PART NUMBER: H001SFL400

DESCRIPTION: LONG RANGE KEY START REMOTE ENGINE START SYSTEM IMPREZA / CROSSTREK

1 KIT CONTENTS

- Remote Engine Start Control Module (ECU) Quantity=1
- Remote Engine Start Wire Harness Quantity=1
- Remote Engine Start Transmitters w/ Warning Tags Quantity=2
- Under Hood Warning Label Quantity=1
- Quick Reference Card Quantity=1 English, 1 French
- Wire Harness Clip Quantity=1
- ECU Foam Tape Quantity=1
- Tie Wraps 20cm Quantity=4 39cm Quantity=8

2 TOOLS REQUIRED

- Phillips Screwdriver Short and Standard
- Ratchet, 10mm Socket & Extension
- Torque Wrench
- Panel Removal Tool
- Wire Cutters
- Alcohol and Towel
- Pick Tool
- Utility Knife
- Ruler
- SSM IV (DST-i) Diagnostic Interface

3 MEANING OF CHARACTERS

- : Remove
- : Install
- : Disconnect
- : Connect
- : Location of Clip or Screw
- : Tighten Torque
- : Loosen
- : Discard
- : Re-use

CAUTION: DO NOT SECURE ANY REMOTE START HARNESSES TO ANY YELLOW HARNESSES / CONNECTORS (AIRBAG SYSTEM) IN THE VEHICLE.
VEHICLE PREPARATION

1. Using a 10mm socket/ratchet, disconnect the negative battery terminal. (FIGURE A)
   
   NOTE: Do not disconnect the battery cable from the battery post.
   
   NOTE: DO NOT PROCEED TO THE NEXT STEP FOR ONE (1) MINUTE TO ALLOW TIME FOR THE AIRBAG POWER SUPPLY TO DISCHARGE.

2. Using a panel removal tool, carefully remove the left side dashboard panel by starting at the bottom access notch and working upward to disengage four (4) pressure clips. (FIGURE B)
   Using a Phillips screwdriver, remove one (1) Phillips screw securing the lower dashboard panel on the left side of the dashboard. (FIGURE C)

3. Using a panel removal tool, carefully remove the driver’s left side lower dashboard panel by pulling straight out to disengage seven (7) pressure clips. Unplug all connectors attached to the dashboard panel. (FIGURE D)
4. Using a Phillips screwdriver, remove one (1) Phillips screw on the lower corner of the driver’s right side lower dashboard panel. Carefully remove the driver’s right side lower dashboard panel by pulling straight out toward the rear of the vehicle to disengage six (6) pressure clips. (FIGURE E)
NOTE: Do not pull from the bottom of the panel, doing so may result in damage to the panel or the retaining clips.

5. Remove the steering column shroud. Using a Phillips screwdriver, remove one (1) Phillips screw on the left side face and one (1) Phillips screw on the right side face of the steering column shroud. Carefully unsnap and remove the lower steering column shroud panel and then remove the upper steering column shroud panel. (FIGURE F)
NOTE: Insert the ignition key into the ignition switch and turn to the “ACC” position to unlock and rotate the steering wheel to access the Phillips screws on the face of the steering column.

6. Using a 10mm socket/ratchet/extension, remove the two (2) 10mm nuts securing the driver’s side lower airbag/knee bolster. (FIGURE G)
Remove the lower airbag/knee bolster. Using a pick tool, disengage the yellow connector lock by lifting upward. (FIGURE H)
Using a panel removal tool, carefully lift upward to unplug the electrical connector and place the airbag/knee bolster panel in a safe area.
4 VEHICLE PREPARATION, continued

7. Open the glove box and press inward on the sides of the glove box to disengage the retaining tabs from the glove box inner cover. Disconnect the strut from the glove box. (FIGURE I)

8. Using a panel removal tool, carefully remove the right side dashboard panel by starting at the bottom access notch and working upward to disengage four (4) pressure clips. (FIGURE J)

9. Using a panel removal tool, carefully lift upward to disengage four (4) pressure clips and one (1) finger clip and then pull rearward to remove the passenger’s side ornament panel. (FIGURE K)

10. Using a Phillips screwdriver, remove seven (7) Phillips screws securing the glove box inner cover. Disengage the six (6) pressure clips and disconnect the glove box lamp connector to remove the glove box inner cover. (FIGURE L)
1. Locate the glove box inner cover and remote engine start ECU. Using alcohol, clean the back side of the glove box inner cover and ECU, as shown. (FIGURE M)

2. Using the supplied double sided tape, remove the three (3) small release liners and attach the tape to the glove box inner cover. Ensure the tape is positioned against the vertical character line and flat against the multi-level inner cover, as shown. Press firmly in place for at least 30 seconds. (FIGURE N)

   **NOTE:** Ensure the double sided tape is positioned away from any obstructions on the glove box inner cover.

3. Using a ruler, measure and mark a straight line 1/2” down from the top of the double sided tape, as shown. (FIGURE N) Using a sharp utility knife and ruler, score the release liner of the double sided tape on the straight “dashed” line.

   **NOTE:** Score the release liner only. Do not score through the double sided tape.
4. Remove the larger/lower section of the release liner from the double sided tape. (FIGURE O)

5. Attach the remote engine start ECU to the double sided tape. Ensure the corner of the ECU, closest to the white 8-pin header, is flush with the upper left corner of the exposed double sided tape, as shown. (FIGURE P) Press firmly in place for at least thirty (30) seconds.

**NOTE:** Ensure the 1/2” upper section of the double sided tape is NOT covered by the ECU.

6. Using alcohol, clean the lower, front side of the ECU, as shown. (FIGURE P)

7. Remove the release liner from the one (1) supplied wire harness clip and attach it to the lower, front side of the ECU, as shown. Press firmly in place for at least ten (10) seconds. (FIGURE Q)

8. Using one (1) of the supplied 39cm tie wraps, secure the remote engine start ECU to the glove box inner cover. Trim off the excess tie wrap. (FIGURE Q)
8-PIN IGNITION SWITCH CONNECTIONS

1. Adjust the tilt/telescopic steering column all the way out and down.

2. Locate the plastic channel at the base of the steering column that protects the ignition wire harness. (FIGURE R) Using a panel removal tool, carefully release the three (3) plastic tabs on the left side to open the plastic channel and carefully swing it downward. (FIGURE R)

3. Locate and unplug the 8-pin ignition switch connector on the right side of the steering column. Carefully pull the connector down and away from the steering column. (FIGURE S)

4. Plug the remote engine start wire harness 8-pin female connector into the vehicle’s ignition switch. (FIGURE T)
6 REMOTE ENGINE START WIRE HARNESS CONNECTIONS, continued

8-PIN IGNITION SWITCH CONNECTIONS, continued

5. Carefully fold back the remote engine start wire harness 8-pin foam wrapped male connector. Plug the factory 8-pin female ignition switch connector into the remote engine start wire harness 8-pin male connector. (FIGURE U)

6. Route the remote engine start wire harness inside the plastic channel on the left side of the factory ignition wire harness. Engage the three (3) plastic tabs to close the plastic channel. (FIGURE V)

7. Secure the remote engine start wire harness 8-pin foam wrapped male connector to the vehicle’s wire harness using one (1) of the supplied 39cm tie wraps. Secure the remote engine start wire harness above the plastic channel using one (1) of the supplied 39cm tie wraps at the white tape ring. Trim off the excess tie wraps. (FIGURE W)

**NOTE:** Ensure the tie wrap clasps are rotated upward to avoid contact with the steering column shroud after re-assembly.

8. Continue to route the remote engine start wire harness, with 4-pin and 2-pin pre-fit connectors, along the vehicle’s wire harness toward the left side of the dashboard and secure with three (3) of the supplied 39cm tie wraps at the white tape rings. Trim off the excess tie wraps. (FIGURE X)
4-PIN & 2-PIN PRE-FIT CONNECTIONS

9. Locate and release the vehicle’s 4-pin and 2-pin pre-fit connectors secured to the vehicle’s wire harness with breakaway tape near the dash wall and to the left of the brake pedal assembly. (FIGURE Y)

10. When the vehicle’s 4-pin and 2-pin pre-fit connectors are free from the breakaway tape, unplug and discard the 2-pin mating connector/wire jumper. (This is used for the power window interrupt circuit).

11. Plug the remote engine start wire harness 4-pin and 2-pin connectors into the corresponding pre-fit connectors and secure to the vehicle’s wire harness with one (1) of the supplied 39cm tie wraps. Trim off the excess tie wrap. (FIGURE Z)
REMOTE ENGINE START WIRE HARNESS ROUTING

12. Route the remote engine start wire harness, with 12-pin and 8-pin ECU connectors, to the center console and secure with two (2) of the supplied 20cm tie wraps at the white tape rings. Trim off the excess tie wraps. (FIGURE AA)

NOTE: The lower tie wrap is routed through a slot in the vehicle’s HVAC assembly.

FIGURE AA

13. Continue to route the remote engine start wire harness behind the center console and secure with one (1) of the supplied 20cm tie wraps at the white tape ring. Trim off the excess tie wrap. (FIGURE BB)

NOTE: The tie wrap is routed through a slot in the vehicle’s HVAC assembly.

FIGURE BB
REMOTE ENGINE START WIRE HARNESS CONNECTIONS, continued

REMOTE ENGINE START ECU CONNECTIONS

14. Route the remote engine start wire harness, with 12-pin and 8-pin ECU connectors, through the cabin filter access opening of the glove box inner cover, as shown. Re-connect the glove box lamp connector to the lamp on the glove box inner cover. Re-install the glove box inner cover by engaging the six (6) pressure clips and secure with seven (7) Phillips screws. (FIGURE CC)

**NOTE:** Ensure the upper 8-pin header of the remote engine start ECU is clear of the metal dashboard bracket. (FIGURE CC)

15. Route the remote engine start wire harness to the remote engine start ECU. Plug the remote engine start wire harness 12-pin and 8-pin connectors into the ECU. (FIGURE DD)

16. Reach behind the glove box inner cover and route the remote engine start wire harness through the wire harness clip. (FIGURE EE)

**NOTE:** Ensure the remote engine start wire harness is NOT too tight to avoid stress on the ECU connectors.
7 UNDER HOOD WARNING LABEL MOUNTING

1. Using alcohol, clean the top of the air intake plenum, near the radiator core support.

2. Remove the release liner from the under hood warning label and secure to the top of the air intake plenum, as shown. (FIGURE FF)

8 PANEL RE-ASSEMBLY

1. Plug the yellow electrical connector into the airbag/knee bolster. Verify that the yellow connector is fully seated. Failure to seat the connector lock could result in the instrument cluster airbag light remaining illuminated. Reinstall the airbag/knee bolster and torque the two (2) 10mm nuts to 7.5 Nm +/- 2 Nm (0.76 Kgf-m +/- 0.2 Kgf-m, 5.5 ft-lbs +/- 1.5 ft-lbs).

2. Re-install the steering column shroud and secure in place with two (2) Phillips screws.

3. Re-install the driver’s right side lower dashboard panel and secure with one (1) Phillips screw.

4. Plug in any previously removed connectors and re-install the driver’s left side lower dashboard panel.

5. Re-install the one (1) Phillips screw on the left side of the dashboard that secures the lower dashboard panel in place.

6. Re-install the left side dashboard panel.

7. Re-install the passenger’s side ornament panel by engaging the four (4) pressure clips and one (1) finger clip.

8. Re-install the right side dashboard panel by engaging the four (4) pressure clips.

9. Re-install the glove box and strut.

10. At the end of the installation, insert the Quick Reference Cards into the Owner’s Information Kit.
9 SYSTEM POWER-UP

1. After all the connections are complete, re-connect the vehicle’s negative battery terminal. Using a 10mm socket/torque wrench, tighten the 10mm nut to 7.5 Nm +/- 2 Nm (0.76 Kgf-m +/- 0.2 Kgf-m, 5.5 ft-lbs +/- 1.5 ft-lbs).

2. Start the vehicle at least one (1) time using the ignition key prior to activating the remote engine start system. This is required to allow the vehicle’s electronic systems to re-synchronize.

3. With the vehicle running via the ignition key, verify that the instrument cluster airbag light turns off. If the airbag light remains on, refer to the vehicle service information for troubleshooting.

4. With the vehicle running via the ignition key, apply the brake pedal and shift the transmission out of park. Turn off the engine and confirm the ignition key cannot be removed from the ignition switch. If it can, confirm the key lock solenoid connector is connected and the delivery (test) mode fuse is removed, then re-check.

5. Refer to the vehicle Owner’s manual for the Power Window Reset Procedure to restore the power window functions.

10 SYSTEM REGISTRATION

NOTE: Once the Ignition is turned ON, the system will exit System Registration after 2 minutes.
POST INSTALLATION CHECKLIST

1. REMOTE ENGINE START - Ensure the key is removed from the ignition switch, the engine hood, all doors and trunk or hatch are closed. Press the START button on the remote start transmitter two (2) times within 3 seconds. The vehicle’s parking lights should flash and the vehicle’s horn should honk one (1) time and then the vehicle should crank and start. Once started, the transmitter LED will flash two (2) times and the parking lights will turn on and stay on signifying the vehicle is running. The transmitter LED will flash one (1) time every three (3) seconds signifying the vehicle is still running.

2. SHUT DOWN WITH DOOR OPENING - While the vehicle is running by the remote engine start, wait at least five (5) seconds and then confirm that all functions (lock, unlock & trunk or hatch, but not panic) operate properly on the FACTORY transmitter. Once the FACTORY transmitter functionality is confirmed, press the UNLOCK button on the FACTORY transmitter and open any vehicle door. The remote engine start should shut down and the transmitter LED should flash three (3) times indicating the system has shut down.

3. ACTIVATION WITH DOOR OPEN - Ensure the key is removed from the ignition switch and the engine hood and trunk or hatch are closed. Open the driver’s door and press the START button on the remote start transmitter two (2) times within three (3) seconds. The vehicle’s parking lights should flash and the vehicle’s horn should honk six (6) times. The vehicle should not start with any door, trunk or hatch opened.

4. BRAKE PEDAL SAFETY - While sitting in the vehicle with the engine hood, all doors and trunk or hatch closed, activate the remote engine start and press the brake pedal. The vehicle should shut off.

5. KEY-IN-SENSE - While sitting in the vehicle with the engine hood, all doors and trunk or hatch closed, insert the ignition key into the ignition switch, but keep it in the OFF position. Activate the remote engine start. The vehicle’s parking lights should flash and the vehicle’s horn should honk (2) times. The vehicle should not start since the key is in the ignition switch.

6. HOOD SAFETY SWITCH - Open the engine hood and activate the remote engine start. The vehicle’s parking lights should flash and the vehicle’s horn should honk two (2) times. The vehicle should not start since the hood safety switch is activated.

7. HEATER / A/C FUNCTION - Using the ignition key, turn the ignition to the ON position. Preset the vehicle’s heater or air conditioning to the ON position. Turn the ignition OFF and remove the ignition key. Activate the remote engine start and verify that the heater or air conditioning turns on to the preset setting for manual climate controlled vehicles or turns to the “Full Auto” setting for electronic climate control vehicles.

8. 15 MINUTE RUN TIME - Activate the remote engine start and allow the system to run for the 15 minute preset run time. The remote engine start should shut down after 15 minutes (+/- 10 seconds).

9. TRANSMITTER FUNCTIONALITY VERIFICATION - Activate the remote engine start using both of the supplied single button remote start transmitters.

FUNCTIONAL TESTING IS NOW COMPLETE.