

GENUINE PARTS

| I DESCRIPTION: Remote Engine Start | | | | | | | | |
|---|--|---------------------------|------------------------------------|--|--|--|--|--|
| 2 APPLI | CATION | : Q60 | | | | | | |
| 3 PART NUMBER(S) T99K1 5CH0A (Remote Engine Start Kit) | | | | | | | | |
| REQUI | RED FO | R | | | | | | |
| INSTA | INSTALLATION: | | | | | | | |
| 4 KIT CC | 4 KIT CONTENTS: | | | | | | | |
| | | | | | | | | |
| Item | Qty. | Part Description | Service Part Number | | | | | |
| А | 2 | RES Key Fob | 285E3 4HK0A | | | | | |
| В | 1 | II Replacement Template | 999V2 AW000 | | | | | |
| С | N/A | Installation Instructions | T99K1 5CH0AII | | | | | |
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| 5 TOOLS • C | REQUI ONSULT | RED: III plus • | Approved access to Immobilizer PIN | | | | | |
| 6 PRE-I | NSTALLA | ATION CAUTION/NOTES: | | | | | | |
| | | | ON | | | | | |
| This is a <u>ONE TIME ONLY</u> programming procedure. Be sure to acquire ALL existing Non-RES key fobs from customer and new RES key fobs before proceeding. Please read these instructions carefully before beginning to ensure correct installation. Dealer Installation Only Specialty tools are required. | | | | | | | | |
| 7 CRITICAL STEPS: | | | | | | | | |
| The following steps are critical and must be performed as specified to ensure proper installation: This accessory must only be installed as specified in these instructions. Do Not place key fob(s) on top of dashboard during programming. Frequency interference may occur. Be sure to avoid any other sources of frequency interference such as walkie-talkies, radios, etc. Be sure that vehicle is out of transit mode (shipping mode) by pushing in extended storage switch. Vehicle battery must be at or above 12.5 VDC | | | | | | | | |

8 Vehicle Preperation: **A** CAUTION • Always confirm the ignition is in the "OFF" position before changing the E.S.S. position. 1) Apply parking brake 2) Confirm vehicle is no longer in default shipping state (Extended Storage Switch Pulled Up and BCM in Transit Mode). Failure to confirm vehicle has been removed from this state will result in loss of normal vehicle operation. Confirmation requires two checks: 3) Locating Extended Storage Switch. Fig. 1 a) Locate Extended Storage Switch in cabin fuse block. Check Extended Storage Switch is in b) "Customer" position as shown in Fig. 1. **INVENTORY - UP CUSTOMER - DOWN** 4) Engage and remove from transit mode Fig. 2 a) To engage transit mode, pull out in **A** direction as shown in the figure. b) To remove from transit mode, press in **B** direction as shown in the figure. Condition Note Switch Position Vehicle is delivered to the dealer Inventory Condition Technician performs PDI Customer Delivery Return to Inventory position after PDI. Customer test drives the vehicle Customer Delivery Return to Inventory position after test drive.

Vehicle is being stored at the dealer Inventory Condition Vehicle is delivered to customer Customer Delivery Turn ignition switch to "ON" position 5) 6) Record the customer radio presets and other presets as required. Preset 1 4 5 2 3 6 7) Put shift lever in "P" position for A/T and CVT or "1st" for M/T 8) Turn ignition switch to "OFF" position 9) Use seat and floor protection.

| ehicle Preperation: | | | | | | |
|---|--|-----------------------------------|--|---|--|--|
| .) Locate OBD connector. | | | | | | |
| .) Connect tool. | | | | | | |
| .) Follow CONSULT III plus pro | gramming instructions. | | | | | |
| .) Verify RES operation. | | | | | | |
| Installation Procedure: Cau | tions / Notes | | | | | |
| | 🛕 CA | UTIC | N | | | |
| Do not allow the Intelligen | t Key which contains | electric | al components to com | e into contact with | | |
| water. This could severely moisture from I-Key until o | affect system function completely dry. | n. If the | Intelligent Key gets w | vet, immediately wipe | | |
| Do not drop the Intelligent | Key. | | | | | |
| Do not strike the Intelligen Do not change or modify th | nt Key sharply against ne Intelligent Key. | anothe | object. | | | |
| Do not place the Intelligent extended period of time. | t Key in an area where | e tempe | ratures exceed 140°F | (60°C) for any | | |
| Do not attach the Intelliger | nt Key with a key hold | ler that | contains a magnet. | | | |
| Take care not to scratch or | damage any compone | ent durii | ng the installation pro- | cess. | | |
| Always follow the sequence | e of steps as they are | shown, | Improper procedure ca | an damage parts | | |
| Be sure All key fobs for this | s vehicle have been ar | auirod ł | efore proceeding | | | |
| Avoid All other sources of f | irequency interference | such a | cell phones walkie-t | alkies radios etc | | |
| • Avoid All other sources of frequency interference such as cell phones, walkie-talkies, radios, etc | | | | | | |
| DO NOT STOP or disconnec | + CONSULT TIT plus or | · VT unti | after the process has | : heen completed | | |
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12 Installation Procedure: Vehicle Parts Installation









- 1) Locating the connector.
 - a) Locate OBD Connector under steering finisher as shown in Fig. 2.
 - b) Connect CONSULT tool to vehicle OBD connector as shown in Fig. 2.



- <u>Do Not</u> place key fob(s) on top of dashboard during programming. Frequency interference may occur.
- 2) Connecting to the vehicle.
 - a) Press and hold Start Button for at least
 2 seconds without depressing brake to put
 vehicle in Key On / Engine Off.
 - b) Turn on hazard switch to prevent BCM from entering into CAN communication sleep mode.



• DO NOT STOP or disconnect CONSULT tool or VI until after the process has been completed.

- 3) RES key fobs programming instructions.
 - a) Start CONSULT III plus make sure VI is connected. VI serial number will appear in VI section and the VI status will change to "Normal Mode" (green color) as shown in Fig. 4.
 - b) If VI is connected to vehicle go to step 8 and continue the installation. If VI is not connected to vehicle proceed to step 4.
- 4) RES key fobs programming instructions.
 - a) If VI has not connected to vehicle click Select VI/MI button to connect with vehicle as shown in Fig. 5.







Fig. 18

12 Installation Procedure: Vehicle Parts Installation







- 17) New RES key fob confirmation.
 - a) Press and hold push button Ignition switch while depressing brake, to confirm vehicle starts as shown in Fig. 18.
 - b) Press push button Ignition switch and turn ignition switch to OFF position as shown in Fig. 18.

A CAUTION

- Remove all Key Fobs from the vehicle, before proceeding to the next step..
- 18) New RES key fob confirmation.
 - a) From outside vehicle press Lock on Fob 1 and Unlock on Fob 2 and confirm that vehicle responds accordingly as shown Fig. 19.
 - b) From outside vehicle press Lock on Fob 2 and Unlock on Fob 1 and confirm that vehicle responds accordingly as shown Fig. 19.
- 19) New RES key fob confirmation.
 - Press and hold the RES button within five (5) seconds of pressing the LOCK button until the turn signal lights turn ON, then release to confirm vehicle starts as shown in Fig. 20.
 - b) Press and release RES button a second time to stop vehicle.
 - c) Lock vehicle and repeat sequence with second RES Key fob.
- 20) Disposing of original key fobs.
 - a) Before disposing of old fobs remove key by turning the fob over and sliding button to right as shown in Fig. 21.



12 Installation Procedure: Vehicle Parts Installation



- 25) Disposing of old key fobs.
 - a) Insert keys into the new RES fobs as shown in Fig. 36.

| 13 Final Inspection: | | | | | | |
|----------------------|---|---|--|--|--|--|
| | | | | | | |
| • Ref | Refer to the vehicle service manual for more information. | | | | | |
| | Verify in | terior and exterior is not damaged. | | | | |
| | Turn ign | ition switch to the "ON" position to confirm proper operation of vehicle systems. | | | | |
| | | That there are no new Diagnostic Trouble Codes. | | | | |
| | | Verify all windows and sunroof (if equipped), one touch operation and perform the reset procedure if necessary. Refer to the vehicle service manual for more details. | | | | |
| | | Tail Lamp - Turn on headlamps; open glove box and note whether light goes on. | | | | |
| | | Confirm proper audio function (AM, FM, SAT, CD and AUX). | | | | |
| | | Re-program radio presets and other vehicle settings to the recorded settings if necessary. | | | | |
| | Confirm | RES function. | | | | |
| | | Turn IGN ON. | | | | |
| | | Turn IGN OFF. | | | | |
| | | Get out of the vehicle and close <u>all</u> doors (make sure the hood is closed). | | | | |
| | | Lock the vehicle with the remote. | | | | |
| | | Within 5 seconds, press and hold the RES button for more than 2 seconds. | | | | |
| | | Engine should start. | | | | |
| | Front So front of | onar Module Connector - Turn on vehicle, put vehicle in 'Drive'. Move slowly towards a large object in the vehicle. Note whether alarm sounds. | | | | |
| | Rear Sou behind t | nar Module Connector - Turn on vehicle, put vehicle in 'Reverse'. Move slowly towards a large object he vehicle. Note whether alarm sounds. | | | | |
| | Place the | e Owner Manual, Quick Reference Guide, and/or other Manual in the glove box. | | | | |
| | If this ve extende | ehicle will be returned to a dealer lot or showroom for an extended period of time, be sure the d storage switch is placed in the "inventory" position. | | | | |
| | | | | | | |

14 Troubleshooting: Diagnosis

Operate RES, verify if the system is not working properly:

a. Start the engine normally with the push-button ignition switch.

- b. Turn the ignition OFF, and then wait six (6) seconds.
- c. Exit the vehicle, make sure all doors are closed, and then lock the vehicle with the key fob.
- d. Within five (5) seconds of pressing the lock button, point the key fob at the vehicle, and then press and hold the RES button until the turn signal lights turn ON.
- e. At this time, the engine should start, the turn signal lights remain ON, and the doors should remain locked while the engine is running.
- f. If this condition does not occur, use the Supplemental Diagnosis Table below in addition to the ESM.

Supplemental Diagnosis Table

| | | Possible Cause | Confirmation of Cause | Resolution |
|---|---|--|---|---|
| | 1 | ECM has not completed shutdown procedure after engine/ignition OFF. | ECM has to end shutdown process and save data prior to allowing RES to operate. Shutdown process takes 6 seconds to complete after engine/ignition is turned OFF. | Wait 6 seconds after engine has stopped prior to attempting RES activation. |
| The engine does not start using the RES feature | 2 | RES is correctly activated more than 2 times consecutively OR RES is activated once and with engine running another request is generated. | Not possible to confirm how many times RES has been activated. | Perform steps a-d above. This action will reset counter. |
| (see steps a-e above) | 3 | One or more key fobs for this vehicle are still inside the vehicle. | With all known key fobs outside and out of range of vehicle, try to turn ON ignition with push-button ignition switch. If ignition turns ON, a key fob/I-Key remains inside vehicle. | Find and remove all remaining key fobs from the vehicle, lock doors with key fob, and then perform RES. |
| | 4 | Doors and trunk lid (or lift gate) are not closed and locked. | Doors/trunk lid/lift gate may not be completely closed and locked. Confirm both conditions in BCM Data Monitor: All doors closed - Status SW = ON All doors locked - Status = ON | Close and lock all doors/trunk lid/lift gate. If switches still do not show correct status, diagnose further with ESM. |

14 Troubleshooting: Diagnosis

| | | Possible Cause | Confirmation of Cause | Resolution |
|------------------------------------|----|--|--|---|
| | 5 | Door Lock button on key fob was not pressed prior to activating RES. | Not possible to confirm lock button was pressed first. | Press the Lock button before pressing and holding the RES button. |
| | 6 | RES button on key fob is not held long enough. | Not possible to confirm how long RES button was held. | Hold RES button for more than 2 sec to activate RES. |
| | 7 | Waited longer than 5 seconds to activate RES after door lock operation. | Not possible to confirm how long RES was pressed after lock. | Press and hold RES button within 5 seconds of pressing lock button. |
| | 8 | Ignition switch is not in LOCKED position | Verify if ignition switch position (status) is in any status other than LOCKED. | Change ignition switch to LOCKED status. |
| The engine does | 9 | The vehicle's shift selector is not in Park position. | Shift selector may look to be in Park but is not. Confirm in BCM Data Monitor: PN Switch = ON (with shift selector in Park) | Verify shift selector is in Park position. If PN switch = OFF, diagnose further with ESM. |
| not start using the RES feature | 10 | Shift selector release button is not in released (unpressed) position. | Confirm in BCM Data Monitor: Detent SW = OFF (when release button is not pressed) | If Detent SW = ON, diagnose further with ESM. |
| | 11 | Environmental factors block, reduce, or scramble signal strength from key fob to BCM. | RF interference may exist inside vehicle with aftermarket devices i.e. alarm systems OR other devices found near the key i.e. highway pass card OR RF device i.e. phone or portable garage door opener. | Move vehicle from area where stationary source(s) of interference may be located and/or remove sourse(s) of interference away from the key fob or path of signal. |
| | 12 | Stop lamp switch is misadjusted or inoperative, giving a stop lamp switch ON signal (or brake pedal is applied). | Stop lamp switch adjustment may not be within specification. Confirm switch operation using ABS Data Monitor: Stop Lamp SW = OFF (with brake pedal released not pressed) | Adjust / Replace Stop lamp switch. |

14 Troubleshooting: Diagnosis

| The engine does not start using the RES feature | | Possible Cause | Confirmation of Cause | Resolution |
|---|----|--|--|---|
| | 13 | Hood is opened. | Hood may not be completely closed. Confirm hood switch operation using IPDM Data Monitor: SW = ON (when hood is closed) | Check as needed: Verify the hood is closed. Confirm hood switch connection is secure. Adjust / replace switch. |
| | 14 | Security system is currently activated (activation keeps engine from starting). Note: Horns may not be heard and lights may not be flashing. | Check Security system activation by trying to start engine normally (with push- button ignition switch). Note: Engine will not start with Security system activated. | Turn off/deactivate Security system (unlock doors with key fob). If condition persists, diagnose further using ESM. |
| | 15 | RES is attempted from within the vehicle. | RES can only operate from outside vehicle with doors locked. | Exit vehicle WITH key fob, lock doors and within 5 seconds activate RES. |
| | 16 | Specific DTCs may prevent RES from operating: B261B, B26FE, B26FD | Confirm with C-III plus no DTCs are stored. | Clear DTC(s) with C-III plus. If DTC(s) persist, perform further diagnosis using ESM. |

15 Bill of Materials:

T99K1 5CH0A Remote Engine Start Kit

| Item | Qty. | Part Description | Service Part Number |
|------|------|---------------------------|---------------------|
| Α | 2 | RES Key Fob | 285E3 4HK0A |
| В | 1 | II Replacement Template | 999V2 AW000 |
| С | N/A | Installation Instructions | T99K1 5CH0AII |

16 Mechanization:

REMOTE ENGINE START FUNCTION : System Description

