



*Snow* **STRIKER™**



# OWNER'S MANUAL

2600-3200 V-PLOW FOR TRUCKS

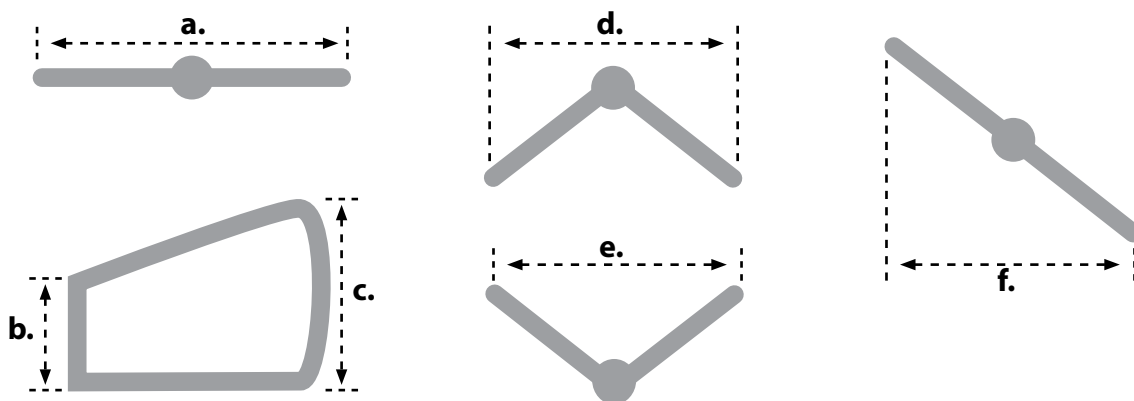
This manual replaces all editions with an earlier date.

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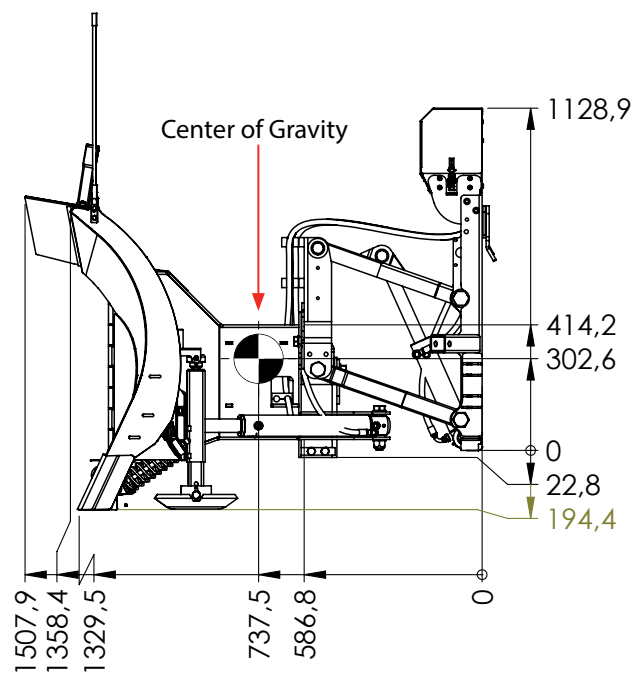
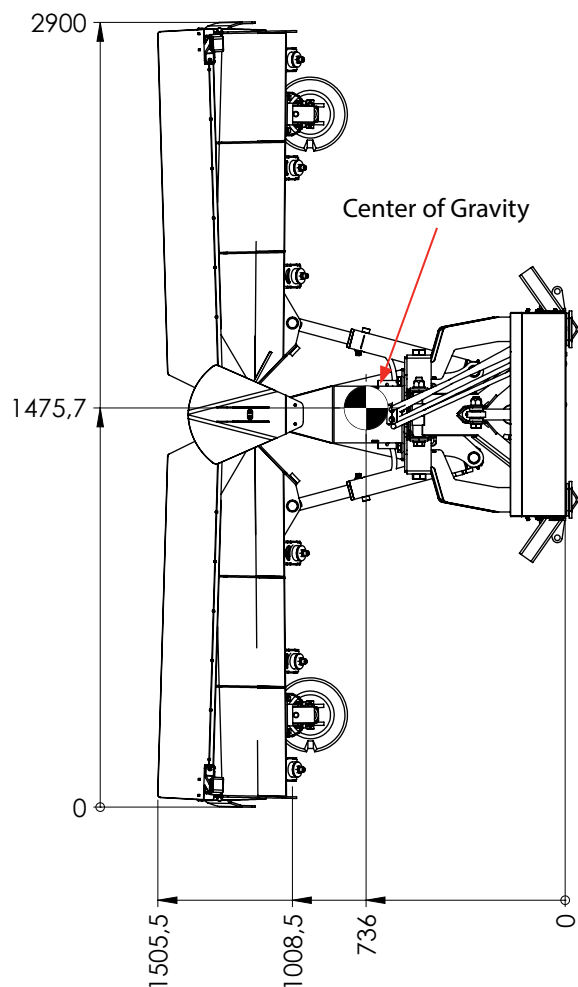


**CAUTION** - Read this manual before installing or operating the snowplow

**Technical specifications**



MODEL	2600-VML	2900-VML	3200-VML
Width (a.)	260 cm	290 cm	320 cm
Height, center (b.)	80 cm	80 cm	80 cm
Height, outer edge (c.)	100 cm	100 cm	100 cm
Width, v-position (d.)	225 cm	250 cm	275 cm
Width, scoop position (e.)	225 cm	250 cm	275 cm
Width, windrow position (f.)	225 cm	250 cm	275 cm
Weight	560 kg	580 kg	600 kg


Specifications and other details are subject to change without notice.




## Safety instructions

Incorrect installation and operation can lead to serious personal injury and/or damage your equipment and property. Note and ensure that you understand this manual and all the labels before installing, operating or making adjustments to the snowplow.

 **WARNING**  
Observe these safety precautions before, during and after operating the snowplow. You can prevent injury to persons and damage to the plow by following these precautions.

 **WARNING**  
**Before operating snowplow:**

- Read this manual before operating the snowplow.
- Make sure that your vehicle total weight is not exceeded beyond payload limits.
- Inspect hydraulic components and hoses
- Check the snowplow and its components for cracks and defects before every plowing-session
- Replace any damaged or worn parts, a snowplow in need of repairs or maintenance should not be operated.
- Make sure the equipment is securely and correctly mounted.


 **WARNING**  
**Maintenance of the snowplow:**

- Before removing or replacing any electrical components, always disconnect the battery.
- Use a piece of cardboard or wood to detect a suspected hose leak. Do NOT use your hand to locate it, hydraulic fluid can damage your skin.


**See page 10 for maintenance checklist**

**Personal safety**

- To prevent accidents, secure long hair and do not wear jewelry or necktie, only wear tight-fitting clothes while working on your plow or vehicle.
- Protect your eyes with safety goggles to avoid damage from battery acid, gasoline, dirt and dust.

 **WARNING**  
**While operating snowplow:**

- Make sure that bystanders keep a safe distance (3 m) when the blade is being operated, raised, lowered or angled. Don't stand between vehicle and blade, a moving or falling blade can cause personal injury.
- Transport speed should not exceed 70km/h
- Plowing speed should not exceed 40 km/h

 **WARNING**  
**After operating snowplow:**

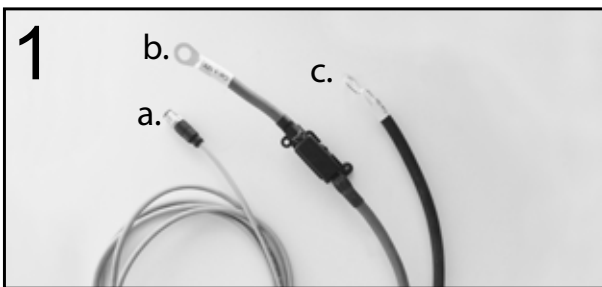
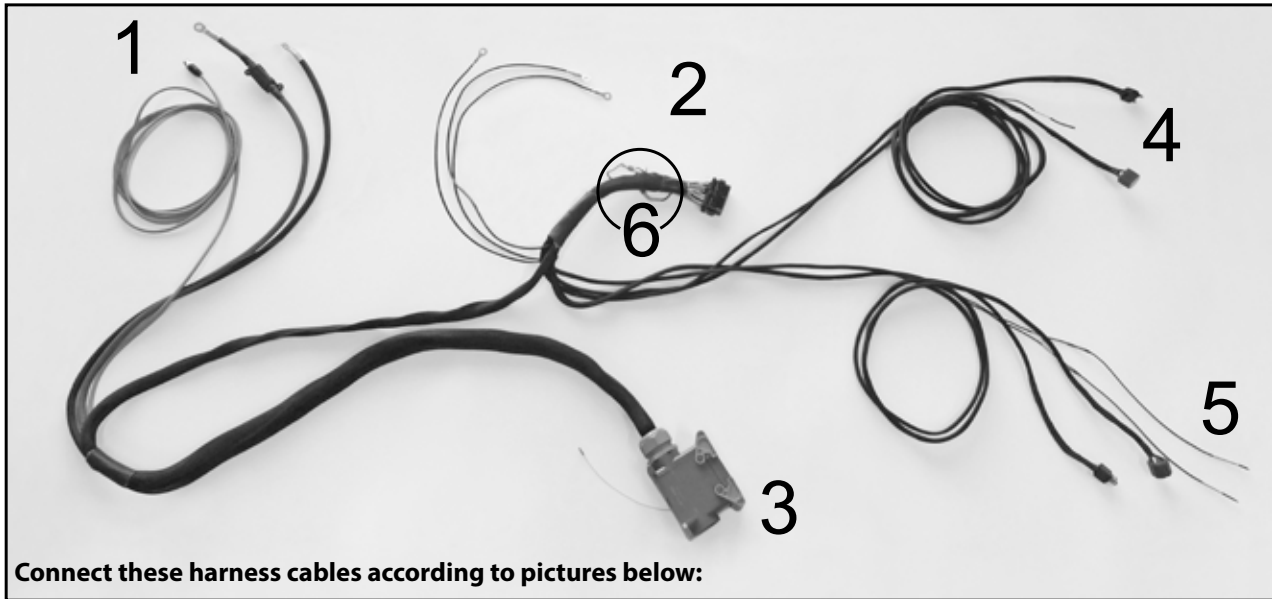
- Lower the plow when vehicle is parked. The hydraulic pressure can change if temperature changes, causing an unexpected plow drop which can lead to plow damage or personal injury.

## Warning and caution labels

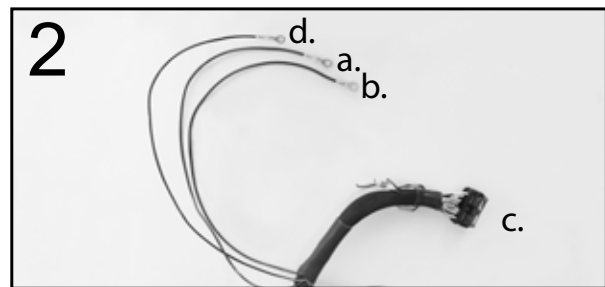
Please become familiar with these warning and caution labels on the plow.



**Vehicle harness**



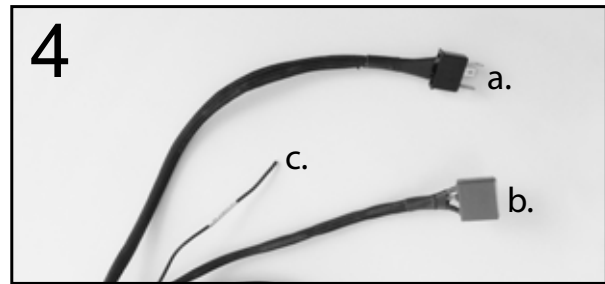
**1a.** Joystick cable    **1b.** Car + 12V (red)  
**1c.** Car ground



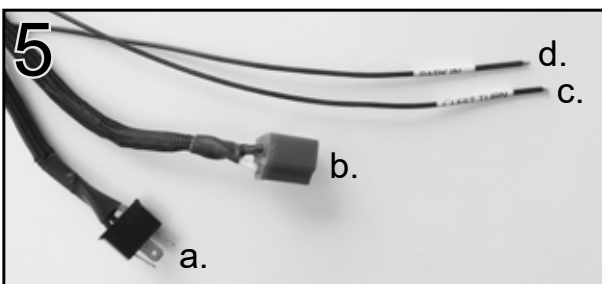
**2a.** Car +12V (VCC +12V)    **2b.** Car ground (GND)  
**2c.** Light module    **2d.** Car +12V



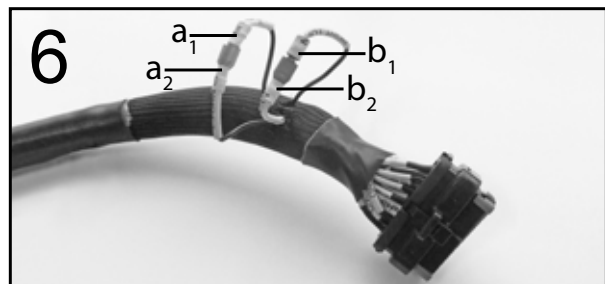
Plow connector



**4a.** Light connector (vehicle harness)  
**4b.** Vehicle light bulb    **4c.** Right turn

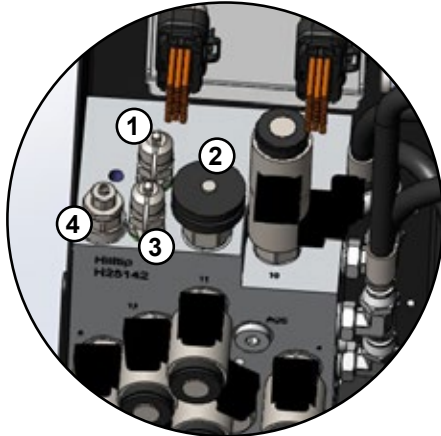


**5a.** Light connector (vehicle harness)  
**5b.** Light connector (bulb)  
**5c.** Left turn    **5d.** Park



**6a<sub>1</sub> = 6a<sub>2</sub>** = turn LEFT    **6b<sub>1</sub> = 6b<sub>2</sub>** = turn RIGHT  
 Switch these cables if the turn lights are flashing on the opposite/wrong side

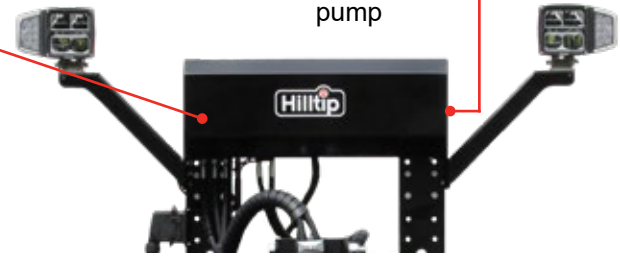
**Motor valve**



1. Main pressure (adjusted on pump)
2. Adjust drop speed
3. Down pressure gauge port
4. Down pressure adjustment



Adjust main pressure on pump



**Joystick (only on electro hydraulic model)**



\* Function when the blue button is pressed

**\*\* Down pressure function**

Push the joystick knob upwards (lower plow-position) for more than 3 seconds to apply down pressure. This function presses the snowplow down to the ground to give you a cleaner scrape when plowing.

The downpressure-function will automatically be deactivated 30 seconds after it has been applied.

**Automatic shut-down**

The joystick/IO module and snowplow will automatically shut down after being inactive for 5 minutes. To reactivate, move joystick knob or turn it off and on again.

## Change software mode in joystick

It is possible to switch between different operation mode. To change mode:

1. Switch off joystick.
2. Hold joystick knob in one of following directions and switch joystick **on** at the same time:

Joystick position	Software option	Comments
RIGHT	V-plow produced from 2017 with valve block H25142	
LEFT	Straight plow	
FORWARD	V-plow produced before 2017 with valve block H23270	
FORWARD + RIGHT	V-plow, move wings independently	Supported in version 10
BACKWARDS + BUTTON	V-plow, Hilltip button logic	Supported in version 18
RIGHT + BUTTON	V-plow, independent wing with button	Supported in version 23

3. Hold for approx. 6 seconds, until the orange DP led lights up.

**NOTE!** To select the “Hydraulic accumulator” function, you must hold the joystick for another 3 seconds after the DP light starts to light up until the DP light starts flashing rapidly. The hydraulic accumulator function is available in version 18 and onwards.

4. Release joystick.
5. Now joystick is programmed and ready to use.

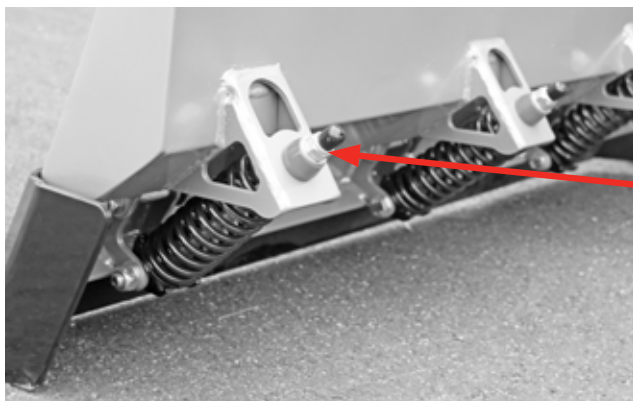
## Error codes

The on/off and error indicator LED located in the upper left corner of the joystick will show a green light when turned on and if no errors are detected. If a problem is detected, the LED will flash with a red light a number of times, pause, and then repeat.

### V-plow error codes:

Type/number of flashes	Problem
Green light	No errors detected
Constant red light	Communication problem between IO box and joystick
1 flash	Valve #10a or #10b not connected, or broken cable/coil
2 flashes	Valve #2 or #3 not connected, or broken cable/coil
3 flashes	Valve #4 or #5 not connected, or broken cable/coil
4 flashes	Valve #6 or #1 not connected, or broken cable/coil
5 flashes	Valve #7 or #8 not connected, or broken cable/coil
6 flashes	Valve #9 or Motor relay not connected, or broken cable/coil
	No error detection on valve 11 and 12

### Cutting edge adjustment



Adjust cutting edge attack angle

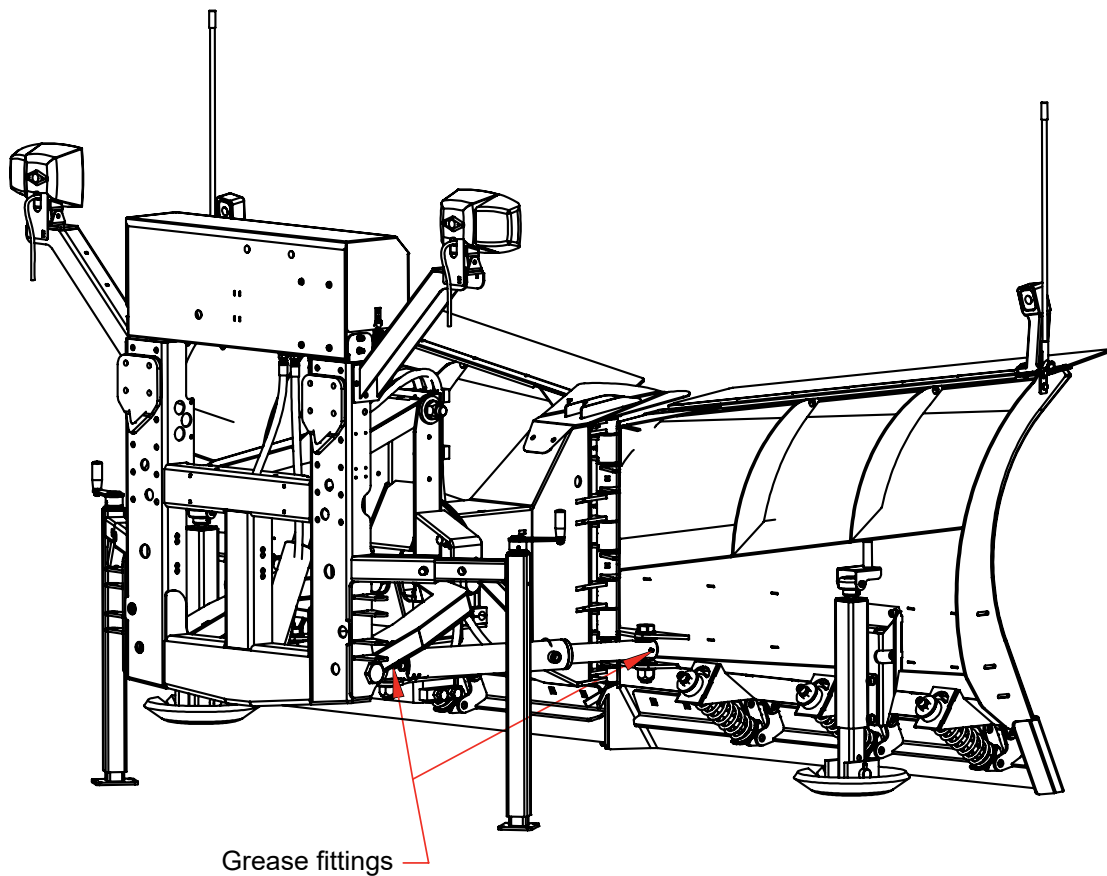
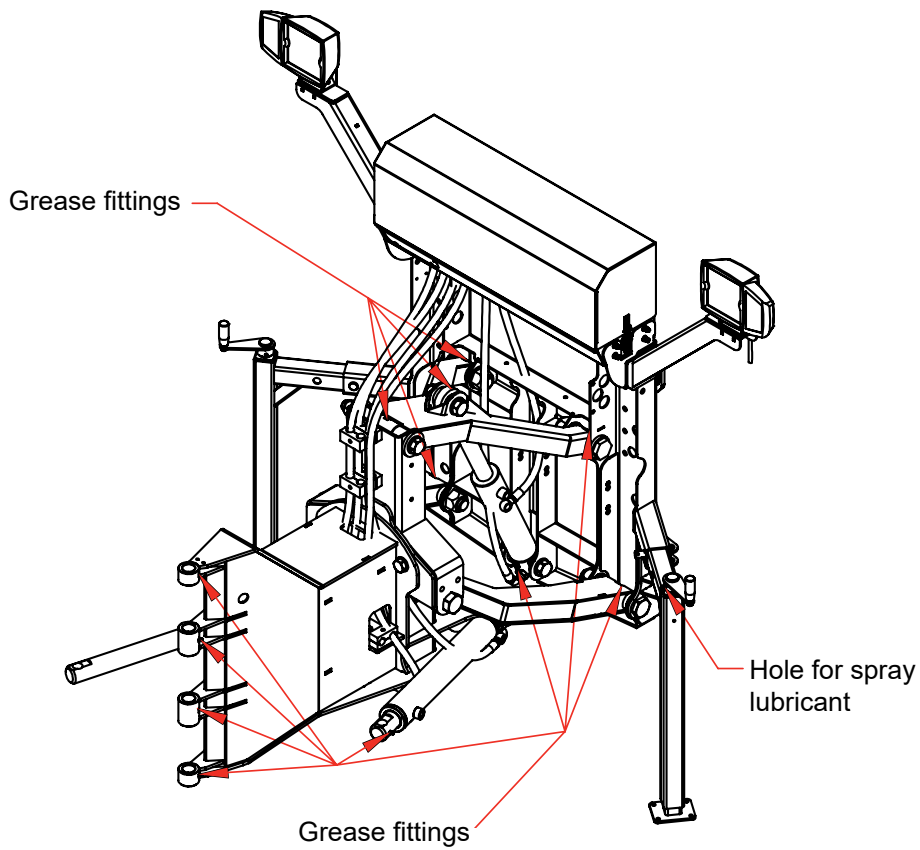
### Maintenance

Follow this checklist to keep your snowplow in good condition and to be able to maintain full warranty for possible damages.

Periodical maintenance checklist	Yearly maintenance checklist
Check that fasteners are tight enough.	Pressure wash and dry the plow carefully before putting it in storage.
Check for scratches and exposed metal, clean and apply touch-up paint.	
Clean and apply dielectric grease on all electrical plugs and connectors. Clean and install all dust caps before placing your plow in storage.	
Lubricate all pins, bushings and the A-frame latch.	
Inspect hydraulic components, hoses and cylinders, check for leaks and wear.	Lubricate all exposed cylinder rod ends with liquid white lithium grease to prevent corrosion.
Inspect rod ends for corrosion and pitting.	Change oil every 100th hour or annually. Empty the pump fluid reservoir, discard the old fluid properly. Clean pump filter and fill the reservoir with new hydraulic fluid to 2 cm from the top. By changing the fluid annually, the pump and manifold lifetime will be extended. Never mix different fluid types.
Check cutting edges for wear.	
Check the hydraulic fluid level. Fill with fluid to 2 cm from the top of the reservoir, do not exceed this level. Never mix different fluid types. Change oil every 100th hour or annually.	
Remove snow and ice build-up from the pump and A-frame.	Cover the snowplow with a tarp during storage, to protect it from sun fading and other weather conditions and circumstances.

For the snowplow hydraulic system we recommend using: **ISO VG 15 - Teboil hydraulic Arctic oil**

### Grease fittings



**Valve electrical functions**

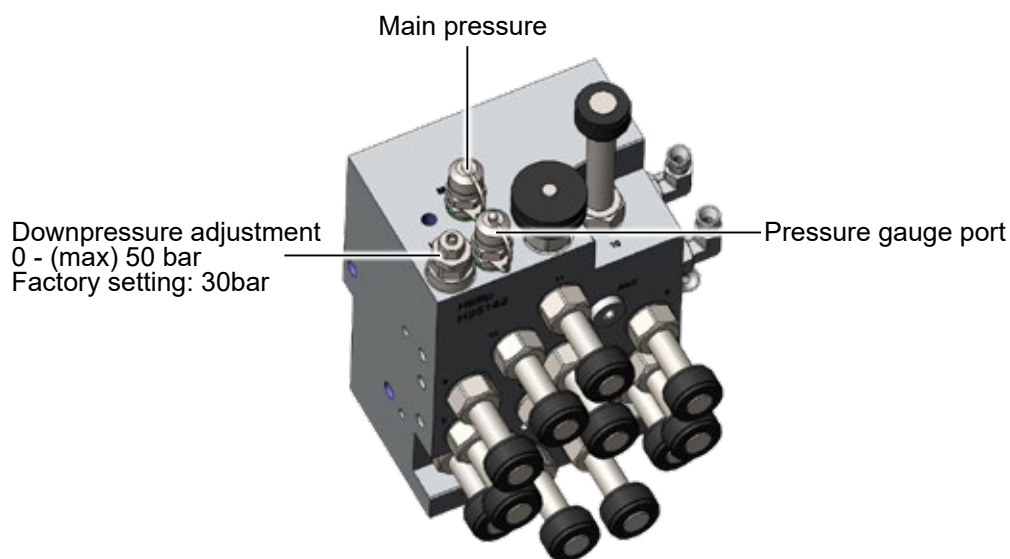
Blade movement	Angle right	Angle left	Right extend	Left extend	Right retract	Left retract	Scoop	Vee	Down pressure	Raise	Lower	Idle	Float
MOTOR									*				
#1													
#2													
#3													
#4													
#5													
#6													
#7													
#8													
#9													
#10a													
#10b									*				
#11													
#12													

\* = Goes low after 30 sec.

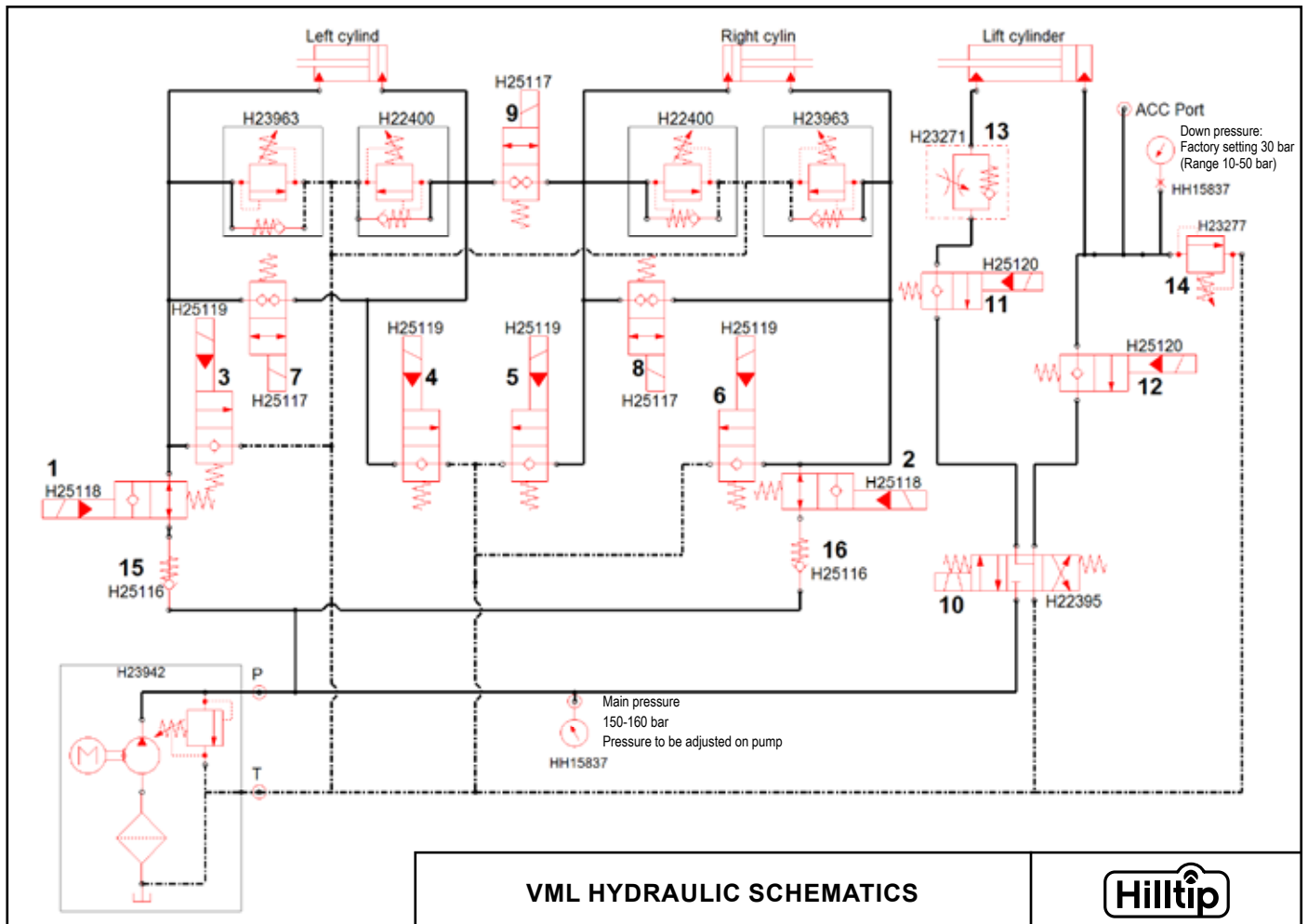
The table below shows how to activate the different functions depending on which mode you have chosen.

**V-plow with push button**

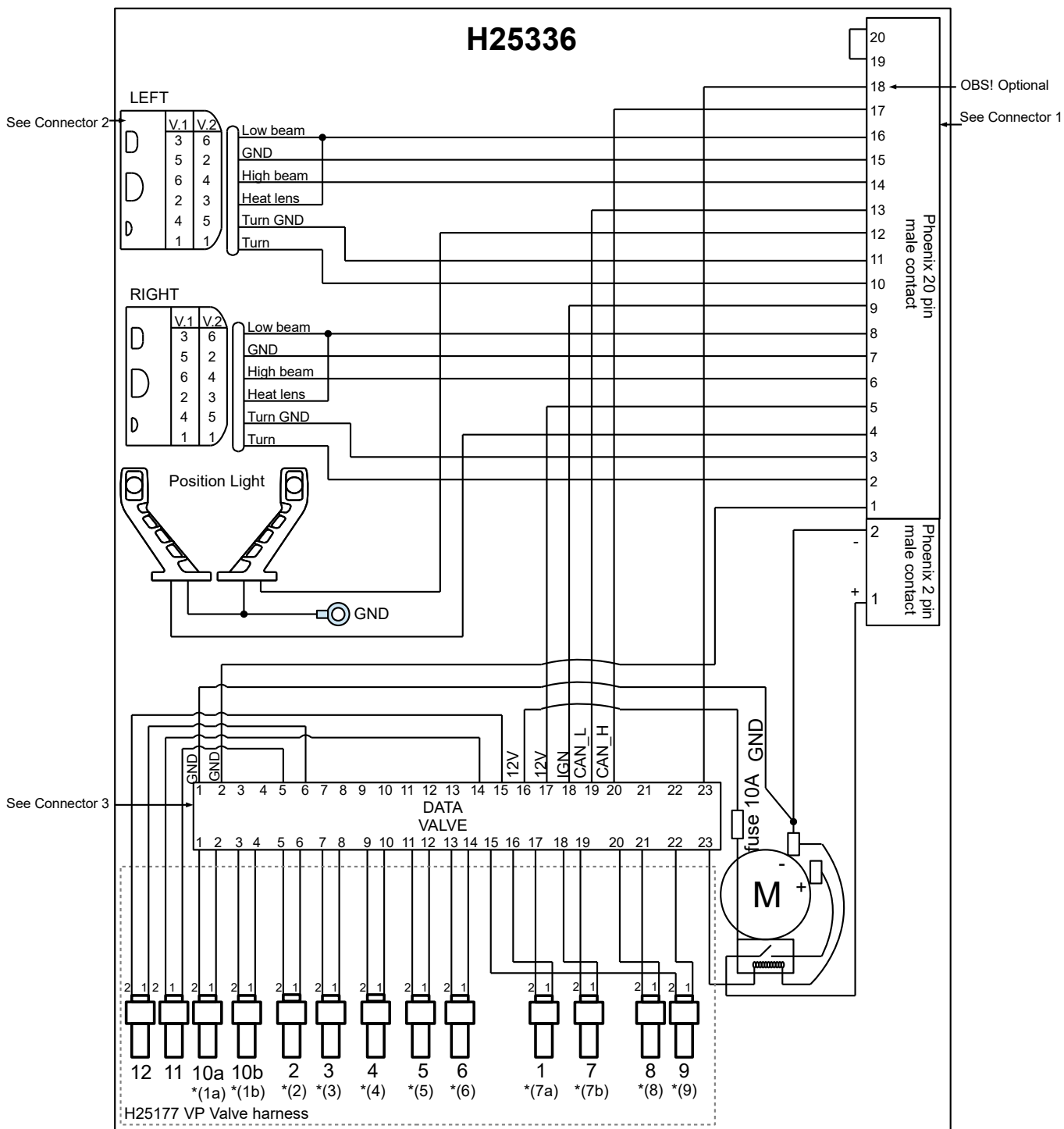
Button	Not pressed	Not pressed	Pressed	Pressed	Pressed	Pressed	-	-	Don't care	Not pressed	Not pressed	Don't care
Joystick position	Right	Left	Right	Left	Forward	Backward	-	-	Forward	Backward	Forward	Center
Blade movement							Right retract	Left retract	Down pressure	Raise	Lower / Float	Idle



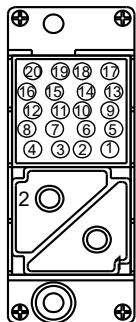
### Hydraulic schematics



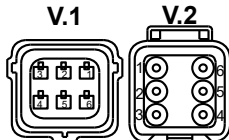
# Electrical schematics with lights - plow side



**Connector 1:**  
Phoenix 20-pin plow side connector



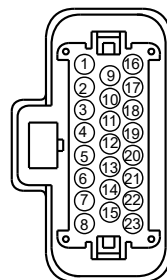
**Connector 2:**  
Plow light connector



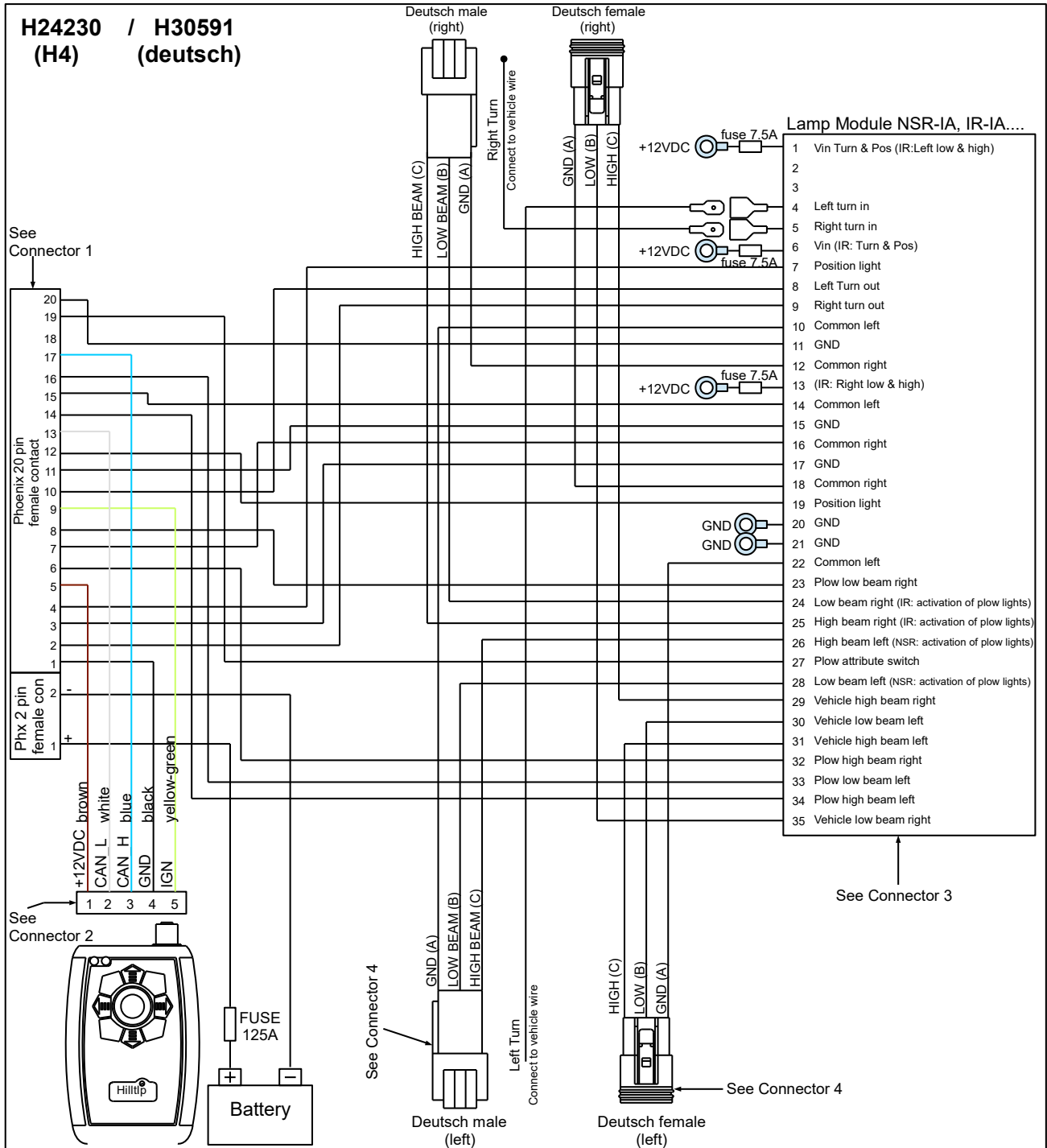
**V.1 V.2**

1	1	Turn
5	2	GND
2	3	Heat lens
6	4	High beam
4	5	GND (turn)
3	6	Low beam

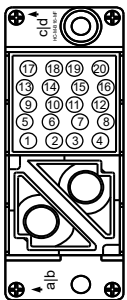
**Connector 3:**  
23-pin connector



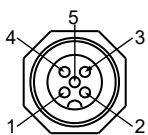
# Electrical schematics with lights - vehicle side



**Connector 1:**  
Phoenix 20-pin vehicle side connector

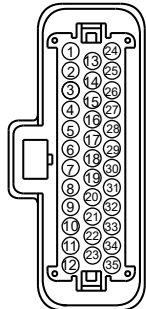


**Connector 2:**  
Connector to joystick (male)



1. +12VDC
2. CAN\_L
3. CAN\_H
4. GND
5. Activation

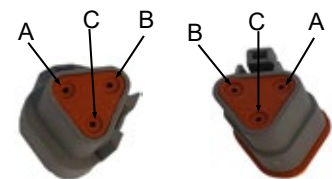
**Connector 3:**  
35-pin main connector



**Connector 4:**  
H4 connector or Deutsch connector



1. GND
2. Low beam
3. High beam

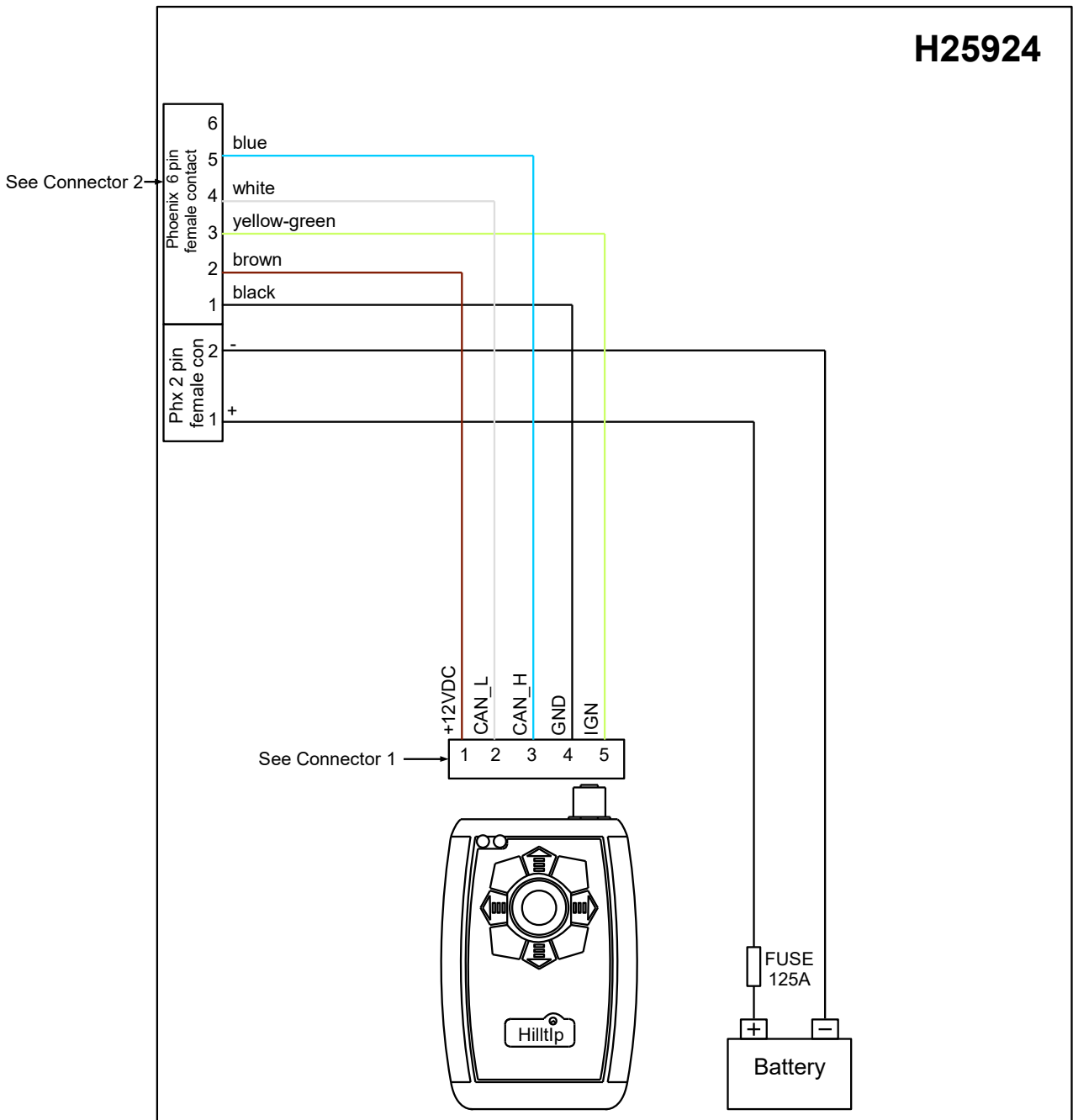


- A. GND
- B. Low beam
- C. High beam

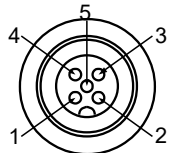


# Electrical schematics - vehicle side

**H25924**

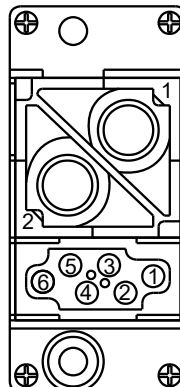


**Connector 1:**  
Connector to joystick (male)



- 1. +12VDC
- 2. CAN\_L
- 3. CAN\_H
- 4. GND
- 5. Activation

**Connector 2:**  
Phoenix 6-pin vehicle side connector



## Warranty information

*This warranty replaces all previous warranties*

### Warranty

Thank you for your interest in the products and services of Oy Hilltip Ab. This Limited Warranty applies to SnowStriker™ snowplows and other products and parts (from now on referred to as the "Product" ) purchased from Hilltip or an authorized dealer.

### What does this limited warranty cover?

This Limited Warranty covers any defects in material or workmanship under normal use during the Warranty Period.

During the Warranty Period, Hilltip, or an authorized dealer will repair or replace, at no charge, products or parts of a product that proves defective because of improper material or workmanship, under normal use and maintenance.

### How long does the coverage last?

The Warranty Period for the product purchased from Hilltip, or an authorized dealer is two (2) years from the date of purchase. The warranty period for a replacement part is one (1) year from the date of replacement or repair.

### How to obtain warranty on your product?

Make sure your dealer has registered your product. In order to obtain service under this warranty the product must be registered with the end user's contact details (name, address, e-mail address and phone number).

### What does this limited warranty not cover?

- Improperly installed parts.
- Damage caused by usage that is not in accordance with product instructions.
- Modification of the product, and/or the vehicle, is entirely at the purchaser's risk.
- This warranty does not include compensation for the drive to the service spot.
- Any damage in transit will be the responsibility of the carrier or at the risk of the purchaser.
- Hilltip will not provide replacement equipment or cover rental costs while your equipment is out of service.

This Limited Warranty does not cover any problem that is caused by:

- Misuse, neglect, accident, improper installation, maintenance or storage, or repair or alternation by anyone except Hilltip or an authorized dealer.

### What do you have to do?

To obtain warranty service, you must first contact us or your authorized dealer. The purchaser must notify Hilltip or an authorized dealer within ten (10) days after any defect in the product becomes known during the warranty period.

### What will we do to correct problems?

Hilltip, or an authorized dealer will repair or replace the part at no charge using either new or refurbished replacement parts.



## DECLARATION OF CONFORMITY

Manufacturer's & Assambler's Name: **Oy Hilltip Ab**

Manufacturer's & Assambler's Address: **Pukkisaarentie 6, FIN-68600 Pietarsaari, Finland**

Equipment Description: Hilltip Snowplow Applications

Equipment Model Designation: Hilltip SnowStriker 2600, 2900 and 3200 VML

Equipment applications: Trucks

The equipments specified above are manufactured, where applicable, in conformity with provisions of the normative document according to the following directives and standards, in addition to relevant Road Traffic Regulations in European countries:

- 2006/42/EC
- EN 15432-1
- 2009/433/EG

I, the undersigned, hereby declare that the equipments specified above, that have been assambled by Oy Hilltip Ab, conforms to the above directives and standards

Pietarsaari 3 April 2023

Signature:

Printed Name: Tom Mäenpää

Title: CEO

---

Installer's Name:

Installer's Address:

Type:

Serial number:

Year of installation:

I, the undersigned, hereby declare that the equipment installation to the vehicle specified above conforms to the directive 2006/42/EC and relevant Road Traffic Regulations.

DATE:

Signature:

Printed:

Title:



**Oy Hilltip Ab**  
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Finland

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