



## Sooner or later, *a farmer pays*

Equipment manufacturers, dealers and individual farmers each have their own perspective on farm equipment chipping. When a piece of chipped equipment fails or needs repair, however, a farmer ultimately pays the bill.

### Costly repair bills.

Suppose a piece of equipment has been chipped, needs repair and has no warranty (either it's expired or been voided). The cost of the repair will be fully borne by the farmer who owns that equipment.

### Compromised trade-in values.

When a farmer trades-in chipped equipment to purchase new equipment, the next owner of that equipment – a neighbor or someone else – might not get what they paid for. That chipped equipment could need costly repairs and have a shorter operating life than expected.

### Legal liability for DEF modification.

Removing or modifying emission controls in farm equipment could expose the farmer to significant enforcement penalties.

## Three questions to ask before you get equipment chipped

As equipment dealers, we fully understand why equipment chipping looks like a winning proposition. At the end of the day, it's your equipment and modifying it or not is your decision to make.

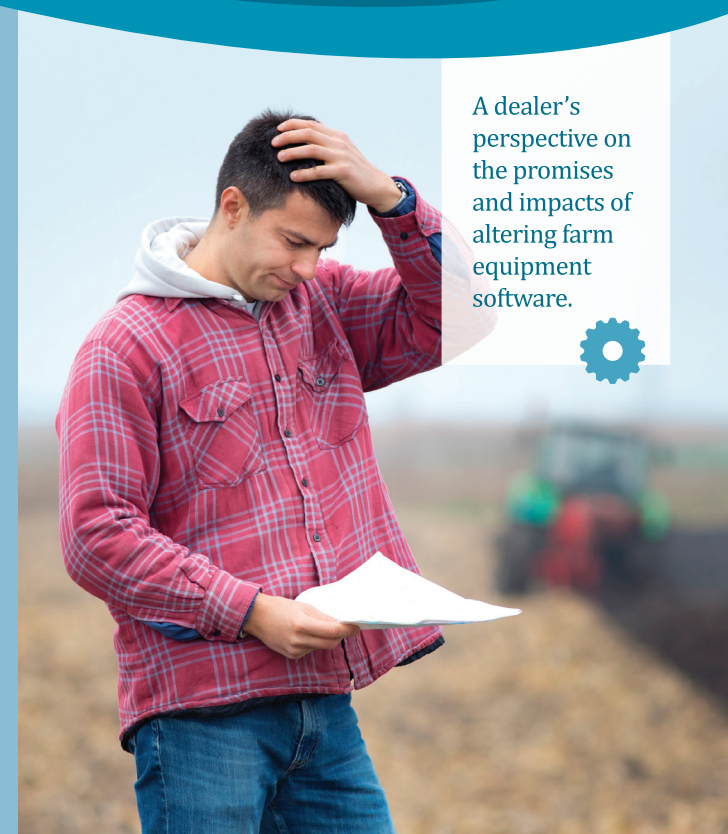
Before you agree to have equipment chipped, we urge you to ask these questions.

- 1 **Does this affect my equipment's warranty?** The fact is, equipment manufacturers will void a warranty instantly if software is altered.
- 2 **Does this affect the service I can get from my dealership?** Dealers can't service chipped equipment until the chipping is removed.
- 3 **How will this affect my engine and other parts?** Running equipment at higher horsepower or torque than it's designed for causes accelerated engine wear, potential overheating and excessive stress on drivetrain components.

Equipment dealers respect the farmer's right to use their equipment as they see fit. When you examine the promised benefits and resulting costs for farmers, we believe it's just not worth it.

*For more information, please contact your local equipment dealer.*

# When equipment is chipped, sooner or later, a *farmer* pays.



A dealer's perspective on the promises and impacts of altering farm equipment software.





## Let's talk about equipment chipping

Modifying farm equipment software to boost performance or evade emission controls has become a significant issue across North America. Sometimes called chipping, tuning or ECU remapping, this service is being offered to farmers by a variety of individuals and companies.

To a farmer, boosting performance for pennies on the dollar compared to the cost of buying higher-capacity equipment must look like an attractive proposition.

We believe that equipment chipping should not be undertaken without an understanding of its consequences. In this brochure, we'll detail the costs associated with chipping and show why, sooner or later, a *farmer* will pay those costs.

## What farmers are promised (and what they actually get)

Depending on the type of equipment being chipped, the promised benefits can include greater horsepower and torque, higher operating speed and efficiency, lower fuel consumption and less time spent on field work. Some of these vendors will also offer to modify or disconnect DEF systems that control emissions.

Let's face it: farm equipment is a significant investment and every hour in the field comes at a high cost too. If you could get the job done with your current equipment and in less time, and possibly delay buying for another year, why wouldn't you?

This is why. Despite the appeal of chipping, it brings a number of consequences that the company selling these services might not tell you about.



### **Loss of warranty.**

Farm equipment manufacturers will void a warranty immediately if the equipment's operating software is altered in any way.

### **Accelerated engine wear.**

The operating ranges of farm equipment are rigorously engineered and tested by manufacturers. If equipment is run at higher horsepower, temperature or groundspeed than it was designed for, the equipment won't last as long as it should. Worse yet, an engine or drivetrain failure could occur during your busiest season. Increasing the manufacturer's specified groundspeed, while getting you from field to field quicker, could also contribute to an accident or even a fatality.

### **Loss of service.**

Equipment dealers can't service equipment that's been chipped, until the chipping is removed and the equipment reset to OEM settings.

### **Violation of emissions laws.**

Altering or removing DEF systems is illegal in Canada under the Canadian Environmental Protection Act and in the U.S. under EPA Regulations.