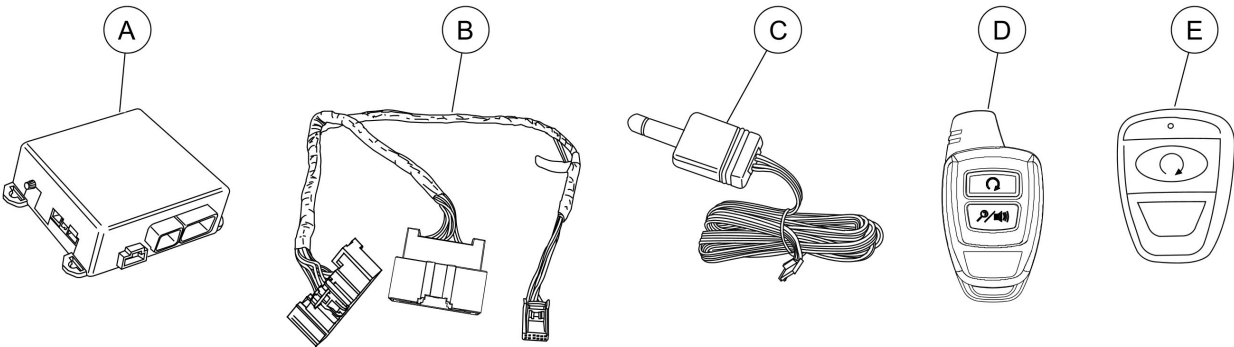---

SCALABLE REMOTE START SYSTEM

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SCALABLE REMOTE START KIT

A - Remote Start Module	B - Wire Harness	C - IVU and Harness	D - 2-way Fob	E - 1-way Fob

NOTE:
2-way Fob does not have a car finder button for kits DS7Z-19G364-A, DS7Z-19G364-B, DS7J-19G364-MA and DS7J-19G364-MB.

APPLICABLE REMOTE START PART NUMBERS

DS7Z-19G364-A	DS7Z-19G364-B	DS7J-19G364-MA	DL3Z-19A361-A
DT4Z-19A361-A	FS7Z-19A361-A	FT4Z-19A361-A	GJ5Z-19A361-A
GT5Z-19A361-A	DS7Z-15K601-F	DL3Z-15K601-A	EL3Z-19G364-B
DS7J-19G364-MB	HS7J-19G364-MA	GT1Z-19A361-A	GM5J-19G364-AA
GM5J-19G364-BB	B6TRN-19G364-AA	B6TRN-19G364-BA	B6TRN-19G364-CA
B6TRN-19G364-DA	B6TRN-19G364-EA		

PRINCIPLES OF OPERATION

The Scalable remote start system is a dealer installed product that starts the vehicle using a separate key fob. This aftermarket system is not integrated into the existing key fob. The system is fully plug-n-play and connects via the vehicle's Data Link Connector (DLC), which communicates to the Controller Area Network (CAN) within the vehicle. The Scalable remote start system has an approximate range of up to 1000 ft (300 m) and controls the following:

- Starting the vehicle.
- Initiating the HVAC systems.
- Running for a programmed duration (5, 10 or 15 minutes).
- Flashing the parking lights.
- Locking the doors (certain models only).
- Key takeover upon insertion of key.

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INSPECTION AND VERIFICATION AND PHYSICAL DAMAGE

1. Verify correct part number is used for vehicle and model year being installed.

2. Visually inspect all parts for damage that could cause a failure.

NOTE:
If at the end of the troubleshooting process a replacement part is required, the supplier's (Voxx Hirschmann) warranty request form will require a detailed description of the suspected failure. Please include such details as VIN, user inputs to induce the failure, vehicle response (horn sounds, IPC messages), and DTCs for each vehicle module.

FAILURE DESCRIPTIONS COVERED

1. TRANSMITTERS DO NOT WORK – PINPOINT TEST A

2. CANNOT PROGRAM TRANSMITTERS – PINPOINT TEST A

3. SYSTEM NO LONGER REMOTE STARTS – PINPOINT TEST A

4. NO RESPONSE FROM SYSTEM – PINPOINT TEST B

5. VEHICLE WILL NOT START – PINPOINT TEST C

PINPOINT TEST A – TRANSMITTERS DO NOT WORK

Possible Causes

*   8 key cycle module learn not performed.
*   Press and hold vs. double press selected.
*   Depleted battery.

A1 – VERIFY PREVIOUS TRANSMITTER OPERATION

Is this a first time installation of the transmitters or a previous installation that has stopped working after initial install or use?

Did the transmitters previously operate correctly?

*   YES - GO TO A4.
*   NO - GO TO A2.

A2 – VERIFY TRANSMITTER PROGRAMMING

If the transmitters have not been programmed, perform the following Transmitter Programming procedure for either key start or push button vehicle.

Key Start Vehicles

1. Verify the 8 key cycle learn process has been performed (see MODULE PROGRAMMING Section).

2. Transmitter (key fob) learn procedure:

    a. Disarm the vehicle security system by pressing UNLOCK on the OE remote keyless entry fob.

    b. Open the driver door.

    c. Press and hold the brake pedal.

    d. Cycle the ignition key from OFF to RUN 6 times, ensuring a full cycle each time and finishing on the sixth cycle in the ON (RUN) position.

    e. The system will sound the horn 3 times indicating it entered transmitter programming mode.

    f. Press the START button on each of the remote start transmitters, the horn will sound once indicating it learned each time the START button is pressed.

    g. Release the brake pedal.

    h. Turn the ignition key to the OFF position to exit transmitter programming mode.

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Push Button Start Vehicles

1. Transmitter (key fob) learn procedure:

    a. Disarm the vehicle security system by pressing UNLOCK on the OE remote keyless entry fob.

    b. Open the driver door.

    c. Press and hold the brake pedal.

    d. **NOTE:**
       The vehicle's engine will start each time

       Pressing the vehicle's START button, cycle the ignition from OFF to START 5 times, ensuring a full cycle each time and finishing on the sixth cycle in the ON (RUN) position.

    e. Pressing the START button, cycle the ignition to the OFF position.

    f. Release the brake pedal.

    g. **NOTE:**
       Depending on the specific vehicle, entering the RUN position may require two presses of the vehicle START switch.

       Pressing the START button, cycle the ignition from OFF to RUN.

    h. The system will sound the horn 3 times indicating it entered transmitter programming mode.

    i. Press the START button on each of the remote start transmitters, the horn will sound once indicating it learned each time the START button is pressed.

    j. Pressing the START button, cycle the ignition to the OFF position to exit transmitter programming mode.

Are the transmitters programmed?

- YES - Verify proper function and continue installation.
- NO - GO TO A3.

A3 – VERIFY 8–KEY CYCLE LEARN PROCESS

The remote start module must be programmed to the vehicle for both transmitter and remote start features to properly function. For 2-way systems, if the remote start is working but the Find/Panic will not function, verify the module has been programmed if installing on any of the vehicles listed below. If required, perform the following Modue Programming process and then test functionality.

Required for these Key Start Vehicles Only:

- 2011-14 Edge
- 2011-14 F-150
- 2013-16 Taurus
- 2013-16 Flex
- 2011-16 Super Duty
- 2015–16 Expedition
- 2011-15 Explorer

Module Programming

1. Disarm system.

2. Make sure the brake pedal is not pressed.

3. Cycle the key from OFF to RUN 8 times, ensuring a full cycle each time, and finishing on the eighth cycle in the ON position.

4. Immediately after the last key cycle the door locks will cycle once.

5. The system will pause 3-5 seconds, then cycle the door locks once more indicated it was learned.

6. You can now turn the key off, or wait 20 seconds and the system will exit programming mode automatically – indicated by the door locks cycling once.

If module programming was necessary, was programming successful and do the transmitters now work?

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- YES – Verify proper function and continue installation.
- NO – Module programming unsuccessful, GO TO A5.

A4 – DEPLETED BATTERY

The transmitters have internal batteries that are expected to wear down under normal use or shelf life. Under certain conditions, such as storage conditions and how many times it is used each day, can deplete the batteries more quickly. If the LED on the transmitter is not lighting when activated, is dimly lit, or the unit has been in service for an extended period of time, the battery should be checked and/or replaced. This is considered normal wear and tear and is **not** a warrantable item.

Did transmitter battery replacement solve the problem?

- YES – Verify proper function and continue installation.
- NO – If the transmitter is programmed properly but still will not start the vehicle, GO TO A5.

A5 – VERIFY MODULE IS IN PRESS AND HOLD OR DOUBLE PRESS MODE

The remote start can be activated by one of two different methods which can be programmed by the user; either a Press and Hold for 3 seconds, or a Double Press. If the system is not responding to one method of activation, it may have been changed accidently. Follow these steps to verify and change the programming of the system from one method to another:

Press and Hold vs. Double Press Programming:

1. Verify all doors are closed.

2. Verify the brake pedal is not being pressed.

3. Verify the shifter is in the PARK position.

4. Turn the key to the RUN position.

5. Press the transmitter button 3 times quickly – transmitters must already be programmed (see TRANSMITTER KEY FOB PROGRAMMING Section).

6. The system will respond with either the horn sounding once indicating the system is in Press and Hold mode, or sounding twice indicating the system is in Double Press mode.

7. Repeat this process to set the system in a different mode.

Was the system programmed properly, or changed, and now activates properly?

- YES – Verify proper function and continue installation.
- If the transmitter is programmed properly but still will not start the vehicle, GO TO B.

PINPOINT TEST B – NO RESPONSE FROM SYSTEM

Possible Causes

- Connection not made properly.
- Damaged connector or terminal.
- Blown or missing vehicle fuse.

B1 – VERIFY ALL CONNECTORS CONNECTED TO THE PROPER LOCATIONS

If any connector is not properly connected, the system will not respond. Verify the following connections have been made:

- Harness connected to either the On-Board Diagnosis (OBD) or Gateway connector (see vehicle specific installation instructions).
- Remote start module connected to the main wire harness.
- Antenna harness connected to the glass mounted In Vehicle Unit (IVU) antenna.
- Antenna harness connected to the remote start module.

Were any connections missing or shorted?

- YES – Verify proper function and continue installation.
- NO – GO TO B2.

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B2 – VERIFY REMOTE START HAS BEEN ENABLED USING IDS

The vehicle's remote start feature must be enabled using IDS for the remote start kit to function (see vehicle specific installation instructions). This is only required if the vehicle is not equipped with factory remote start. If the IDS enable has not occurred, follow the steps in the vehicle specific installation sheet.

Did enabling Remote Start via IDS correct the issue?

- YES – Verify proper function and continue installation.
- NO – If IDS enabling failed, GO TO B3.

B3 – VERIFY RADIO FREQUENCY RECEIVER (RFR) ANTENNA IS INSTALLED

If IDS enabling failed and the remote start option cannot be enabled, make sure a RFR antenna has been installed. The following vehicles require the RFR antenna unless factory equipped with remote start:

**Required for these Key-Start Vehicles Only – RFR REQUIRED**

- 2011-14 Edge
- 2011-14 F-150
- 2013-16 Flex
- 2011-16 Super Duty

After installing the RFR antenna, was IDS enabling of remote start successful?

- YES – Verify proper function and continue installation.
- NO – Not required or did not address the issue, GO TO B4.

B4 – VERIFY POWER AND GROUND SUPPLY

The module requires power and ground and should be verified at the module connector. Using a digital multimeter, verify the module has 12V + on the RED wire in pin 2 of the 12-way connector of the harness. Also verify the module has ground on the BLACK wire in pin 6 of the 12-way connector of the harness.
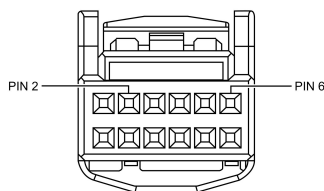
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Was power or ground missing at the module?

- YES – If missing power, GO TO B5. If missing ground, replace the wire harness.
- NO – GO TO B6.

NOTE:
If the system responds to a transmitter in any way, the CAN lines are active and communication is being performed between the module and the vehicle.

B5 – VERIFY VEHICLE FUSES

If the module is missing power, verify the vehicle's fuse is not missing or blown. Refer to the vehicle's owner's manual or vehicle service manual.

Was the fuse blown or missing?

- YES – Replace and retest.
- NO – GO TO B6.

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B6 – VISUALLY INSPECT TERMINALS

Visually inspect all terminals of every connector on the remote start product as well as the vehicle for bent or damaged pins.

Were there any bent or damaged pins that could NOT be repaired?

- YES – Replace part, or service vehicle accordingly.
- NO – GO TO PINPOINT TEST C.

PINPOINT TEST C– VEHICLE WILL NOT START

Possible Causes

- Hood is open.
- Hood switch is missing.
- Remote start menu set to disabled.
- Remote start limit has been reached.
- Key is present in ignition switch.
- Vehicle is not in park.
- Low battery voltage.
- Vehicle is in Transport Mode.
- Activation method incorrect (press and hold vs. double press).

C1 – HORN SOUNDS ONCE DURING REMOTE START – SAFETY INPUT ISSUE

The remote start system requires that a vehicle has all its safety inputs present. If one is not present, the system will sound the horn ONCE when trying to activate remote start. The required inputs are:

- The hood must be closed.
- A factory hood switch must be installed (on non-factory equipped vehicles).
- The remote start menu on the instrument cluster must NOT be set to disabled.
- There cannot be an ignition key present in the ignition switch.

Did addressing any one of these correct the problem?

- YES – Verify proper function and continue installation.
- NO – Horn is only honking once, GO TO B6.
- NO – Horn is not honking, GO TO C2.

C2 – VEHICLE IN PARK

The remote start system will only initiate if the vehicle's shifter is in the PARK position.

Was the vehicle in park?

- YES – GO TO C3.
- NO – Place the shifter in the PARK position, verify proper function and continue installation.

C3 – BATTERY VOLTAGE LOW

The vehicle will not allow a remote start system to initiate if the vehicle's battery is less than 9 volts. Connect a battery charger and retest the remote start system.

Did charging the vehicle battery correct the issue?

- YES – Verify proper function and continue installation.
- NO – GO TO C4.

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C4 – RUN TIME LIMITATIONS

On certain models, the vehicle will not allow more than TWO remote start sessions before resetting. This is done by turning the ignition key to the RUN position (all the way forward), or starting the vehicle. If the vehicle remote started twice and will not restart, try starting the vehicle with the ignition key once.

Does the vehicle now remote start?

- YES – Verify proper function and continue installation.
- NO – GO TO C5.

C5 – TRANSPORT MODE

Under certain situations, a vehicle may have been accidentally left or put into transport mode. In this state, factory remote start is not allowed. Verify the vehicle is not transport mode. Remove the vehicle from transport mode if necessary.

Does the vehicle now Remote Start?

- YES – Verify proper function and continue installation.
- NO – GO TO PINPOINT TEST B.