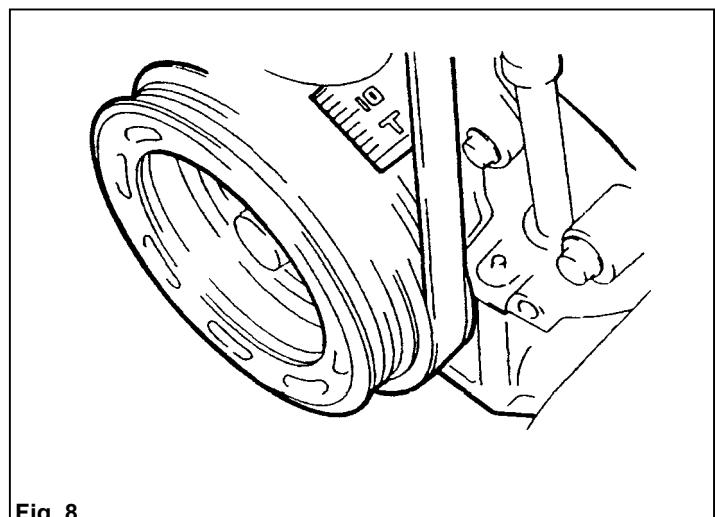


Fig. 8

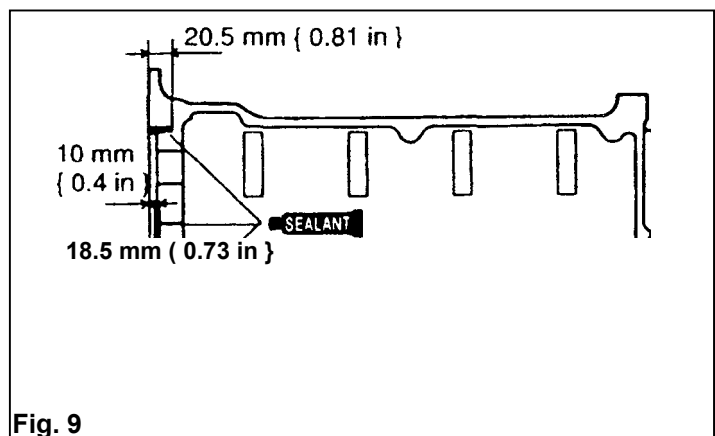


Fig. 9