

Field of expertise : *SALT SPREADERS*



Starting from our experience ...



What is a salt spreader?

A salt spreader is a machine that helps to melt ice and snow, and is usually used by municipal road departments to keep city streets clear. If snowfall is light, less than a few inches, usually nothing needs to be done; drivers simply need to proceed with caution. However, for continuing or heavier snowfall, a bit of salt spread on the street can dramatically improve driving conditions. You can find salt spreaders in 300-pound capacities, 600-pound payloads, and models that can carry and spread 750 pounds of salt at a time. You can find walk-behind models, 'hopper' styles, hitch mounts, and other types of salt (and sand) spreaders.

The salt is generally spread across the roadway by an impeller, attached by a hydraulic drive system to a small onboard engine.



Where are Tecnord Parts?



Hydraulic manifold



In cabin Electronic Control Unit



Pavement temp. Sensor



Spinner position Sensor

Battery Harness



Complete Wiring



Speed sensors for hydraulic motor

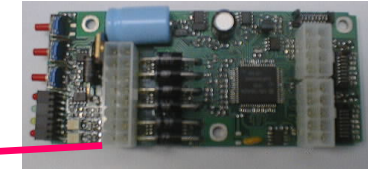


End of material sensor



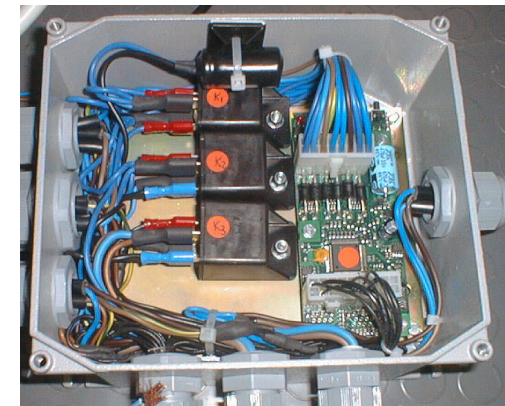
Basic digital version

Non tachimetric salt spreader
Adjustable by means of led and push-buttons
Software and case are customizable
Easy to install thank to the magnet on the rear



Custom digital version

Custom design
Non tachimetric salt spreader
Adjustable by means of led and push-buttons
With motor and light control



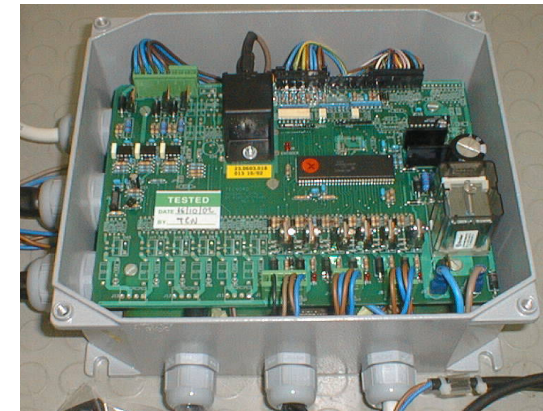
Digital tachimetric type

Tachimetric salt spreader
Self-setting according to the speed of the truck
Adjustable by means of menu
With motor and light control

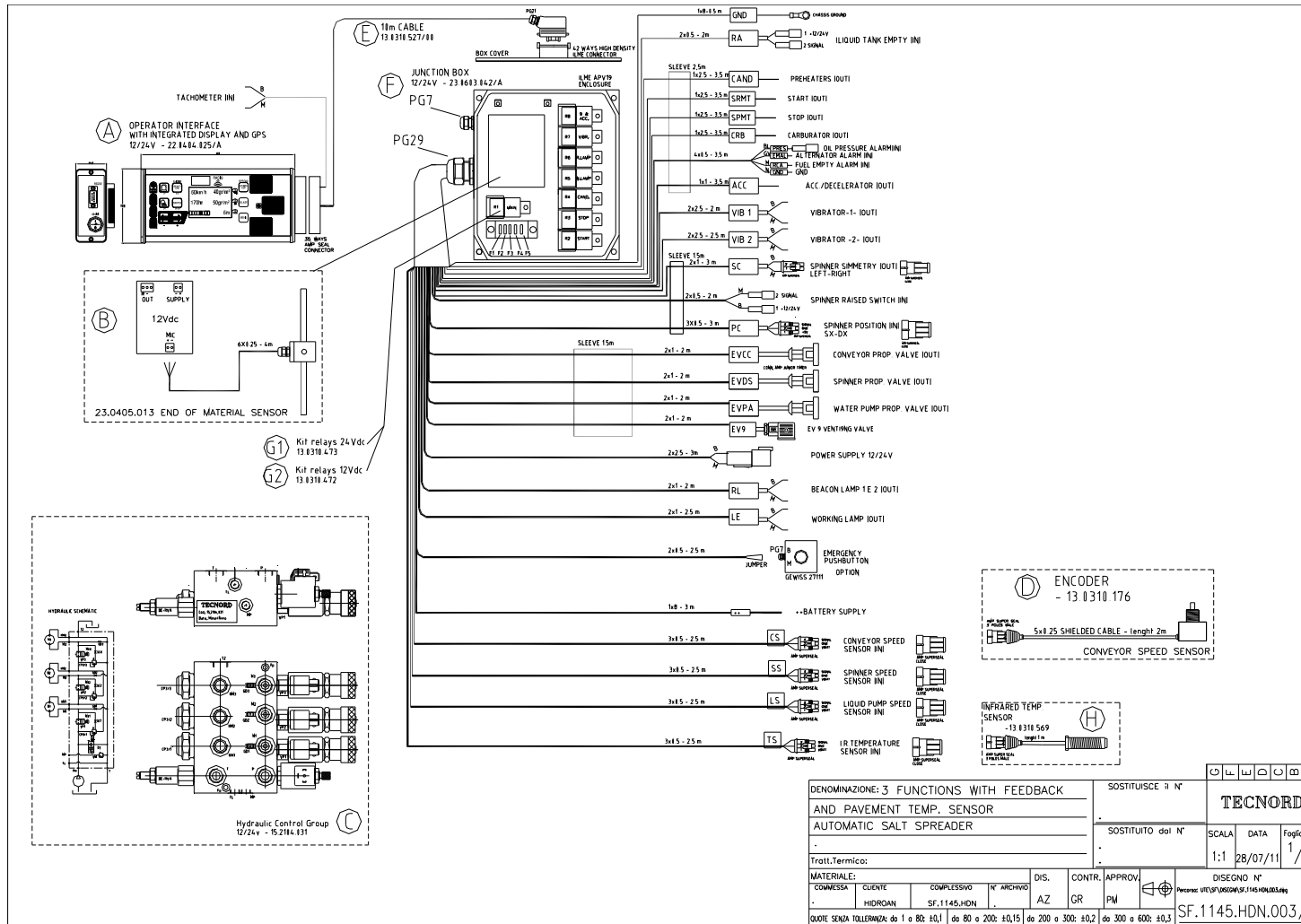


Digital non tachimetric type

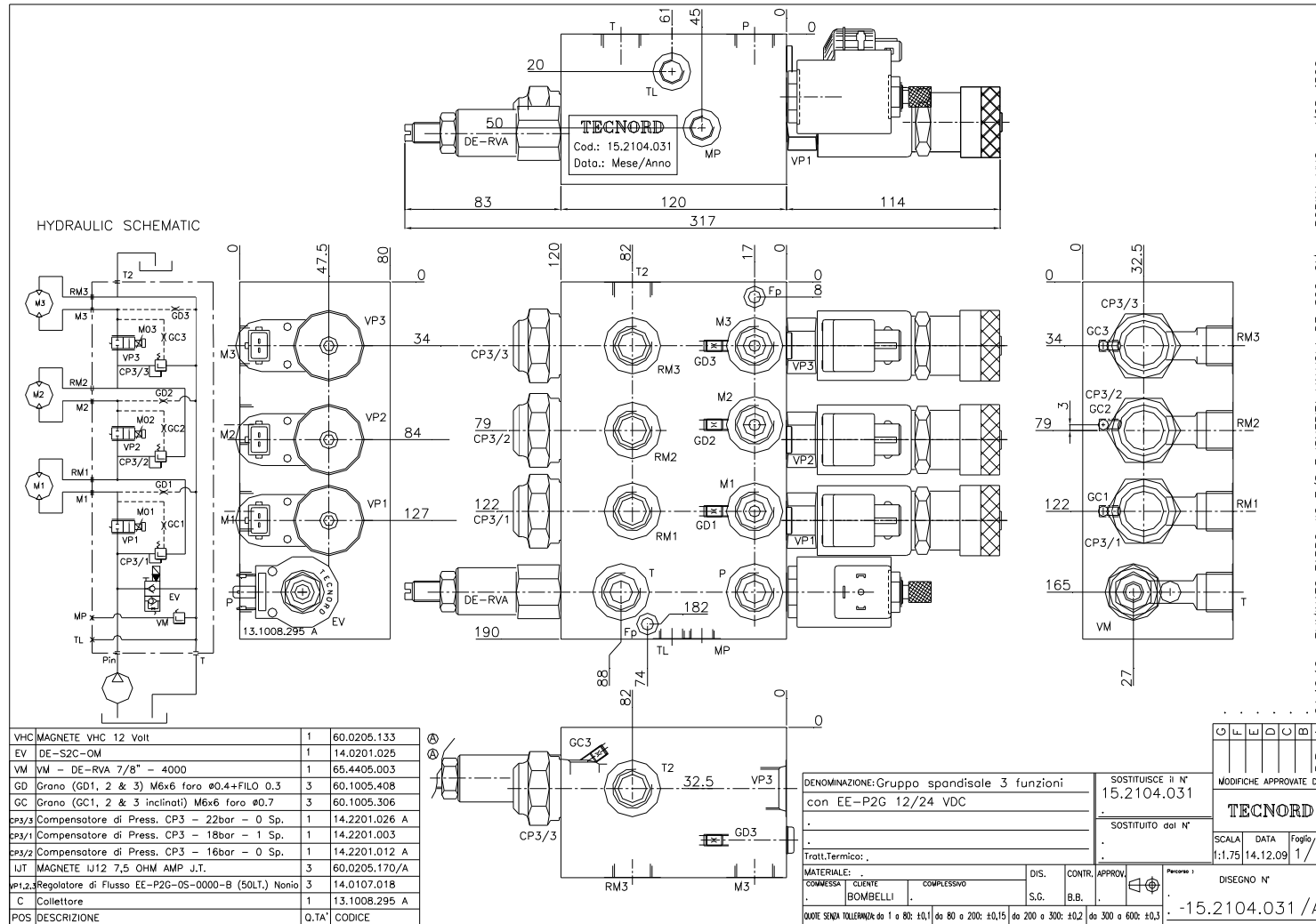
Non tachimetric salt spreader
Adjustable by means of trimmers
With motor and light control
With control of directional spreader



Typical Application: Salt spreader 3F with feedback and engine control (electronics)



Typical Application: Salt spreader 3F with feedback and engine control (hydraulics)



Tecnord systems for Saltspreaders are built with:

IN CABIN ELECTRONIC CONTROL UNIT (for 3 functions systems with feedback)

- ✓ GPS module with integrated antenna
- ✓ Self-setting according to the speed of the vehicle by means of tachimeter or GPS signal
- ✓ Adjustable by means of menu on a graphic backlighted display
- ✓ 9 backlighted pushbuttons and 4 leds
- ✓ With motor and light control
- ✓ 12 inputs and 12 outputs
- ✓ CANbus interface
- ✓ Radio connection
- ✓ Data logger with Real Time Clock and Calendar
- ✓ RS232 serial line connection for PC data download
- ✓ IP67 environmental protection
- ✓ 8 ÷ 30 Vdc Power Supply
- ✓ Bidirectional Radio connection



HYDRAULIC MANIFOLD

- ❖ 3 Open-loop proportional sections for following functions
 - ✓ Conveyor
 - ✓ Spinner
 - ✓ Water pump
- ❖ Electrical Venting valve N.O.



Tecnord systems for Saltspreaders are built with:

MAIN WIRING HARNESS

- ✓ Optimized for all Tecnord parts
- ✓ Only on sealed connector for the ECU
- ✓ From the relay box, all other connections go to:
 - ✓ ECU
 - ✓ Power Supply
 - ✓ Proportional and venting valves
 - ✓ Sensors
 - ✓ Encoders
 - ✓ Thermal engine sensors



BATTERY HARNESS

Harness dedicated to the power supply connection from the battery of a truck (mounts a 160A connector).



Tecnord systems for Saltspreaders are built with:

END OF MATERIAL SENSOR

Electronic device optimized to detect the end of the material (salt or sand) going out from the spinner.



PAVEMENT TEMPERATURE SENSOR

Infrared temperature sensor inform the ECU about the pavement temperature.

Analog output voltage spans from -40 to 40 °C.
Temperature range adjustable via PC.



Tecnord systems for Saltspreaders are built with:

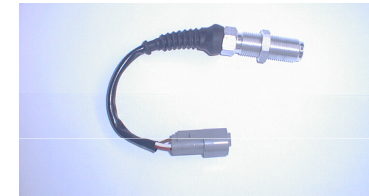
SPEED SENSORS FOR HYDRAULIC MOTORS

Devices used for the feedback to the ECU of each of the 3 proportional functions: conveyor, spinner and water-pump.



Encoder
type

Gear tooth
type



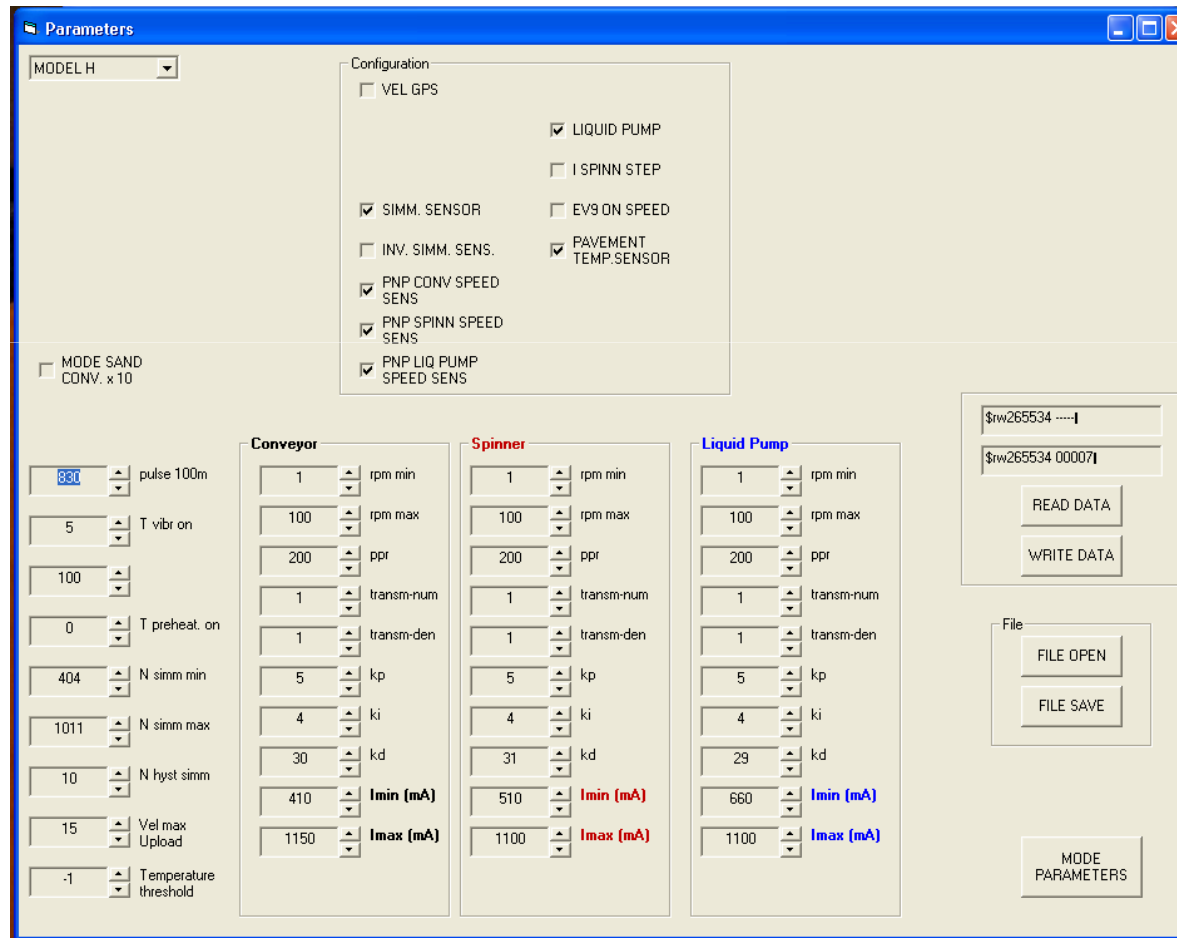
SPINNER POSITION SENSOR

Hall effect based device that is used to check the presence or not of the spinner in it's working position.



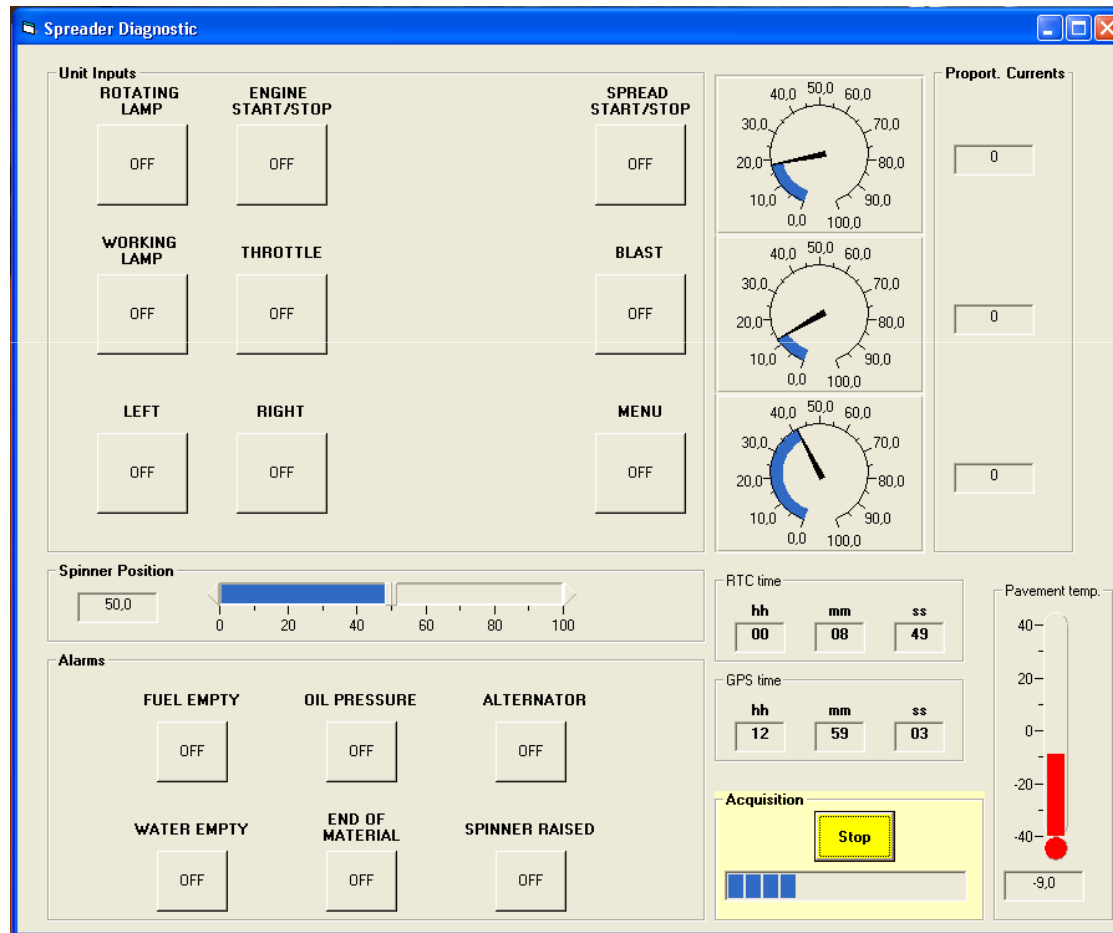
Configuration : Parameters Adjustment

Each function can be individually adjusted via standard PC, through RS232 port.
TECNORD provides the appropriate PC Setting Tool.



Diagnostics

A specific Diagnostic Window allows to detect the status of the inputs connected to the Electronic Control Unit.

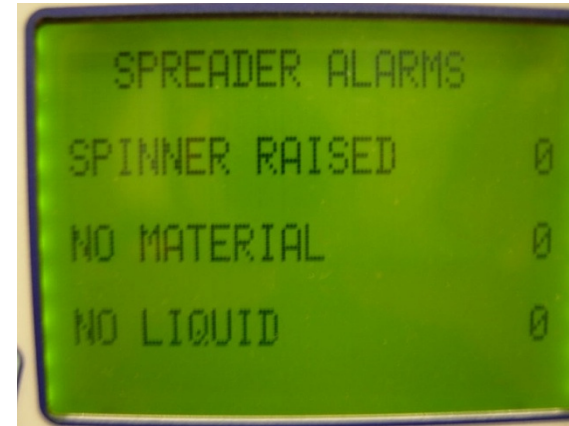


Display windows

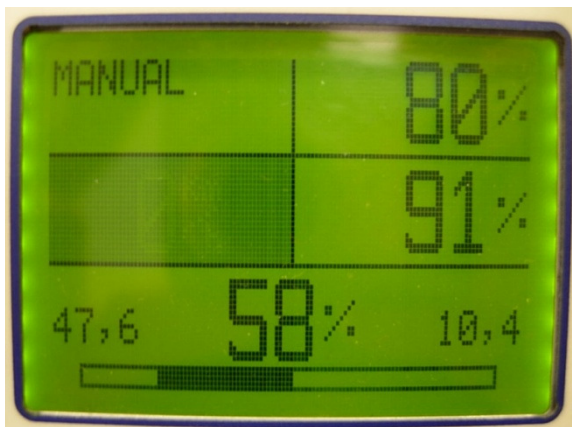
Working window



Diagnostic window



Manual mode window



Upload window

