

**S-TYPE**

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SERVICE

TECHNICAL BULLETIN**Memory Systems –
Driver's Seat, Steering Column, Door Mirrors
– Diagnostics**MODEL 2000-02 MY
S-TYPE

VIN L00001-M44997

Issue:

This Technical Bulletin provides diagnostic procedures for the memory system which controls the seat, steering column, and door mirror memory.

In most cases, a memory recall problem is not caused by the memory system itself.

There is often an electrical or mechanical fault with another component, resulting in the memory not recalling as expected.

Action:

Information to aid with diagnosing faults

Note: This bulletin includes a copy of the Frequently Asked Question (FAQ) ref 2101 from the Electronic Product Quality Report (EPQR) system. The information in the FAQ may be needed to help diagnose the faults.

Please read the 'Key elements of memory systems' on pages 9 and 10 for help on what memory functions the vehicle has. The table includes information on the modules used to store memory, the controls used to store and recall memory, and the easy entry / exit function.

When the customer first reports the concern it is recommended that you complete a '**customer memory system questionnaire**' to record all the details of the issue. A copy of the questionnaire is included in this bulletin.

Whenever possible identify the exact axis that is not recalling correctly, as it will be needed to help identify the cause of the fault. You should also identify if the memory fails to recall correctly during:

1. Easy entry/easy exit mode.
2. Memory recall from drivers door switch pack.
3. Memory recall from key fob.
4. Programming of memory system.

Outline of bulletin contents

Customer Concern

Easy entry/easy exit problem.
Memory recall problem from driver door switch pack.
Memory recall problem when using key fob.
Diagnosis of issues

Section

Flow chart 1 - Page 3
Flow chart 2 – Page 4

Flow chart 3 – Page 5
Pages 6 to 8

Other information

Other sources of information to aid diagnosis.
Key elements of memory systems.
Memory system – customer questionnaire.
FAQ 2101

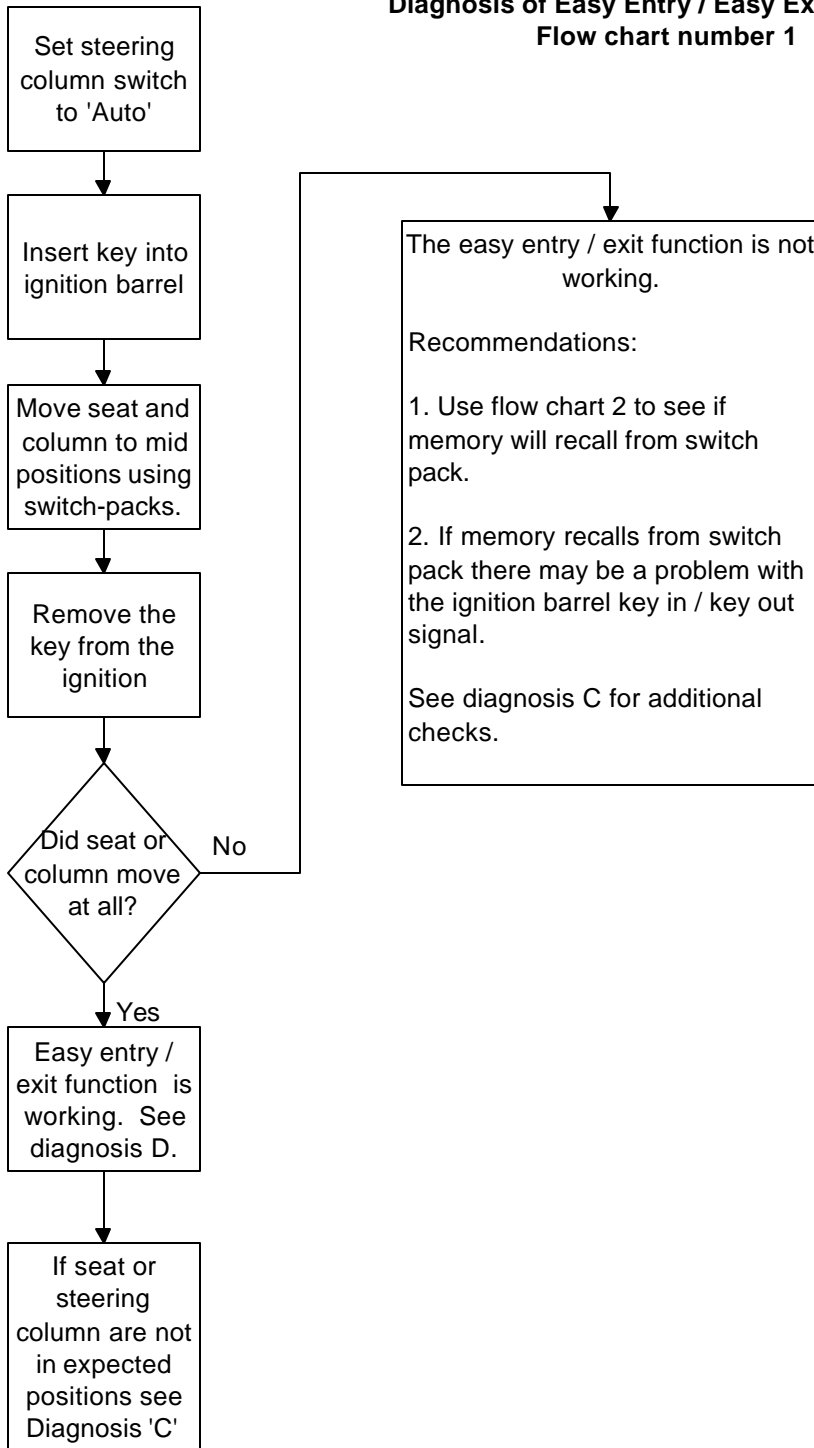
Page 8
Page 9
Page 11
Page 12

How to check if the easy entry / easy exit function is working correctly see – Flow chart 1.

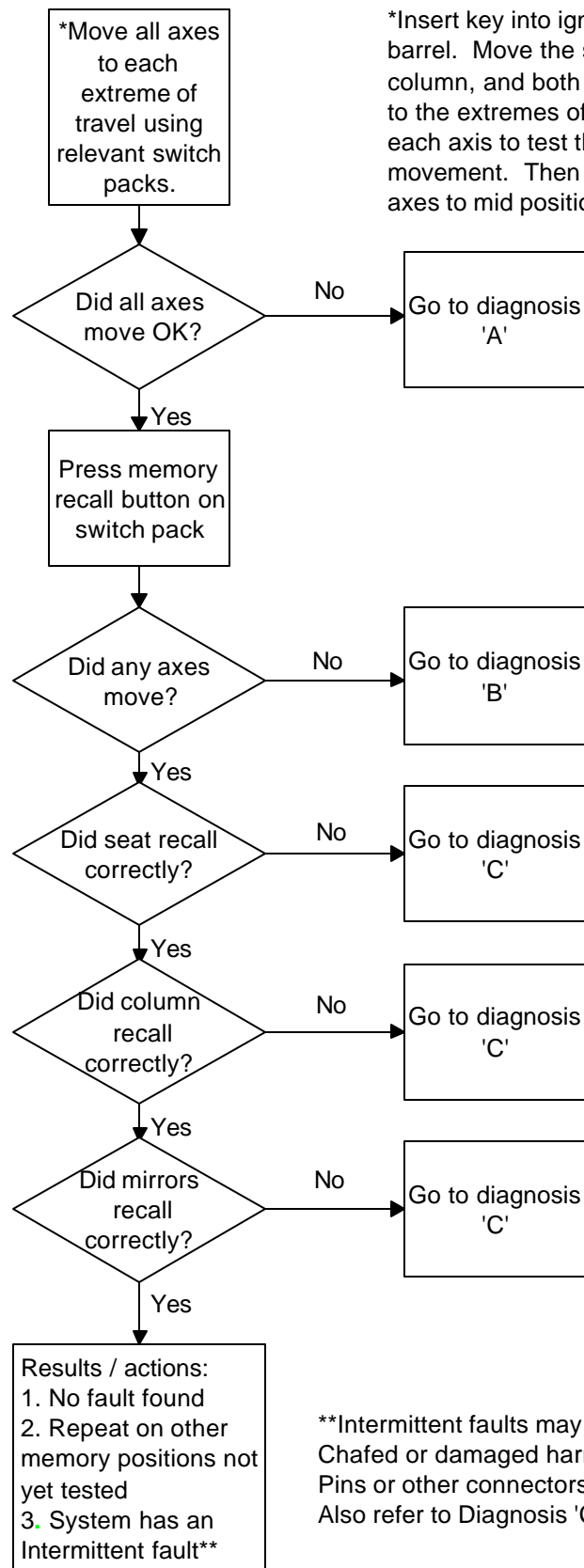
Things to know about the easy/exit function:

- 1 If the seat is within approximately 50mm of its rear most travel the seat may not move during easy entry/exit mode, as this position is outside the defined operating range for this function.
- 2 If the key fob has not been programmed with memory settings, and it is used to unlock the vehicle, the seat and steering column will recall to the last position you set and not the memorized position.
- 3 If any of the manual switch packs (directional controls) are operated during easy entry/exit mode the function will cease.

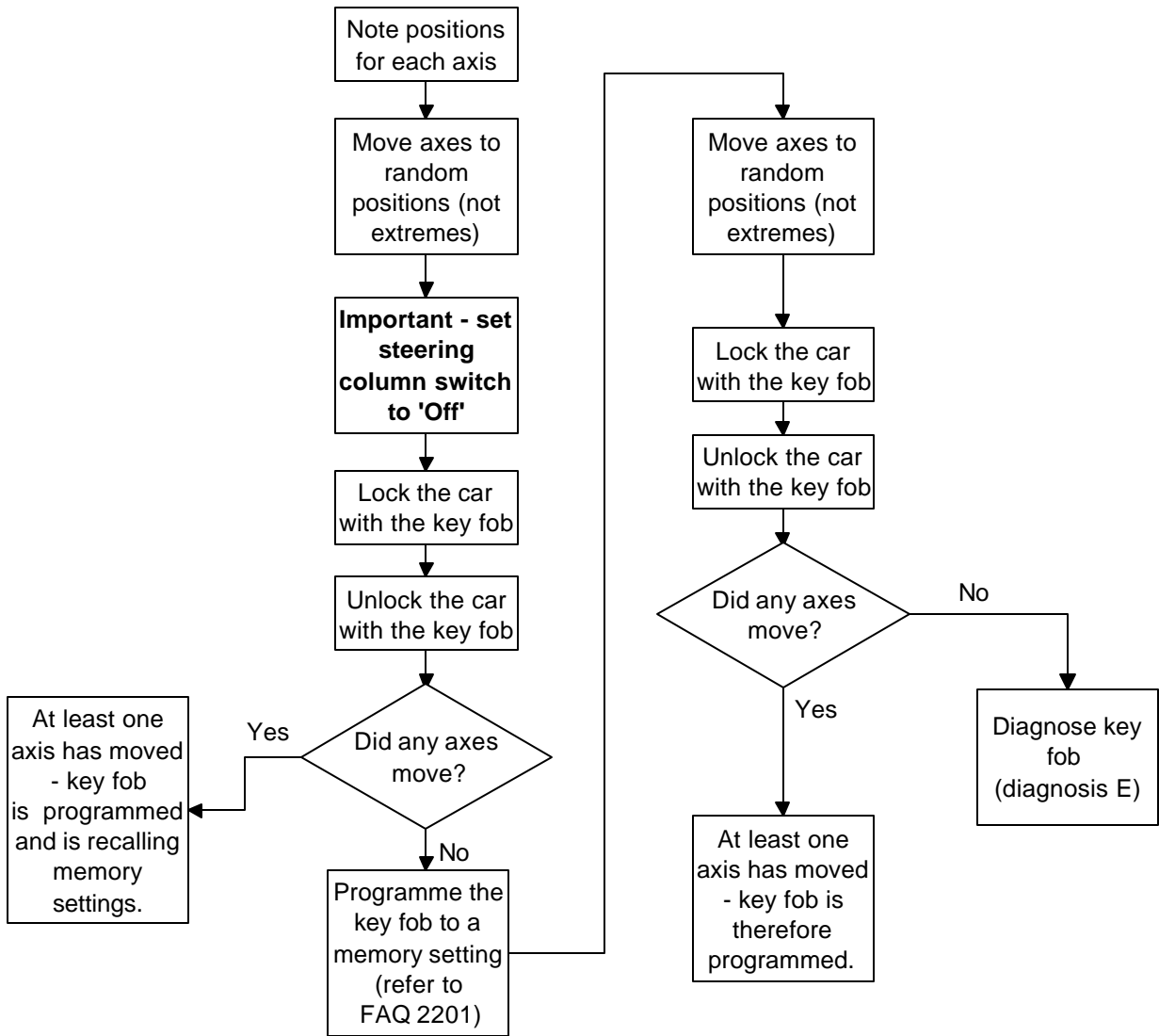
**Diagnosis of Easy Entry / Easy Exit function
Flow chart number 1**



Checking memory recall from driver door switch-pack
Flow chart number 2



**Check memory recall from key fob
Flow Chart number 3**



Diagnosis A – One or more axis does not move correctly when operating the applicable switch-pack

If this happens the problem may not be related to the memory system. If one axis does not recall correctly it may be caused by a mechanical or electrical problem with that part of the system rather than memory recall.

Check points:

- 1 If a complete system will not move then check the relevant fuses.
- 2 Chaffed or damaged harnesses.
- 3 Pins backed out of connectors.
- 4 Poor connections to motors, potentiometers, and modules.
- 5 Short or open circuits.
- 6 Motors being strained or overloaded.
- 7 Bent, buckled, or damaged mechanisms.
- 8 Worn mechanisms.
- 9 Poor connections to the controlling switch pack.
- 10 Switch pack buttons not operating correctly.
- 11 Check the type of seat that is fitted – perhaps the customer thinks the seat has more movements than it actually has.

Diagnosis B – No memory recall from the switch pack

If, after pressing the memory recall button on the switch pack the seat, door mirrors, steering column, and head-restraint did not move at all, the memory system does not appear to be working.

Note: Look at each part of the system carefully for any signs of movement – if part of a system moves even slightly then the memory system is trying to recall the stored settings. If this is the case the memory system is working, but not all positions are recalling correctly.

Things to check if there is no memory recall at all:

- 1 Is the driver door switch pack faulty? (Look for buttons sticking, water ingress, do the memory recall buttons appear to work ok)
- 2 Are the fuses for the memory system ok?
- 3 Has memory been programmed to a switch-pack button?
- 4 Is the driver door module working correctly?
- 5 Are the connections and harnesses to the driver door module ok?
- 6 Is the BPM working?

Diagnosis C – One or more axis does not return to the memorized position

If at least one axis moves when the memory is recalled, either from the driver door switch-pack or the key fob, then the memory system is working. The problem is therefore a mechanical or electrical problem with the affected axis, or a problem with one of the modules.

Note: It is not possible for a module to intermittently lose its memory and then re-gain it. Intermittent memory recall problems will be caused by something other than the memory system.

Check points:

- 1 A chaffed or damaged harness.
- 2 Loose or backed out pins to modules and the corresponding harnesses connectors.
- 3 Poor connections to motors or potentiometers.
- 4 Potentiometers not functioning correctly – use data logger to check the output of the potentiometers.
- 5 Potentiometer may be out of range – this may happen if a memory position is towards the maximum travel of an axis.
- 6 Poor connections to switch-packs.
- 7 Short or open circuits on harnesses.
- 8 Physical damage or wear of mechanical components such as slides, linkages, or gears.

Diagnosis D – The memory system will not store the required positions (no confirmation chime from the system)

When programming the memory system, a chime should be heard when the 'M' memory button is pressed to confirm that the memory has been stored.

If this does not happen check:

All conditions required to program the memory system are correct. Refer to 'other sources of information' on where to find details on programming the memory system.

If the conditions have been met diagnosis of the components will be required.

Check points:

- 1 Connections to the driver door switch pack.
- 2 Correct operation of the switch pack buttons.
- 3 Connections to the driver front door module.
- 4 Harness integrity to the switch pack and door module.
- 5 Connections to the body processor module.
- 6 Correct operation of the BPM.

Diagnosis E – Key fob does not recall memory settings

This section deals with the key fob not recalling any memory positions – the seat, steering column, door mirrors, and head restraints do not move at all. If this is the case it may be a key fob issue rather than a memory issue.

Check points:

- 1 Does the locking and security system work correctly? If it does not it may indicate that the SLM is the cause of the problem.
- 2 Has the key fob been programmed with memory setting?
- 3 When programming the fob does the vehicle give a chime to confirm the memory has been assigned to the fob?
- 4 Is the key fob battery OK?

Other sources of information to aid diagnosis:

WDS can be used in data logger or guided diagnostics modes to help pinpoint the source of concern.

Key elements of memory systems on S-TYPE vehicles:

Modules used for memory storage	
Model and memory system feature	S-TYPE
Driver seat memory is stored in:	Driver's Seat module
Driver head restraint memory is stored in:	Driver's seat module
Passenger head restraint memory is stored in:	
Driver door mirror memory is stored in:	Driver's door module
Passenger door mirror memory is stored in:	Passenger's door module
Steering column memory is stored in:	Body Processor module

Controls for memory recall and storage	
Store memory settings using:	Driver's door switch pack
Can key fobs be programmed with memory settings?	Yes
Can key fob memory programming be cleared?	Yes
Memory recall available from: (*only when programmed)	Driver's door switch pack & key fob*
Memory recall type, using driver door switch pack:	One touch
Number of memory storage positions available	2

Controls for memory recall and storage (continued)	
Model and memory system feature	S-TYPE
Sequence to set memory on driver door switch pack:	Press 'M', red light on switch pack illuminates, press numbered button within 4 seconds
Confirmation that memory has been set:	Chime
Confirmation that a memory setting has been recalled correctly:	No confirmation

Easy entry/easy exit function	
Does seat move in easy entry / easy exit mode?	Yes
Does seat move fully rearwards in easy entry / exit mode?	No
Does steering column move in easy entry / easy exit mode?	Yes – fully up and fully forward
What happens if a switch pack is manually operated during memory recall	The affected system will stop memory recall (e.g. seat, column, or mirrors).

Memory System – Customer Questionnaire					
VIN:			Customer Name		
Model:	V8 XJ	XK	S-TYPE	Date	
How does the customer describe the concern?					
Has the customer reported this concern before?		Yes		No	
Is the concern intermittent or constant?		Intermittent		Constant	
If the concern is intermittent, how long elapses between occurrences?		1 WK	2 WK	3 WK	4 WK Random
<p align="center">Check the following boxes to show which elements of the memory system are not working correctly. If that part of the system is working correctly tick 'OK.'</p>					
Seat position	Forward / rearward	Up / down	Recline	OK	
Column position	In / Out	Up / Down		OK	
Passenger mirror	In / Out	Up / Down		OK	
Driver mirror	In / Out	Up / Down		OK	
Head restraint	Up / Down			OK	
Memory position?	Memory 1	Memory2	Memory3		
Recall from driver door switch pack?	Problem	OK			
Recall from key fob?	Problem	OK			
Have memory positions been programmed into fob?	Yes	No			
Steering column set to Auto?	Yes	No	Don't know		
Was customer last person to drive the car?	Yes	No	Don't Know		
If no, did the other driver use a memory position?	Yes	No	Don't know		

FAQ memory system setting S-TYPE

Question: The memory system on S-TYPE is not functioning correctly.

Answer

Before any repair is carried out it is suggested that the memory system is checked to ensure it is set up correctly. This document outlines how the system is designed to operate on S-TYPE.

S-TYPE memory system set up procedure

A. Storing a driving position in memory using the driver door switch pack

1. Set the driving position as required (Column, Seat and exterior mirrors)
2. Press the "memory" button on the driver door switch pack
3. A red light will illuminate on the switch pack
4. Within 5 seconds of the light coming on, press one of the two numbered memory buttons (1, 2) located on the driver door switch pack.
5. A chime will sound to indicate the memory has been stored on the selected memory button and the light will go out.
6. If the ignition is on (position II) the instrument pack message center will also advise the settings have been saved
7. To set a second setting repeat steps 1-6 using the unused memory location.

B. Programming the key fob to recall a memorized driving position S-TYPE

Memorized driving positions can be recalled from the key fob when the unlock button is pressed. The key fob must be programmed to do this.

Method:

1. Set the driving position as required (Column, Seats, Exterior mirrors)
2. Press the "memory" button on the driver door switch pack
(The red light on the switch pack will illuminate)
3. Within 5 seconds press any button on Key- Ring transmitter.
4. Press the desired memory location 1 or 2 on the switch pack
5. Repeat steps 1-4, to program the other transmitter using the unused memory location.

Once the key fob is programmed (to memory 1 or 2), there is no need to re-program the key fob if a new driving position is stored in the same memory position.

C. How to clear the memory recall function from the key fob (S-TYPE)

1. Press the memory button

2. While the memory set light is illuminated press any button on the key ring transmitter (except panic button were fitted)
3. Then press the memory button again.

D. Recalling memorized driving positions (S-TYPE)

Recall of memorized driving positions can be performed either by using the driver door switch pack or the key fob. There are some conditions that must be met for the system to work when the recall is selected:

- The gear selector must be in "park" or "neutral" for automatic vehicles.
- For manual transmission the vehicles handbrake must be "On".
- To recall from switch pack select desired memory recall button 1 or 2 the column, mirrors and seat will move to programmed position
- To recall from Key Fob, the Fob must have been programmed as previously stated, seats column and mirrors will move on pressing the unlock button on transmitter.

E. Easy Entry / Exit Function (S-TYPE)

- This function will only operate when the steering column adjustment switch is set to the "Auto" position.
- This function DOES NOT affect the functionality of the memory system or the manual movement of the seat, mirrors or steering column.
- If the customer has selected "Auto" and the steering column is in the process of moving to the easy entry / exit position, using the seat or column adjustment switches will stop the easy entry / exit function until it's next use.
- The easy entry / exit function will operate whether the car is opened with the key or the key fob, and the key fob DOES NOT need to be programmed for this function to work.
- The function will also operate when inserting the key into the ignition switch, removing the key from the ignition switch.
- The seat will only move back 50mm from its rearward stored memory position for easy exit, and then only if the seat is not already at its most rearward point of travel at this point the seat will not move.

NOTE: If all the above settings are correct please contact dealer technical support to log this as a seat memory failure. You should provide dealer technical support with: -

1. All vehicle details.
2. Customer description of concern.
3. Technician's findings including all fault codes as derived from WDS diagnostics.
4. What, if any repairs/parts changes have been done either now or in the past.