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## Subject: Programming Top Mechanism (Using ISAT or Tech 2)

**Application: 1995–1997 900 Convertible**

**Supersedes PSI 08/94–0495**

Use the updated procedure listed below to program a Convertible top using ISAT or Tech 2. Note that the procedures have been separated depending upon which Scan tool is used.

### Cars Affected:

1995–97 900 Convertible

### Background Information:

Mechanical end positions

There are three main moving parts to the soft top system: the soft top (A), the fifth bow (B) and the tonneau cover (C). See Figure below. The maximum movement of each of these three is mechanically limited within the soft top system. Some of the mechanical end positions can be adjusted within certain limits. For example, the end position of the soft top when being raised can be adjusted by means of a mechanical stop located where the soft top mechanism is attached to the body work.

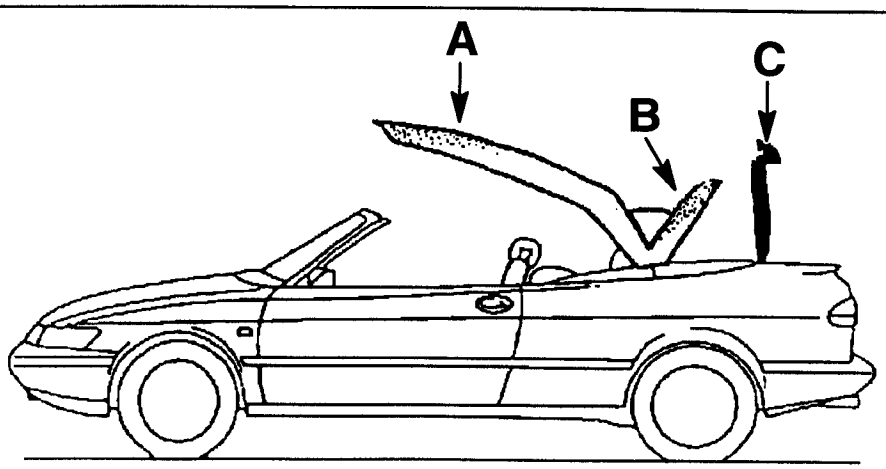


**Figure 1.** The three main moving parts of the soft top
A. Soft top
B. Fifth bow
C. Tonneau cover

Programmed end positions

The TSAS ECM controls the motors that drive the various parts of the soft top mechanism up and down. When a part reaches its mechanical end position, the ECM must be given information. Otherwise, the ECM continues to run the motor against the mechanical end position. The result of this is that the ECM breaks the power circuit to the motor and registers a diagnostic trouble code (DTC) for high power consumption.

To give the ECM continuous information on the exact position of the soft top mechanism, the mechanism is equipped with three potentiometers (position sensors): one for the soft top, one for the fifth bow and one for the tonneau cover.

The potentiometer produces a reading of between 0 and 255, depending on the position of the soft top mechanism. The potentiometer readings corresponding to the mechanical end positions are programmed in the TSAS ECM. The ECM thus knows when the mechanical end positions are reached and can then stop running the motors.

Interaction between mechanical and programmed end positions

From the information above, it follows that the programmed end positions must never be outside the mechanical end positions. If they were, the ECM would continue to run the motor despite the mechanical end position having been reached. Eventually, the ECM would break the power circuit to the motor and register a diagnostic trouble code (DTC) for high power consumption.

The end position should instead be programmed just before, or in certain cases, equal to the mechanical end positions. The motor will then stop driving before the mechanical end position is reached and the movement will slow gently. If for example, the main motor potentiometers show a reading of 204 when the soft top has reached its upper mechanical end position, i.e., when it is completely raised, the value of 201 should be programmed into the ECM. By taking away 3 units, the main motors stop driving just before the mechanical end position is reached and the soft top comes to rest gently against the windshield frame.

When lowering the soft top, 1 should instead be added to the value the potentiometer shows when the soft top has reached its lower mechanical end position. If the lower end position corresponds to a potentiometer reading of 49, the value of 50 should be programmed into the ECM. When the top is lowered, the ECM will count down from potentiometer reading 201 (upper programmed end position) to 50. At this point, the main motors stop running and the top can drop under its own weight to its mechanical end position (potentiometer reading 49).

In ISAT, the upper end positions are called "HIGH LIMIT" and the lower end positions are called "LOW LIMIT". In Tech 2, the upper end positions are called "HIGH LEVEL" and the lower end positions are called 'LOW LEVEL".

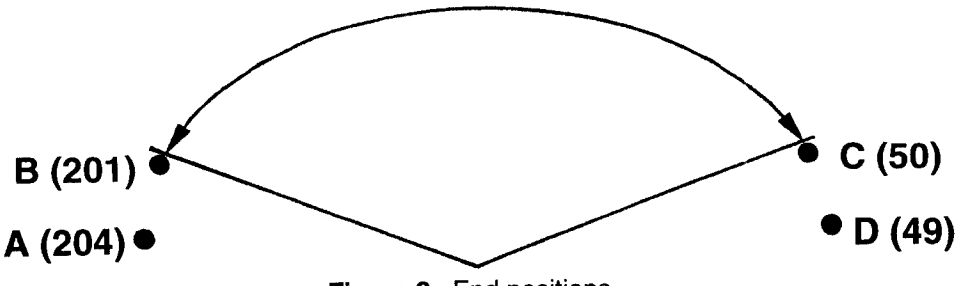


**Figure 2.** End positions

A. Upper mechanical end position
B. Upper programmed end position
C. Lower programmed end position
D. Lower mechanical end position

Overlap positions

To ensure that raising and lowering of the soft top is carried out quickly and smoothly, the TSAS ECM must be able to control two different movements of the soft top system simultaneously. For this to be possible with no danger of the various parts of the soft top system colliding with each other, the TSAS ECM must know exactly when it should start the different movements.

To convey this information to the ECM, it is programmed with two additional values besides the two end positions for the relevant part of the soft top system. These values are called overlap positions, one high and one low. For instance, when the soft top reaches the upper overlap position when being raised, the TSAS ECM starts the fifth bow's downward movement. The functions of the different overlap positions will be evident from the table below.

It is very important that the overlap positions are correctly programmed. Incorrect settings mean that there is a danger of the various parts of the soft top system colliding and being damaged.

| | |
|---|---|
| 1. Soft top upper overlap position | When the main motor reaches this position as the soft top is being raised, the ECM starts the downward movement of the fifth bow. |
| 2. Soft top low overlap position | When the main motor reaches this position while lowering the soft top, the ECM checks whether the fifth bow is in its upper position.<br><br>If it is not, the ECM will stop the movement of the soft top and raise the fifth bow to the upper position. |
| 3. Tonneau cover upper overlap position | **A. When lowering the soft top:**<br>When the tonneau cover motor reaches this position, the fifth bow starts its movement downward (towards the tonneau cover) in order to clear the head restraints.<br><br>**B. When raising the soft top:**<br>When the tonneau cover reaches this position, the main motor starts its movement upward. |
| 4. Tonneau cover low overlap position | When the tonneau cover closes and reaches this position when the soft top is being raised, the fifth bow starts its movement downward. |
| 5. Fifth bow upper overlap position | When the fifth bow reaches this position when the soft top is being lowered, the tonneau cover latch opens. |
| 6. Fifth bow low overlap position | At this point, the main motor starts its movement downward during the lowering operation, at the same time as the fifth bow changes direction. |

**See Figure 3 on next page.**

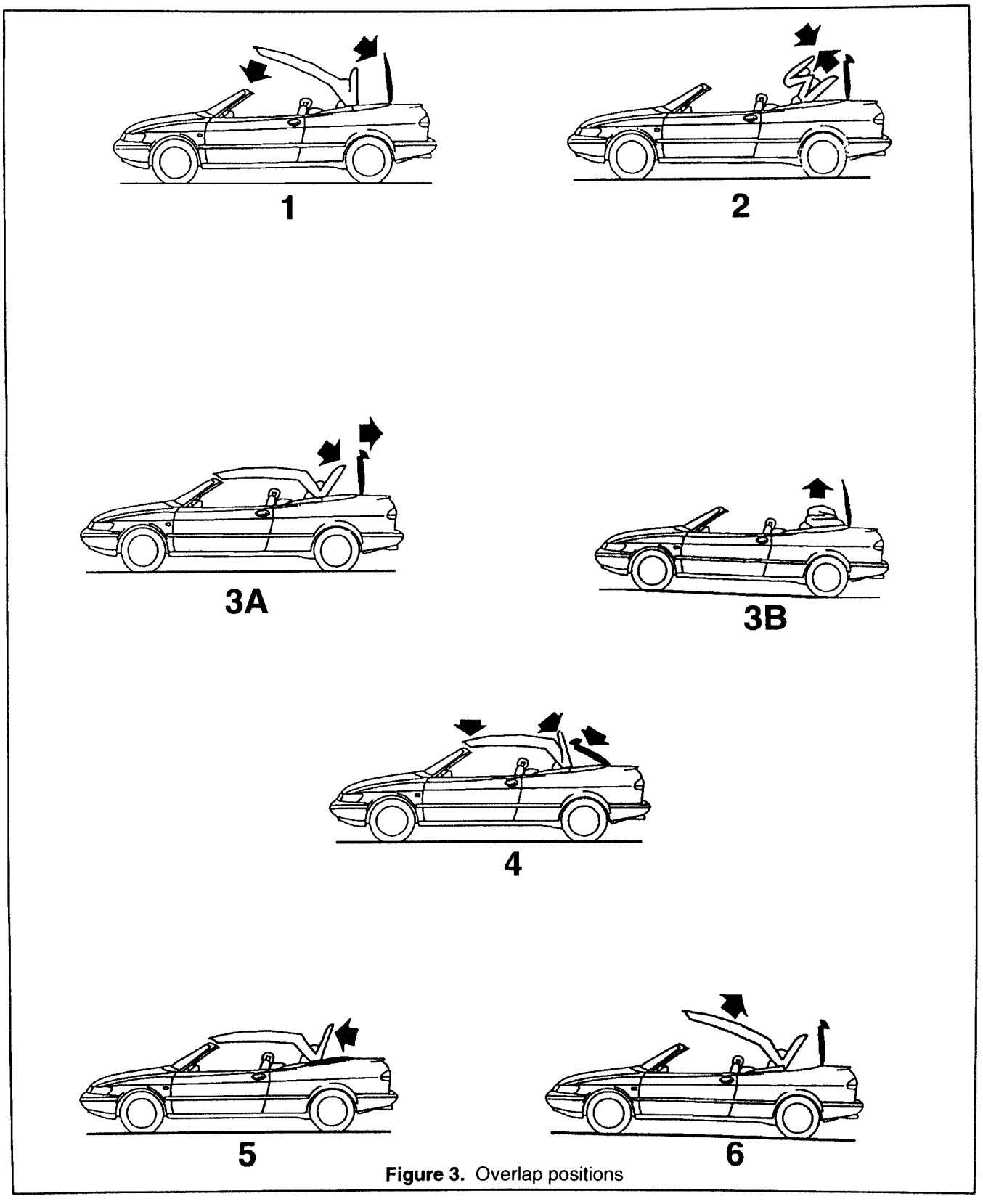


**Figure 3.** Overlap positions

**WARNING!**

ISAT command "COMPLETE PROGRAM" must **not** be used. Due to internal changes to the TSAS ECM software, this command can cause serious damage to the soft top if used.

***Remember when programming ....***

- that the car should be on level ground.
- The soft top mechanism must be correctly mechanically adjusted.

  Mechanical adjustment of the soft top mechanism has a direct bearing on the possibility of correctly programming the potentiometer readings.

  It is, therefore, extremely important for the soft top mechanism to have been correctly adjusted mechanically when programming is started.

  It is absolutely essential for the soft top's stop position when raised to be correct. Otherwise there is an obvious risk of incorrect programming. Similarly, it is just as important to program the ECM with the new potentiometer readings after major mechanical adjustment of the soft top mechanism.

- that if the ECM is inactive for more than 3 seconds it enters a rest mode. In order to establish contact between ISAT/Tech 2 and the ECM, open the latches securing the soft top to the windshield frame and press a window button to lower the window automatically and immediately afterward press ON/ENTER on ISAT or ENTER on Tech 2.
- that there is a difference between operating the soft top with ISAT/Tech 2 and with the ROOF button on the center console.

  With the ROOF button, the soft top is run to the programmed position but with ISAT/Tech 2 it is run to the mechanical stop.

  Unless otherwise stated, ISAT/Tech 2 should be used when the soft top mechanism is operated during programming. F3 (UP) and F4 (DOWN) should be kept depressed for at least five seconds after the movement of the soft top mechanism has come to a halt. This is to ensure that the end positions have actually been reached.
- that the battery is fully charged before starting programming.

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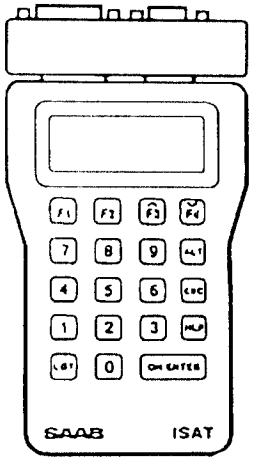


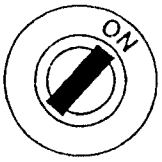


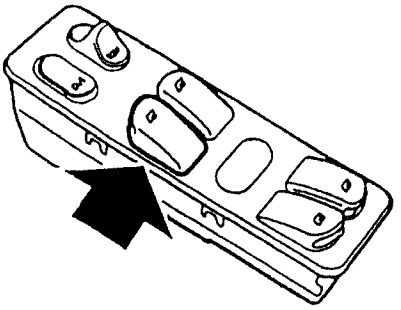

**Figure 4.** Programming high and low limit

## PROGRAMMING USING ISAT:

**Important**

During programming the soft top mechanism should be operated using ISAT. Keep each button (F3 = UP, F4 = DOWN on ISAT ) depressed for at least five seconds after the movement has stopped in order to ensure that the end positions have been reached.

- The battery should be in good condition when programming is carried out.
- The soft top should be completely raised, the latches on the first bow should be closed and the fifth bow should be latched to the tonneau cover.
- See the Table on page 17. Fill it in with the readings taken during programming.

**Important**

The rear seat backrest **must** be tipped forward as the rear window could be damaged by the head restraints during programming.

**Programming and high low limits using ISAT:**

1. Tip the rear seat backrest forward.
2. Open the latches securing the soft top to the windshield frame.
3. Connect ISAT to the DLC. The ignition switch should be in the OFF position.
4. Turn the ignition switch to the ON position.
5. Press a window button to lower the window automatically and immediately afterwards press ON/ENTER on ISAT.

   By having the latches open, the ECM is prevented from returning to its rest mode.
6. Call up "TSAS" on ISAT.
7. Read "SOFTWARE VERSION" in the READ SYSTEM INFO menu.

**NOTE: All ECM's should have been replaced during the performance of PSI 03/95–0554 Improvement to Operation of Top Stack Mechanism. Do not use part numbers obtained when reading ISAT . Although the ECM programming was updated, the internal part number was not. ECM should be Version 0402. If it is not, replace it before continuing.**

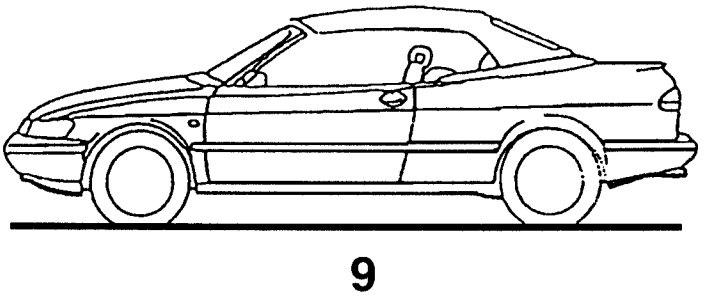

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**Figure 5.** Programming high and low limit continued

**Programming high and low limits using ISAT continued:**

8. Select "TONNEAU MOTOR DOWN" in the ACTIVATE menu and run the tonneau cover to the fully lowered position. Note value of Tonneau potentiometer.

   Keep the F4 button depressed for at least five seconds after movement has stopped to ensure that the mechanical end position has been reached.

9. Select "MOTORS 5TH BOW DOWN" in the ACTIVATE menu.

   Keep the F4 button depressed for at least five seconds after movement has stopped to ensure that the mechanical end position has been reached.

10. Select "LATCH MOTOR 5TH BOW DOWN" in the ACTIVATE menu.

    Keep the F4 button depressed for at least five seconds after movement has stopped to ensure that the mechanical end position has been reached.

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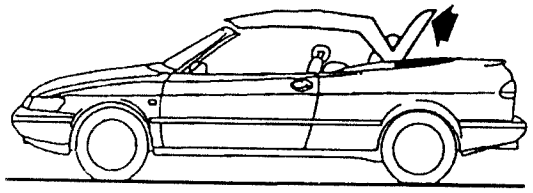

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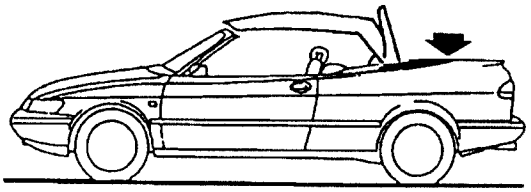

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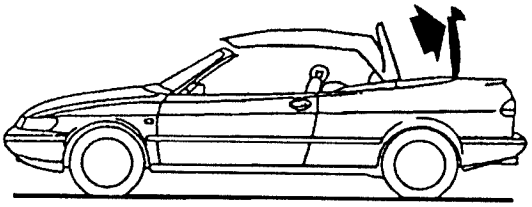

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**Figure 6.** Programming high and low limits continued

**Programming high and low limits using ISAT continued:**

11. Select "POT POS 5TH BOW" in the READ VALUES menu to read the fifth bow's low limit.

    Note the value on line L in the table on page 17.

12. Select "LATCH MOTOR 5TH BOW UP" in the ACTIVATE menu to open the fifth bow's latch.

13. Select "MOTORS 5TH BOW UP" in the ACTIVATE menu and run the fifth bow to the fully raised position.

    Keep the F3 button depressed for at least five seconds after movement has stopped to ensure that the mechanical end position has been reached.

14. Select "POT POS 5TH BOW" in the READ VALUES menu to read the fifth bow's high limit. Note the reading on line I in the table on page 17.

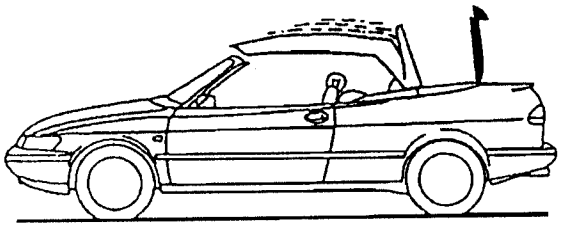
15. Select "TONNEAU MOTOR DOWN" in the ACTIVATE menu and run the tonneau cover to the fully lowered position.

    Keep the F4 button depressed for at least five seconds after movement has stopped to ensure that the mechanical end position has been reached.

16. Select "POT POS TONNEAU" in the READ VALUES menu to read the tonneau cover's low limit. Note the reading on line H in the table on page 17.

17. Select "TONNEAU MOTOR UP" in the ACTIVATE menu and run the tonneau cover to the fully raised position.

    Keep the F3 button depressed for at least five seconds after movement has stopped to ensure that the mechanical end position has been reached.



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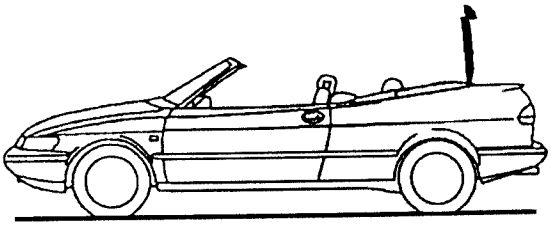

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**Figure 7.** Programming high and low limits continued

**Programming high and low limits using ISAT continued:**

18. Select "POT POS TONNEAU" in the READ VALUES menu to read the tonneau cover's high limit. Note the reading on line E in the table on page 17.
19. Select "MAIN MOTORS UP" in the ACTIVATE menu and run the soft top to the fully raised position.

    Keep the F3 button depressed for at least five seconds after movement has stopped to ensure that the mechanical end position has been reached.
20. Select "POT POS MAIN MOTOR" in the READ VALUES menu to read the soft top's high limit. Note the reading on line A in the table on page 17.
21. Select "MAIN MOTORS DOWN" in the ACTIVATE menu and run the soft top to the fully lowered position.

    Keep the F4 button depressed for at least five seconds after movement has stopped to ensure that the mechanical end position has been reached.
22. Select "POT POS MAIN MOTOR" in the READ VALUES menu to read the soft top's low limit. Note the value on line D in the table on page 17.

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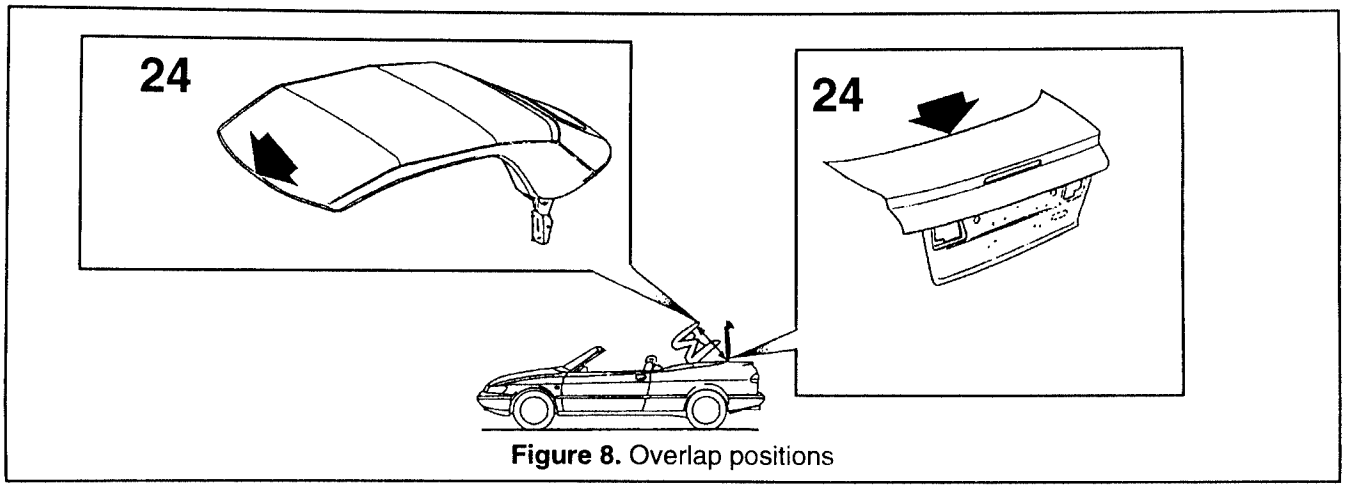


**Figure 8.** Overlap positions

**Overlap positions using ISAT:**

The overlap positions of the soft top, fifth bow and Tonneau are calculated below.

23. Select "POT POS MAIN MOTOR" in the READ VALUES menu.
24. Use the ROOF button to operate the soft top until the distance between the edge of the first bow and the middle of the leading edge of the trunk lid is 110cm.

    Ask someone to help you. Make sure the soft top does not move.
25. Select "POT POS MAIN MOTOR" and note the reading on line B in the table on page 17.

    The reading obtained is the same as the main motor's high overlap limit ("MAIN MOTOR OVERLAP HIGH LIMIT").
26. To calculate the main motor's low overlap limit, subtract six units from the high overlap limit ("OVERLAP HIGH LIMIT – 6 = "OVERLAP LOW LIMIT"). See line C in the table on page 17.
27. Using the table on page 17, calculate the new potentiometer readings for the high and low limits of the end positions.
28. Use ISAT to program the new potentiometer readings in the TSAS ECM by selecting the commands below in the PROGRAMMING menu.

    The overlap positions on lines B, C, F, G, J and K in the table are to be programmed later. Skip past these by pressing "OK" on ISAT.

    - "MAIN MOTOR, HIGH LIMIT"
    - "MAIN MOTOR, LOW LIMIT"
    - "TONNEAU MOTOR, HIGH LIMIT"
    - "TONNEAU MOTOR, LOW LIMIT"
    - "5TH BOW MOTOR, HIGH LIMIT"
    - "5TH BOW MOTOR, LOW LIMIT"
29. Continue raising the soft top with the ROOF button until the distance between the front edge of the Tonneau cover and the rear edge of the crossmember behind the rear seat backrest is 26cm (10–1/4").

    Select "POT POS TONNEAU" in the READ VALUES menu. Note this reading on Line F in the table on page 17. (This is the TONNEAU MOTOR OVERLAP HIGH POSITION.)

    Operate the soft top with the ROOF button until the distance between the front edge of the Tonneau cover and the rear edge of the crossmember behind the rear seat backrest is 20cm (7–3/4").

    With Tonneau still selected, note the reading on Line G in the table on page 17. (This is the TONNEAU MOTOR OVERLAP LOW POSITION.)

30. Continue to operate the top with the ROOF button until the Tonneau cover is closed and the distance between the edge of the 5th bow's cloth lip and the middle of the trunk's forward edge is 30cm (11–3/4").

    Select "POT POS 5TH BOW" in the READ VALUES menu. Note this reading on Line K in the table on page 17. (This is the 5th BOW MOTOR OVERLAP LOW POSITION.)

    To calculate 5th bow motor overlap high position, add 8 units to the 5th bow motor overlap low position ("5TH BOW MOTOR OVERLAP LOW POSITION + 8 = 5TH BOW MOTOR OVERLAP HIGH POSITION".)

    Note this reading on Line J in the table on page 17 (5TH BOW MOTOR OVERLAP HIGH POSITION).

    End by pressing ESC on ISAT in order to store the programmed readings.

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**Important**
Programming must be ended by means of the ESC button on ISAT for the new readings to be stored in the TSAS ECM.

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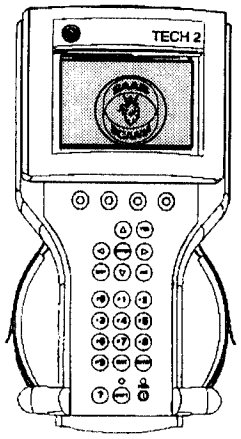
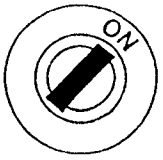
Checking with ISAT

1. Clear DTC's.
2. End communication between ISAT and the TSAS via the END button.
3. Operate the soft top mechanism through a complete up and down cycle by means of the ROOF button.
4. Plug in ISAT and check all potentiometer readings by selecting the PROGRAMMING menu and comparing the readings programmed in the ECM with the reading calculated in the table on page 17.
5. If all readings are correct, end communication via the END button.
6. If any readings are not correct, the correct readings in the table should be programmed in the ECM. Then, return to point 2 above and continue from there.



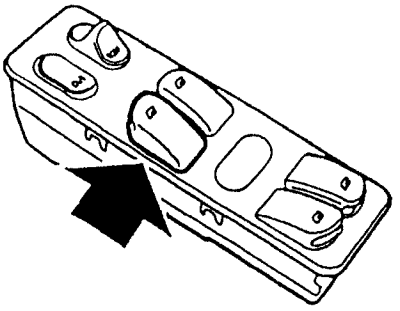



**Figure 4.** Programming high and low limit

## PROGRAMMING USING TECH 2:

**Important**

Each time you depress the UP or DOWN button Tech 2, the motor will run for 5 seconds. Be sure to press the UP or DOWN button one more time after the movement has stopped in order to ensure that the end positions have been reached.

- The battery should be in good condition when programming is carried out.
- The soft top should be completely raised, the latches on the first bow should be closed and the fifth bow should be latched to the tonneau cover.
- See the Table on page 17. Fill it in with the readings taken during programming.

**Important**

The rear seat backrest **must** be tipped forward as the rear window could be damaged by the head restraints during programming.

**Programming high and low limits using Tech 2:**

1. Tip the rear seat backrest forward.
2. Open the latches securing the soft top to the windshield frame.
3. Connect Tech 2 to the DLC. The ignition switch should be in the OFF position.
4. Turn the ignition switch to the ON position.
5. Press a window button to lower the window automatically. Immediately afterwards press ENTER on Tech 2.

   By having the latches open, the ECM is prevented from returning to its rest mode.
6. Call up Convertible (TSAS) on Tech 2.
7. READ SYSTEM INFO on Tech 2 by pressing press F4. Then press the "MORE" key to read "SOFTWARE VERSION".

**NOTE: All ECM's should have been replaced during the performance of PSI 03/95–0554 Improvement to Operation of Top Stack Mechanism. Do not use part numbers obtained when reading Tech 2. Although the ECM programming was updated, the internal part number was not. ECM should be Version 0402. If it is not, replace it before continuing.**

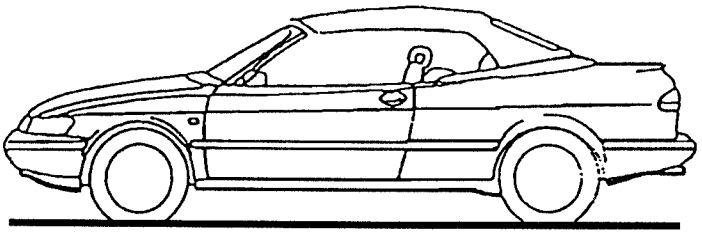


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**Figure 5.** Programming high and low limit continued

**Programming high and low limits continued using Tech 2:**

8. Select "READ VALUES/ACTIVATE".
9. Using TECH 2, make sure that the Tonneau and 5th bow are completely lowered, and that the 5th bow latch is completely closed:

   Select "ACTIVATE".

   Select "TONNEAU MOTOR". Press DOWN. The Tonneau motor will run for approximately 5 seconds.

   Press EXIT once. Select "#5 BOW MOTOR". Press DOWN. The 5th bow motor will run for approximately 5 seconds.

   Press EXIT once. Select "#5 BOW LATCH MOTOR". Press CLOSE. The 5th bow latch motor will runf or approximately 5 seconds.

   Press VIEW DATA. Note "5TH BOW POTENTIOMETER" position on line L in the table on page 17.
10. With "#5 BOW LATCH MOTOR" still selected, press OPEN. The 5th bow latch motor will run for approximately 5 seconds.

    Press EXIT once. Select "#5 BOW MOTOR". Press UP. The 5th bow motor will run for approximately 5 seconds. Your may have to press UP 3 or 4 times to fully raise the 5th bow.

    Press VIEW DATA. Note "5TH BOW POTENTIOMETER" positon on line I in the table on page 17.
11. Press EXIT once. Select "TONNEAU MOTOR". Press DOWN. The Tonneau motor will run for approximately 5 seconds. This will ensure that the Tonneau motor is at the fully lowered position.

    Press VIEW DATA. Note "TONNEAU POTENTIOMETER" position on line H in the table on page 17.
12. With "TONNEAU MOTOR" still selected, press UP. The Tonneau motor will run for approximately 5 seconds. You may have to press UP 2 or 3 more times to fully raise the Tonneau.

    Press VIEW DATA. Note "TONNEAU POTENTIOMETER" position line E in the table on page 17.
13. Press Exit ONCE. Select "MAIN MOTOR". Press UP once (this ensures that the top main motors are in the fully raised position).

    Press VIEW DATA. Note "MAIN POTENTIOMETER" position on line A in the table on page 17.

    With MAIN MOTOR still selected, press DOWN. The main motor will run for approximately 5 seconds. You may have to press DOWN 3 or 4 more times to fully lower the top.

    Note the main potentiometer position on line D in the table on page 17.

**At this point you may program the HIGH and LOW limits as follows:**

1. EXIT 3 times. Press F2: Program Potentiometers

   The initial TECH 2 screen will display the main potentiometer programmed values. To change them, press the "CHANGE VALUE" soft key, which will highlight the "HIGH LEVEL SETTING" (the main potentiometer high limit). To change this setting, press the "INCREASE" or the "DESCREASE" soft keys. When the High Limit is correct, press the "NEXT VALUE" soft key 3 times to highlight "LOW LEVEL SETTING". To change this setting, press the "INCREASE" or the "DECREASE" soft keys. When the Low Limit is correct, press EXIT.

2. Press the "CHANGE POT" soft key once to change the lower TECH 2 display to "TONNEAU POT. PROGRAMMED VALUES". Change these values as needed using the same procedure you followed in step #1 above.
3. Press the "CHANGE POT" soft key again to change the lower TECH 2 display to "#5 BOW POT. PROGRAMMED VALUES". Change these values as needed using the same procedure you followed in step #1 above.
4. EXIT twice to the TSAS "Application Menu".

**Programming Overlap Positions using TECH 2:**

The overlap positions are calculated based on measurements taken during the convertible top movement.

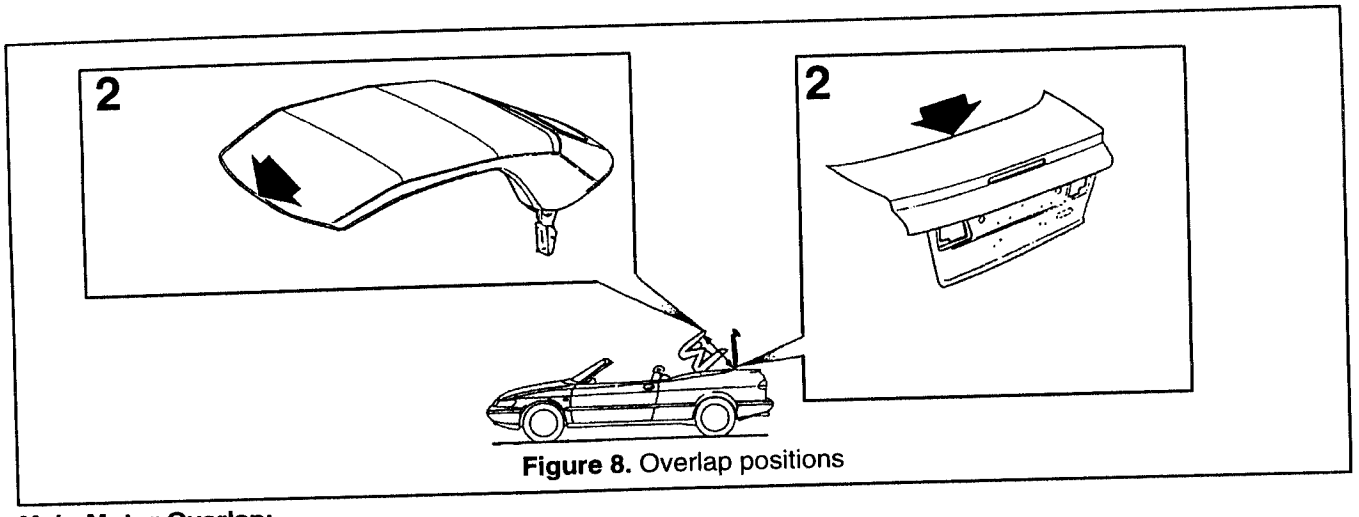


**Figure 8.** Overlap positions

**Main Motor Overlap:**

1. Select "READ VALUES/ACTIVATE".
2. Use the ROOF button on the center console to operate the soft top until the distance between the edge of the first bow and the middle of the leading edge of the trunk lid is 110cm (43–1/4"). Make sure that the top does not move.

   Note the "MAIN MOTOR POTENTIOMETER POSITION". Record this reading on line B in the table on page 17. (This is the MAIN MOTOR OVERLAP HIGH POSITION.)
3. To calculate the Main Motor Overlap Low Position, subtract 6 units from the Main Motor Overlap High Position. (Main Motor Overlap High Position – 6 = Main Motor Overlap Low Position.)

   Record this reading on line C in the table on page 17. (Main Motor Overlap Low Position.)

**Tonneau Motor Overlap:**

1. Continue raising the soft top with the ROOF button until the distance between the front edge of the Tonneau cover and the rear edge of the crossmember behind the rear seat backrest is 26cm (10–1/4").

   Note the TONNEAU POTENTIOMETER POSITION. Record this reading on line F in the table on page 17. (This is the Tonneau Overlaps High Position.)

2. Operate the soft top with the ROOF button until the distance between the front edge of the Tonneau cover and the rear edge of the crossmember behind the rear seat backrest is 20cm (7–3/4").

   Note the TONNEAU POTENTIOMETER POSITION. Record this reading on line G in the table on page 17. (This is the Tonneau Overlaps Low Position.)

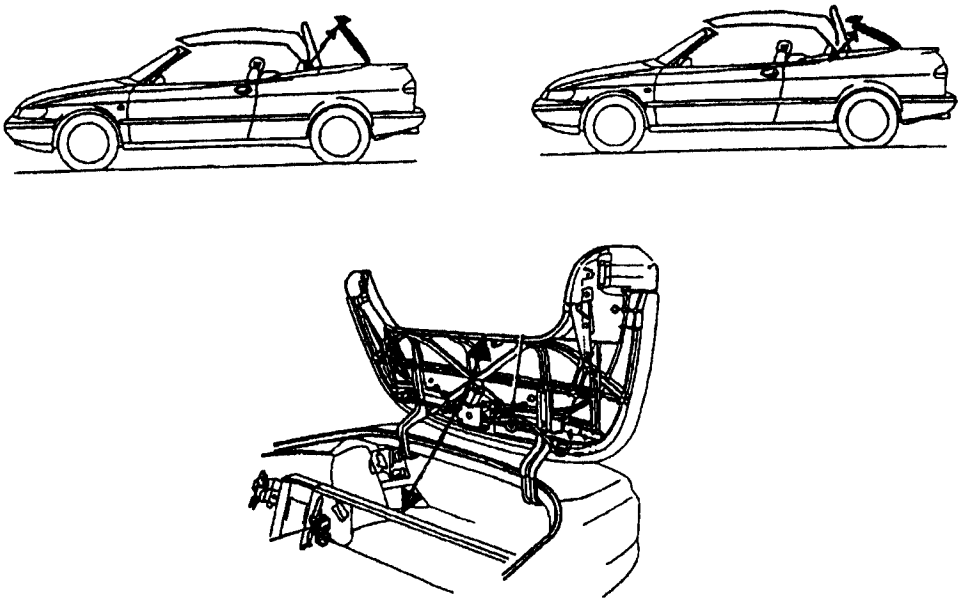

**Figure 30.** Programming overlap positions

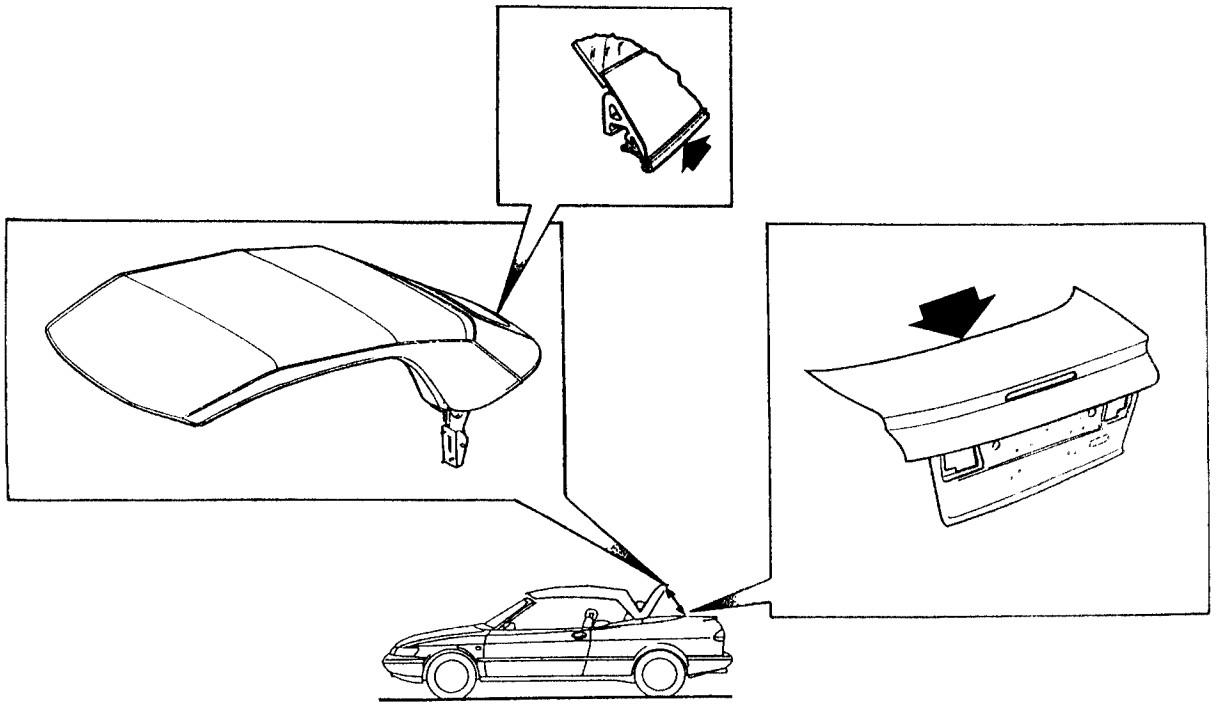

**Figure 31.** Programing overlapping positions

**5th Bow Motor Overlap:**

1. Continue to operate the top with the ROOF button until the Tonneau cover is closed and the distance between the edge of the 5th bow's cloth lip and the middle of the trunk's forward edge is 30cm (11–3/4").

   Note the 5TH BOW POTENTIOMETER position. Record this reading on line K in the table on page 17. (This is the 5TH BOW MOTOR OVERLAP LOW POSITION.)

2. To calculate the 5th Bow Motor Overlap High Position, add 8 units to the 5th Bow Overlap Lap Position. (5th Bow Motor Overlap Low Position + 8 = 5th Bow Motor Overlap High Position.)

   Record this reading on line J in the table on page 17. (5th Bow Motor Overlap High Position.)

3. Press EXIT once, then press F2: "Program Potentiometers".

   The initial TECH 2 screen will display the Main potentiometer programmed values. To change them, press the "Change Value" soft key, press "Next Value" once to highlight "Overlap High Level". To change this setting, press the "Increase" or "Decrease" soft keys. When the Overlap High level is correct, press the "Next Value" soft key once to highlight "Overlap Low Level Setting". To change this setting, press the "Increase" or "Decrease" soft keys. When the Overlap Low Level is correct, press EXIT.

4. Press the "CHANGE POT" soft key once to change the lower TECH 2 display to "TONNEAU POT.PROGRAMMED VALUES". Changes these values as needed, using the same procedure you followed in step #1 above under programming High and Low limits.

5. Press the "CHANGE POT" soft key once to change the lower TECH 2 display to "#5 BOW POT. PROGRAMMED VALUES". Change these values as needed using the same procedure you followed in step #1 above under programming High and Low limits.

6. Press EXIT 2 times to exit from the TSAS system, then "CLEAR VEHICLE" to store all programmed values.

**Checking:**

1. Clear DTC's.
2. End communication between TECH 2 and Convertible (TSAS) via the EXIT menu.
3. Operate the soft top mechanism through a complete up and down cycle by means of the ROOF button.
4. Plug in TECH 2 and check all potentiometer readings by selecting the "PROGRAMMING" menu and comparing the readings programmed in teh ECM with the readings calculated in the table below.
5. If all readings are correct, end communication via the EXIT button.
6. If any readings are not correct, the correct readings in the table should be programmed in the ECM. Then, return to point 2 above and continue from there.

See Table below.

**COPY THIS TABLE AND USE TO CALCULATE NEW POTENTIOMETER READINGS.**

| Line | Position | Reading obtained | Conversion factor | New reading |
|---|---|---|---|---|
| A | Soft top, high limit "MAIN MOTOR HIGH LIMIT" | | − 3 = | |
| B | Soft top, overlap high limit "MAIN MOTOR OVERLAP HIGH LIMIT" | | ± 0 = | |
| C | Soft top, overlap low limit "MAIN MOTOR OVERLAP LOW LIMIT" | B (MAIN MOTOR OVERLAP HIGH LIMIT) | − 6 = | |
| D | Soft top, low limit "MAIN MOTOR LOW LIMIT" | | + 1 = | |
| E | Tonneau cover, high limit "TONNEAU MOTOR HIGH LIMIT" | | − 9 = | |
| F | Tonneau cover, overlap high limit "TONNEAU MOTOR OVERLAP HIGH LIMIT" | | ± 0 = | |
| G | Tonneau cover, overlap low limit "TONNEAU MOTOR OVERLAP LOW LIMIT" | | ± 0 = | |
| H | Tonneau cover, low limit "TONNEAU MOTOR LOW LIMIT" | | + 1 = | |
| I | Fifth bow, high limit "5TH BOW MOTOR HIGH LIMIT" | | − 2 = | |
| J | Fifth bow, overlap high limit "5TH BOW MOTOR OVERLAP HIGH LIMIT" | K (5TH BOW MOTOR OVERLAP LOW LIMIT) | + 8 = | |
| K | Fifth bow, overlap low limit "5TH BOW MOTOR OVERLAP LOW LIMIT" | | ± 0 = | |
| L | Fifth bow, low limit "5TH BOW MOTOR LOW LIMIT" | | ± 0 = | |

## Warranty Information:

To resolve a customer complaint for a vehicle in warranty, submit a claim using the following information:

Failure code: 81107–01–0–01/06–05

Labor operation number: 81107 for 0.5 hr.