November 1, 2007 Lit. No. 26473, Rev. 03

26470-2 TESTER ISOLATION MODULE LIGHT SYSTEM

Operating Instructions

A CAUTION

Read this document before testing any snowplows.

A CAUTION

See your sales outlet/Web site for specific vehicle application recommendations. The Kit Selection Guide/Selection List has specific vehicle and snowplow requirements.

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SAFETY DEFINITIONS

WARNING

Indicates a potentially hazardous situation, that if not avoided, could result in death or serious personal injury.

A CAUTION

Indicates a potentially hazardous situation that, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.

NOTE: Indicates a situation or action that can lead to damage to your snowplow and vehicle or other property. Other useful information can also be described.

BEFORE YOU BEGIN

A WARNING

Lower blade when vehicle is parked. Temperature changes could change hydraulic pressure, causing the blade to drop unexpectedly or damaging hydraulic components. Failure to do this can result in serious personal injury.

WARNING

The tester shall keep bystanders clear of the blade during this test. Do not stand between the vehicle and the blade or within 8 feet of a moving blade. A moving or falling blade could cause personal injury.

A CAUTION

Before starting any on-truck test, the snowplow must be properly attached to the vehicle.

 Park the vehicle on a level surface, place shift lever in PARK or NEUTRAL and set parking brake.

FUSES

The snowplow electrical and hydraulic systems contain several automotive blade-style fuses. If a problem should occur and fuse replacement is necessary, the replacement fuse must be of the same type and amperage rating as the original. Installing a fuse with a higher rating can damage the system and could start a fire. Fuse Replacement, including fuse ratings and locations, is located in the Maintenance Section of the Owner's Manual.

PERSONAL SAFETY

- Remove ignition key and put the vehicle in park or in gear to prevent others from starting the vehicle during installation or service.
- Wear only snug-fitting clothing while working on your vehicle or snowplow.
- Do not wear jewelry or a necktie, and secure long hair.
- Wear safety goggles to protect your eyes from battery acid, gasoline, dirt and dust.
- Avoid touching hot surfaces such as the engine, radiator, hoses and exhaust pipes.
- Always have a fire extinguisher rated BC handy, for flammable liquids and electrical fires.

FIRE AND EXPLOSION

A WARNING

Gasoline is highly flammable and gasoline vapor is explosive. Never smoke while working on vehicle. Keep all open flames away from gasoline tank and lines. Wipe up any spilled gasoline immediately.

Be careful when using gasoline. Do not use gasoline to clean parts. Store only in approved containers away from sources of heat or flame.

BATTERY SAFETY

A CAUTION

Batteries normally produce explosive gases which can cause personal injury. Therefore, do not allow flames, sparks or lit tobacco to come near the battery. When charging or working near a battery, always cover your face and protect your eyes, and also provide ventilation.

Batteries contain sulfuric acid which burns skin, eyes and clothing.

Disconnect the battery before removing or replacing any electrical components.

TEST PREPARATION

A CAUTION

Read this document before testing any snowplows.

- When connecting the Isolation Module Tester to the battery, connect the red clip to the POSITIVE (+) terminal and the black clip to the NEGATIVE (-) terminal. Connect the black clip last. When disconnecting, disconnect it first.
- If an Isolation Module Tester lamp (tester lamps are white, tester LEDs are green and slightly smaller) does not come ON, the fault could be an open lamp element, an open circuit, or both.
- All vehicle lamps must be operational. An open lamp may cause false test results.
- The Isolation Module Tester is protected by a fuse inside the tester that automatically resets itself. If the fuse activates, disconnect power from the Isolation Module Tester and wait several minutes. Then resume the test.

ISOLATION MODULE ON-VEHICLE TEST

Set Up

Before connecting the Isolation Module Tester to the Isolation Module, ensure the Isolation Module Tester switches are in the following positions.

Isolation Module Tester Switch	Position
POWER	OFF
PARK LAMPS	OFF
HEADLAMPS	LOW
PLOW ATTACHED	NO
IGNITION SWITCH	OFF
HEADLAMP COMMON	NEG (-)
HIGH BEAM #2	OFF
DEDICATED DRL BULB SYSTEM	OFF

Connection

Connect the Isolation Module Tester to the Isolation Module as follows:

- Connect the Isolation Module Tester power cable to a 12V power source by attaching the red alligator clip to POSITIVE (+) and the black alligator clip to NEGATIVE (-).
- 2. Connect the Adapter Cable (PN 26472) to the Isolation Module Tester harness 2.
- 3. Connect the molded connector of the Adapter Cable to the vehicle lighting harness connector located at the grille of the vehicle. Isolation Module Tester harnesses 1, 3 and 4 are not used for this test.

Test Procedure

- Turn the vehicle's ignition ON, but do not start engine. Verify the vehicle's lights function properly by cycling the vehicle's park, turn, hazard, high beams, low beams and DRL lamps. Then place the vehicle's headlamp switch in the "low beam" position. Turn OFF all vehicle lighting. Repair or replace any defective vehicle lamps before proceeding.
- 2. Turn the Isolation Module Tester POWER switch to the "ON" position. Only the POWER indicator should light.

ISOLATION MODULE TEST PROCEDURE - ALL MODULES

- 3. Turn ON the vehicle's parking lamps. Verify the vehicle's parking lamps are ON.
- 4. Turn ON the vehicle's headlamps. Verify the vehicle's low beams are ON.
- Place the Isolation Module Tester PLOW ATTACHED switch in the "ON" position. Verify the vehicle's low beams go OFF and the following Isolation Module Tester indicators are lit: PLOW ATTACHED, plow PARK LIGHTS, and both plow LOW BEAMs.
- Place the vehicle's headlamps in the "high beam" position. The Isolation Module Tester plow HIGH BEAM indicators should light.
- 7. Turn ON the vehicle's left turn signal. Verify the vehicle's left turn signal is functioning properly and the Isolation Module Tester left TURN SIGNAL indicator is lit. Turn OFF vehicle's left turn signal.
- Turn ON the vehicle's right turn signal. Verify the vehicle's right turn signal is functioning properly and the Isolation Module Tester right TURN SIGNAL indicator is lit. Turn OFF vehicle's right turn signal.
- Activate the vehicle's four-way flashers. Both the vehicle's turn signal lamps and the Isolation Module Tester TURN SIGNAL indicators should be flashing. Turn OFF the vehicle's four-way flashers.
- 10. Place the Isolation Module Tester PLOW ATTACHED switch in the "OFF" position. The Isolation Module Tester HIGH BEAM, PARK LIGHTS and PLOW ATTACHED indicators should go OFF and the vehicle's high beams should be ON.
- 11. Place the vehicle in the DRL mode. Verify the vehicle's DRLs are functioning properly.

NOTE: Due to the many DRL systems available, it is the responsibility of the installer to fully understand the operation of the system being tested.

12. Dedicated DRLs with a 26401, 27781 or 29070 Module: Place the Isolation Module Tester PLOW ATTACHED switch in the "ON" position. Depending on what module you have, the following tester indicators should light:

26401 – HIGH BEAM (Dim) 27781 – LOW BEAM (Dim) 29070 – TURN SIGNAL

Low voltage DRLs with a 26400, 26401, 27781 or 29760-1 Module: Place the Isolation Module Tester PLOW ATTACHED switch in the "ON" position. The vehicle's DRLs should transfer to the Isolation Module Tester. The Isolation Module Tester mimics the vehicle's DRLs when the PLOW ATTACHED switch is in the "ON" position.

13. Return the Isolation Module Tester PLOW ATTACHED switch to the "OFF" position. Place the Isolation Module Tester POWER switch in the "OFF" position. Turn the vehicle's ignition OFF. The vehicle portion of the test is complete. If the system passes, remove the Isolation Module Tester from the vehicle.

If the system fails the vehicle portion of the test, remove the adapter cable (PN 26472) from the Isolation Module Tester cable. Unplug the vehicle lighting harness from position 2 (4-port) or position A (3-port) of the Isolation Module. Connect the Isolation Module Tester harness 2 to position 2 (4-port) or position A (3-port) of the Isolation Module. Rerun the vehicle portion of the test from the beginning to determine if the vehicle lighting harness is functioning properly. If it is, proceed to the module test section.

ISOLATION MODULE 26400 (WHITE LABEL) OFF-VEHICLE TEST

Set-Up

Before connecting the Isolation Module Tester to the Isolation Module, ensure the Isolation Module Tester switches are in the following positions.

Isolation Module Tester Switch	Position
POWER	OFF
PARK LAMPS	OFF
HEADLAMPS	LOW
PLOW ATTACHED	NO
IGNITION SWITCH	OFF
HEADLAMP COMMON	NEG (-)
HIGH BEAM #2	OFF
DEDICATED DRL BULB SYSTEM	OFF

Connection

Connect the Isolation Module Tester to the Isolation Module as follows:

- 1. Connect Isolation Module Tester cable 1 to Isolation Module connector 1.
- 2. Connect Isolation Module Tester cable 2 to Isolation Module connector 2.
- 3. Connect Isolation Module Tester cable 3 to Isolation Module connector 3.
- 4. Connect Isolation Module Tester cable 4 to Isolation Module connector 4.
- 5. Connect the Isolation Module Tester power cable to a 12V power source by attaching the red alligator clip to POSITIVE (+) and the black alligator clip to NEGATIVE (–).

Test Vehicle Lights

 Place the Isolation Module Tester POWER switch in the "ON" position. The green POWER indicator should light.

- Place the PARK LAMP switch in the "ON" position. The left and right side tester vehicle LOW BEAM lamps should light.
- 3. Place the HEADLAMP COMMON switch in the POS (+) position and listen for the "click" of the configuration relay inside the Isolation Module Tester. The LOW BEAM indicator flickers as the relay changes state. Cycle the switch several times to verify the relay is functioning properly. Return the switch to the NEG (–) position.
- Place the HEADLAMP switch in the "HIGH" position. The tester vehicle HIGH BEAM indicators should light.
- Place the HIGH BEAM #2 switch in the "ON" position. The tester vehicle HIGH BEAM and HIGH BEAM #2 indicators should light. Release the switch and only the HIGH BEAM indicators should remain ON.

Test Snowplow Lights

- Place the PLOW ATTACHED switch in the "ON" position. The green PLOW ATTACHED indicator should light and both plow HIGH BEAM indicators and the plow PARK LIGHTS indicator should light.
- 2. Place the HEADLAMP switch in the "LOW" position. The plow LOW BEAM indicators and PARK LIGHTS should light.
- Place the IGNITION SWITCH in the "ON" position.
 The green IGNITION SWITCH and CONTROL POWER indicators should light.
- 4. Press and hold the TURN SIGNAL switch in the "LEFT" position. The plow left TURN SIGNAL indicator should light. Release the switch.
- 5. Press and hold the TURN SIGNAL switch in the "RIGHT" position. The plow right TURN SIGNAL indicator should light. Release the switch.

ISOLATION MODULE 27781 (GREEN LABEL) OFF-VEHICLE TEST

Set-Up

Before connecting the Isolation Module Tester to the Isolation Module, ensure the Isolation Module Tester switches are in the following positions.

Isolation Module Tester Switch	Position
POWER	OFF
PARK LAMPS	OFF
HEADLAMPS	LOW
PLOW ATTACHED	NO
IGNITION SWITCH	OFF
HEADLAMP COMMON	NEG (–)
HIGH BEAM #2	OFF
DEDICATED DRL BULB SYSTEM	OFF

Connection

Connect the Isolation Module to the Isolation Module Tester as follows:

- 1. Connect Isolation Module Tester cable 1 to Isolation Module connector 1.
- 2. Connect Isolation Module Tester cable 2 to Isolation Module connector 2.
- 3. Connect Isolation Module Tester cable 3 to Isolation Module connector 3.
- 4. Connect Isolation Module Tester cable 4 to Isolation Module connector 4.
- 5. Connect the Isolation Module Tester power cable to a 12V power source by attaching the red alligator clip to POSITIVE (+) and the black alligator clip to NEGATIVE (–).

Test Vehicle Lights

 Place the Isolation Module Tester POWER switch in the "ON" position. The green POWER indicator should light.

- Place the PARK LAMP switch in the "ON" position. The left and right side tester vehicle LOW BEAM indicators should light.
- Place the HEADLAMP switch in the "HIGH" position. The tester vehicle HIGH BEAM indicators should light.

Test Snowplow Lights

- Place the PLOW ATTACHED switch in the "ON" position. The green PLOW ATTACHED indicator should light and both plow HIGH BEAM indicators and the plow PARK LIGHTS indicator should light.
- Place the HEADLAMP switch in the "LOW" position. The plow LOW BEAM and PARK LIGHTS indicators should now light.
- 3. Place the IGNITION SWITCH in the "ON" position. The green IGNITION SWITCH and CONTROL POWER indicators should light.
- 4. Press and hold the TURN SIGNAL switch in the "LEFT" position. The plow left TURN SIGNAL indicator should light. Release the switch.
- 5. Press and hold the TURN SIGNAL switch in the "RIGHT" position. The plow right TURN SIGNAL lamp should light. Release the switch.
- Place the HEADLAMP switch in the "LOW" position. The plow LOW BEAM indicators should light.
- 7. Place the DEDICATED DRL BULB SYSTEM switch in the "ON" position. The plow LOW BEAM indicators should dim.
- Return the DEDICATED DRL BULB SYSTEM switch to the "OFF" position. The plow LOW BEAM indicators should return to their full brightness.

ISOLATION MODULE 26401 (YELLOW LABEL) OFF-VEHICLE TEST

Set-Up

Before connecting the Isolation Module Tester to the Isolation Module, ensure the Isolation Module Tester switches are in the following positions.

Isolation Module Tester Switch	Position
POWER	OFF
PARK LAMPS	OFF
HEADLAMPS	LOW
PLOW ATTACHED	NO
IGNITION SWITCH	OFF
HEADLAMP COMMON	POS (+)
HIGH BEAM #2	OFF
DEDICATED DRL BULB SYSTEM	OFF

Connection

Connect the Isolation Module Tester to module as follows:

- 1. Connect Isolation Module Tester cable 1 to Isolation Module connector 1.
- 2. Connect Isolation Module Tester cable 2 to Isolation Module connector 2.
- 3. Connect Isolation Module Tester cable 3 to Isolation Module connector 3.
- 4. Connect Isolation Module Tester cable 4 to Isolation Module connector 4.
- 5. Connect the Isolation Module Tester power cable to a 12V power source by attaching the red alligator clip to POSITIVE (+) and the black alligator clip to NEGATIVE (–).

Test Vehicle Lights

 Place the Isolation Module Tester POWER switch in the "ON" position. The green POWER indicator should light.

- Place the PARK LAMP switch in the "ON" position. The left and right side tester vehicle LOW BEAM indicators should light.
- 3. Place the HEADLAMP switch in the "HIGH" position. The tester vehicle HIGH BEAM indicators should light.

Test Snowplow Lights

- Place the PLOW ATTACHED switch in the "ON" position. The green PLOW ATTACHED indicator should light and both plow HIGH BEAM indicators and the plow PARK LIGHTS indicator should light.
- Place the HEADLAMP switch in the "LOW" position. The plow LOW BEAM and PARK LIGHTS indicators should now light.
- 3. Place the IGNITION SWITCH in the "ON" position. The green IGNITION SWITCH and CONTROL POWER indicators should light.
- 4. Press and hold the TURN SIGNAL switch in the "LEFT" position. The plow left TURN SIGNAL indicator should light. Release the switch.
- 5. Press and hold the TURN SIGNAL switch in the "RIGHT" position. The plow right TURN SIGNAL lamp should light. Release the switch.
- Place the HEADLAMP switch in the "HIGH" position. The plow HIGH BEAM indicators should light.
- 7. Place the DEDICATED DRL BULB SYSTEM switch in the "ON" position. The plow HIGH BEAM indicators should dim.
- Return the DEDICATED DRL BULB SYSTEM switch to the "OFF" position. The plow HIGH BEAM indicators should return to their full brightness.

ISOLATION MODULE 29060 (WHITE LABEL) OFF-VEHICLE TEST

Set-Up

Before connecting the Isolation Module Tester to the Isolation Module, ensure the Isolation Module Tester switches are in the following positions.

Isolation Module Tester Switch	Position
POWER	OFF
PARK LAMPS	OFF
HEADLAMPS	LOW
PLOW ATTACHED	NO
IGNITION SWITCH	OFF
HEADLAMP COMMON	NEG (–)
HIGH BEAM #2	OFF
DEDICATED DRL BULB SYSTEM	OFF

Connection – Requires Adapter 29294-1

Connect the Isolation Module Tester to the 29294-1 adapter and module as follows:

- 1. Connect Isolation Module Tester cable 1 to adapter connector 1.
- Connect Isolation Module Tester cable 2 to
 Isolation Module connector A
- 3. Connect Isolation Module Tester cable 3 to adapter connector 3.
- 4. Connect adapter cable connector B to Isolation Module connector B.
- 5. Connect Isolation Module Tester cable 4 to adapter connector 4.
- 6. Connect adapter cable connector C to Isolation Module connector C.
- Connect the Isolation Module Tester power cable to a 12V power source by attaching the red alligator clip to POSITIVE (+) and the black alligator clip to NEGATIVE (-).

Test Vehicle Lights

- Place the Isolation Module Tester POWER switch in the "ON" position. The green POWER indicator should light.
- Place the PARK LAMP switch in the "ON" position.
 The left and right side tester vehicle LOW BEAM lamps should light.
- 3. Place the HEADLAMP switch in the "HIGH" position. The tester vehicle HIGH BEAM indicators should light.

Test Snowplow Lights

- Place the PLOW ATTACHED switch in the "ON" position. The green PLOW ATTACHED indicator should light and both plow HIGH BEAM indicators and the plow PARK LIGHTS indicator should light.
- Place the HEADLAMP switch in the "LOW" position. The plow LOW BEAM indicators and PARK LIGHTS should light.
- Place the IGNITION SWITCH in the "ON" position.
 The green IGNITION SWITCH and CONTROL POWER indicators should light.
- 4. Press and hold the TURN SIGNAL switch in the "LEFT" position. The plow left TURN SIGNAL indicator should light. Release the switch.
- 5. Press and hold the TURN SIGNAL switch in the "RIGHT" position. The plow right TURN SIGNAL indicator should light. Release the switch.

ISOLATION MODULE 29070 (GREEN LABEL) OFF-VEHICLE TEST

Set-Up

Before connecting the Isolation Module Tester to the Isolation Module, ensure the Isolation Module Tester switches are in the following positions.

Isolation Module Tester Switch	Position
POWER	OFF
PARK LAMPS	OFF
HEADLAMPS	LOW
PLOW ATTACHED	NO
IGNITION SWITCH	OFF
HEADLAMP COMMON	NEG (–)
HIGH BEAM #2	OFF
DEDICATED DRL BULB SYSTEM	OFF

Connection – Requires Adapter 29294-1

Connect the Isolation Module Tester to the 29294-1 adapter and module as follows:

- 1. Connect Isolation Module Tester cable 1 to adapter connector 1.
- 2. Connect Isolation Module Tester cable 2 to Isolation Module connector A.
- 3. Connect Isolation Module Tester cable 3 to adapter connector 3.
- 4. Connect adapter cable connector B to Isolation Module connector B.
- 5. Connect Isolation Module Tester cable 4 to adapter connector 4.
- 6. Connect adapter cable connector C to Isolation Module connector C.
- Connect the Isolation Module Tester power cable to a 12V power source by attaching the red alligator clip to POSITIVE (+) and the black alligator clip to NEGATIVE (-).

Test Vehicle Lights

 Place the Isolation Module Tester POWER switch in the "ON" position. The green POWER indicator should light.

- Place the PARK LAMP switch in the "ON" position. The left and right side tester vehicle LOW BEAM indicators should light.
- Place the HEADLAMP switch in the "HIGH" position. The tester vehicle HIGH BEAM indicators should light.

Test Snowplow Lights

- Place the PLOW ATTACHED switch in the "ON" position. The green PLOW ATTACHED indicator should light and both plow HIGH BEAM indicators and the plow PARK LIGHTS indicator should light.
- Place the HEADLAMP switch in the "LOW" position. The plow LOW BEAM and PARK LIGHTS indicators should now light.
- 3. Place the IGNITION SWITCH in the "ON" position. The green IGNITION SWITCH and CONTROL POWER indicators should light.
- 4. Press and hold the TURN SIGNAL switch in the "LEFT" position. The plow left TURN SIGNAL indicator should light. Release the switch.
- 5. Press and hold the TURN SIGNAL switch in the "RIGHT" position. The plow right TURN SIGNAL lamp should light. Release the switch.
- Place the PARK LAMP switch in the "OFF" position. The plow LOW BEAM and PARK LIGHTS indicators should turn OFF.
- 7. Place the DEDICATED DRL BULB SYSTEM switch in the "ON" position. The plow TURN SIGNAL indicators should light.
- 8. Press and release the TURN SIGNAL switch in the "LEFT" position. The plow left TURN SIGNAL indicator should momentarily turn OFF then back ON.
- Press and release the TURN SIGNAL switch in the "RIGHT" position. The plow right TURN SIGNAL indicator should momentarily turn OFF then back ON.
- 10. Return the DEDICATED DRL BULB SYSTEM switch to the "OFF" position.

ISOLATION MODULE 29760 AND 29760-1 (BLUE LABEL) OFF-VEHICLE TEST

Set-Up

Before connecting the Isolation Module Tester to the Isolation Module, ensure the Isolation Module Tester switches are in the following positions.

Isolation Module Tester Switch	Position
POWER	OFF
PARK LAMPS	OFF
HEADLAMPS	LOW
PLOW ATTACHED	NO
IGNITION SWITCH	OFF
HEADLAMP COMMON	NEG (–)
HIGH BEAM #2	OFF
DEDICATED DRL BULB SYSTEM	OFF

Connection – Requires Adapter 29294-1

Connect the Isolation Module Tester to the 29294-1 adapter and module as follows:

- 1. Connect Isolation Module Tester cable 1 to adapter connector 1.
- Connect Isolation Module Tester cable 2 to
 Isolation Module connector A
- 3. Connect Isolation Module Tester cable 3 to adapter connector 3.
- 4. Connect adapter cable connector B to Isolation Module connector B.
- 5. Connect Isolation Module Tester cable 4 to adapter connector 4.
- 6. Connect adapter cable connector C to Isolation Module connector C.
- Connect the Isolation Module Tester power cable to a 12V power source by attaching the red alligator clip to POSITIVE (+) and the black alligator clip to NEGATIVE (-).

Test Vehicle Lights

 Place the Isolation Module Tester POWER switch in the "ON" position. The green POWER indicator should light.

- Place the PARK LAMP switch in the "ON" position. The left and right side tester vehicle LOW BEAM lamps should light.
- Place the HEADLAMP switch in the "HIGH" position. The tester vehicle HIGH BEAM indicators should light.

Test Snowplow Lights

- Place the PLOW ATTACHED switch in the "ON" position. The green PLOW ATTACHED indicator should light and both plow HIGH BEAM indicators and the plow PARK LIGHTS indicator should light.
- Place the HEADLAMP switch in the "LOW" position. The plow LOW BEAM and PARK LIGHTS indicators should light.
- 3. Place the IGNITION SWITCH in the "ON" position. The green IGNITION SWITCH and CONTROL POWER indicators should light.
- 4. Press and hold the TURN SIGNAL switch in the "LEFT" position. The plow left TURN SIGNAL indicator should light. Release the switch.
- 5. Press and hold the TURN SIGNAL switch in the "RIGHT" position. The plow right TURN SIGNAL indicator should light. Release the switch.
- 6. 29760-1 Module only: Place the PARK LAMP and IGNITION SWITCH in the "OFF" position. The IGNITION SWITCH and CONTROL POWER indicators should turn OFF. Listen for the "click" of the configuration relay inside the Isolation Module Tester. Cycle the IGNITION SWITCH several times to verify the relay is functioning properly. Place the IGNITION SWITCH in the "OFF" position and cycle the PARK LAMP switch several times to verify the relay is functioning properly.

Place the PARK LAMP switch in the "ON" position. The plow LOW BEAM and PARK LIGHTS indicators should be ON. Listen for the "click" of the configuration relay inside the Isolation Module Tester. Cycle the PARK LAMP switch several times to verify the relay is functioning properly.

he company reserves the right under its product improvement policy to change construction or design details and furnish equipment when s Iltered without reference to illustrations or specifications used. This equipment manufacturer or the vehicle manufacturer may require or recom-
nend optional equipment for snow removal. Do not exceed vehicle ratings with a snowplow. The company offers a limited warranty for a
nowplows and accessories. See separately printed page for this important information.
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