

# **Can Convertor Kit**

Operator's Manual

169831 Revision D

Original Instruction

### Can Convertor Kit



Published: August 2016

## **Declaration of Conformity**

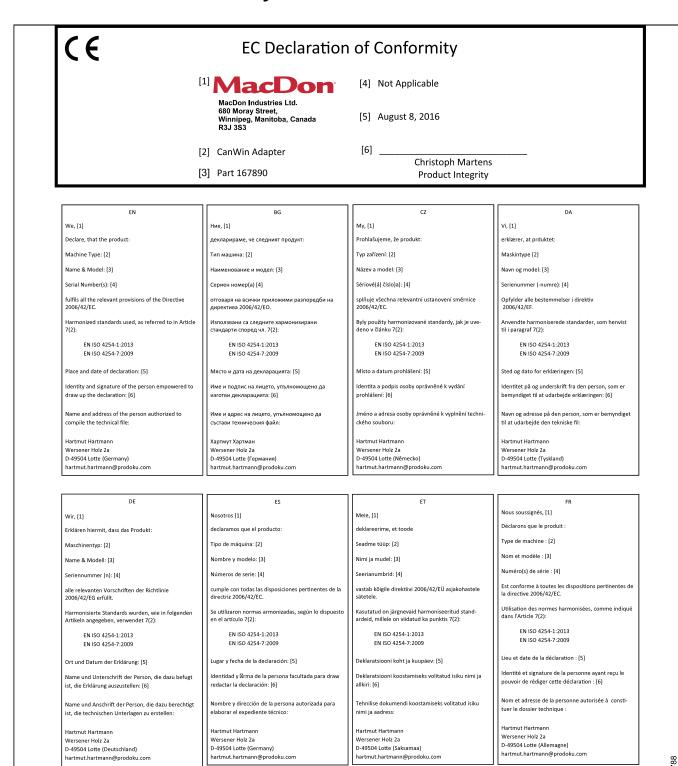


Figure 1: EC Declaration of Conformity, Page 1

The Harvesting Specialists

169831 i Revision D

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|   | EC Declaration   | of Conformity   |   |
|---|--|---|---|
| IT  | HU   | LT  | LV  |
| Noi, [1]  | Mi, [1]  | Mes, [1]  | Mēs, [1]  |
| Dichiariamo che il prodotto:  | Ezennel kijelentjük, hogy a következő termék:                                      | Pareiškiame, kad šis produktas:   | Deklarējam, ka produkts:  |
| Tipo di macchina: [2]   | Gép típusa: [2]  | Mašinos tipas: [2]  | Mašīnas tips: [2]   |
| Nome e modello: [3]   | Név és modell: [3]   | Pavadinimas ir modelis: [3]   | Nosaukums un modelis: [3]   |
| Numero(i) di serie: [4]   | Szériaszám(ok): [4]  | Serijos numeris (-iai): [4]   | Sērijas numurs(-i): [4]   |
| soddisfa tutte le disposizioni rilevanti della direttiva<br>2006/42/CE.                         | teljesíti a következő irányelv összes vonatkozó<br>előírásait: 2006/42/EK.         | atitinka taikomus reikalavimus pagal Direktyvą<br>2006/42/EB.                                   | Atbilst visām būtiskajām Direktīvas 2006/42/EK prasībām.                                    |
| Utilizzo degli standard armonizzati, come indicato nell'Articolo 7(2):                          | Az alábbi harmonizált szabványok kerültek<br>alkalmazásra a 7(2) cikkely szerint:  | Naudojami harmonizuoti standartai, kai nurodoma<br>straipsnyje 7(2):                            | Piemēroti šādi saskaņotie standarti , kā minēts<br>7. panta 2. punktā:                      |
| EN ISO 4254-1:2013<br>EN ISO 4254-7:2009  | EN ISO 4254-1:2013<br>EN ISO 4254-7:2009   | EN ISO 4254-1:2013<br>EN ISO 4254-7:2009  | EN ISO 4254-1:2013<br>EN ISO 4254-7:2009  |
| Luogo e data della dichiarazione: [5]   | A nyilatkozattétel ideje és helye: [5]   |   |   |
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| Wij, [1]  | My niżej podpisani, [1]  | Nós, [1]  | Noi, [1]  |
| Verklaren dat het product:  | Oświadczamy, że produkt:   | Declaramos, que o produto:  | Declarăm, că următorul produs:  |
| Machinetype: [2]  | Typ urządzenia: [2]  | Tipo de máquina: [2]  | Tipul maşinii: [2]  |
| Naam en model: [3]  | Nazwa i model: [3]   | Nome e Modelo: [3]  | Denumirea și modelul: [3]   |
| Serienummer(s): [4]   | Numer seryjny/numery seryjne: [4]  | Número(s) de Série: [4]   | Număr (numere) serie: [4]   |
| voldoet aan alle relevante bepalingen van de<br>Richtlijn 2006/42/EC.                           | spełnia wszystkie odpowiednie przepisy dyrektywy 2006/42/WE.                       | cumpre todas as disposições relevantes da Directiva<br>2006/42/CE.                              | corespunde tuturor dispozițiilor esențiale ale directivei 2006/42/EC.                       |
| Geharmoniseerde normen toegepast, zoals vermeld in Artikel 7(2):                                | Zastosowaliśmy następujące (zharmonizowane)<br>normy zgodnie z artykułem 7(2):     | Normas harmonizadas aplicadas, conforme referido no Artigo 7(2):                                | Au fost aplicate următoarele standarde armonizate conform articolului 7(2):                 |
| EN ISO 4254-1:2013  | EN ISO 4254-1:2013   | EN ISO 4254-1:2013  | EN ISO 4254-1:2013  |
| EN ISO 4254-7:2009  | EN ISO 4254-7:2009   | EN ISO 4254-7:2009  | EN ISO 4254-7:2009  |
|   |  |   |   |
| Plaats en datum van verklaring: [5]   | Data i miejsce oświadczenia: [5]   | Local e data da declaração: [5]   | Data și locul declarației: [5]  |
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| RS  | SE   | SI  | sk  |
| Mi, [1]   | Vi, [1]  | Mi, [1]   | My, [1]   |
| Izjavljujemo da proizvod  | Intygar att produkten:   | izjavljamo, da izdelek:   | týmto prehlasujeme, že tento výrobok:   |
| Tip ma@ne: [2]  | Maskintyp: [2]   | Vrsta stroja: [2]   | Typ zariadenia: [2]   |
| Naziv i model: [3]  | Namn och modell: [3]   | Ime in model: [3]   | Názov a model: [3]  |
| Serijski broj(evi): [4]   | Serienummer: [4]   | Serijska/-e številka/-e: [4]  | Výrobné číslo: [4]  |
| Ispunjava sve relevantne odredbe direktive<br>2006/42/EC.                                       | uppfyller alla relevanta villkor i direktivet<br>2006/42/EG.                       | ustreza vsem zadevnim določbam Direktive<br>2006/42/ES.   | spĺňa príslušné ustanovenia a základné požiadavky<br>smernice č. 2006/42/ES.                |
| Korišæeni su usklađeni standardi kao što je navedeno<br>u èlanu 7(2):                           | Harmonierade standarder används, såsom anges i<br>artikel 7(2):                    | Uporabljeni usklajeni standardi, kot je navedeno v<br>členu 7(2):                               | Použité harmonizované normy, ktoré sa uvádzajú v<br>Článku č. 7(2):                         |
| EN ISO 4254-1:2013<br>EN ISO 4254-7:2009  | EN ISO 4254-1:2013<br>EN ISO 4254-7:2009   | EN ISO 4254-1:2013<br>EN ISO 4254-7:2009  | EN ISO 4254-1:2013<br>EN ISO 4254-7:2009  |
| Datum i mesto izdavanja deklaracije: [5]  | Plats och datum för intyget: [5]   | Kraj in datum izjave: [5]   | Miesto a dátum prehlásenia: [5]   |
| ldentitet i potpis lica ovla®æenog za sastavljanje<br>deklaracije: [6]                          | Identitet och signatur för person med befogenhet att<br>upprätta intyget: [6]      | Istovetnost in podpis osebe, opolnomočene za pripravo izjave: [6]                               | Meno a podpis osoby oprávnenej vypracovať toto prehlásenie: [6]                             |
| lme i adresa osobe ovla@eene za sastavljanje teh-<br>nièke datoteke:                            | Namn och adress för person behörig att upprätta den tekniska dokumentationen:      | lme in naslov osebe, pooblaščene za pripravo<br>tehnične datoteke:                              | Meno a adresa osoby oprávnenej zostaviť technický súbor:                                    |
|   | Hartmut Hartmann   | Hartmut Hartmann  | Hartmut Hartmann  |
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Figure 2: EC Declaration of Conformity, Page 2

### Introduction

The Can Convertor kit (MD #167889) consists of an adapter module (MD #167890, not sold separately) and a 6-foot electrical cable (MD #139834). This kit is sometimes referred to as the CanWin box or the J1939 to USB diagnosite adapter.

The Can Convertor kit is a service tool which, in combination with CanWin Service Tool (the CanWin diagnostic software program installed on a laptop computer), allows you to communicate with the windrower's cab display module (CDM) and windrower control module (WCM).

The kit, together with CanWin Service Tool, allows you to:

- · Read and display data from the windrower regarding control system status
- · Activate individual windrower controls to facilitate diagnostics of the system
- Program and update the operating software of the CDM and WCM

#### NOTE:

The CanWin software package (MD #206057) required to operate the Can Convertor is not supplied with this kit, but is available via Internet download from our Dealer-only site (https://portal.macdon.com) (login required).

#### NOTE:

Keep your MacDon publications up-to-date. The most current version of this instruction can be downloaded from our Dealer-only site (https://portal.macdon.com) (login required).

## **List of Revisions**

At MacDon, we're continuously making improvements, and occasionally these improvements affect product documentation. The following list provides an account of major changes from the previous version of this document.

| Summary of Change   | Location   |
|---|--|
| Added EC Declaration of Conformity.   | Declaration of Conformity, page i                                  |
| Changed Can Convertor kit from MD #139832 to MD #167889. Changed adapter module MD #139833 to MD #167890. Changed CanWin software package MD #163836 to MD #206057. | Introduction, page iii   |
| Added imperial measurements.  | • 3.1 P1 Diagnostic Port Connection Specifications, page 7         |
|   | • 3.2 P2 USB Port Connection (Mini USB "B") Specifications, page 9 |

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## 1 Safety

## 1.1 Signal Words

Three signal words, **DANGER**, **WARNING**, and **CAUTION**, are used to alert you to hazardous situations. The appropriate signal word for each situation has been selected using the following guidelines:



#### **DANGER**

Indicates an imminently hazardous situation that, if not avoided, will result in death or serious injury.



### WARNING

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



### CAUTION

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

## 1.2 Safety Alert Symbols

This safety alert symbol indicates important safety messages in this manual.

This symbol means:

- ATTENTION!
- BECOME ALERT!
- YOUR SAFETY IS INVOLVED!

Carefully read, and follow the safety message accompanying this symbol.

### Why is safety important to you?

- · Accidents disable and kill.
- · Accidents cost.
- · Accidents can be avoided.



Figure 1.1: Read operator's manual before operating

#### 1.3 **Diagnostic Safety**

To ensure your safety, and that of everyone else around, familiarize yourself with all safety recommendations provided in the windrower and header operator's and technical manuals before attempting to diagnose problems. In addition, pay particular attention to the following warnings and cautions which are specific to using the Can Convertor.



### CAUTION

To avoid bodily injury or death from unexpected startup of machine, always stop engine and remove key from ignition before leaving operator's seat for any reason.



#### CAUTION

Before connecting the Can Convertor, park the windrower and ensure that all bystanders have cleared the area.



### CAUTION

While using the Can Convertor kit, an Operator must be seated in the operator's seat in the cab at all times.



### CAUTION

When using the remote control feature, the Operator can force any or all of the drive functions (draper, reel, knife/disc) to zero speed even with the header Engaged switch still in the ON position (that is, the header drives could appear to be OFF even though the header switch is still ON).

## 2 Operation

### 2.1 CanWin Service Tool

In order to use the Can Convertor, you must have CanWin Service Tool (the CanWin software program) installed on a laptop computer. For information about downloading and using CanWin Service Tool, see the windrower technical manual.

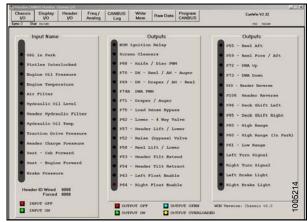


Figure 2.1: CanWin Service Tool – Chassis I/O Page

#### **Connecting Can Convertor** 2.2

In order to use the Can Convertor kit, you must connect it to the windrower and to a laptop with CanWin Service Tool installed on it.

To connect the kit, follow these steps:

- 1. One end of the Can Convertor is labelled COMPUTER USB PORT. Connect the USB port connection (A) on this end to a USB port on the laptop.
- | | J1939 TO USB | DIA GNOSTIC ADAPTER POWER  $\mathbf{A}$

Figure 2.2: Can Convertor

- 2. Plug the Can Convertor's 9-position connector into the 9-position Deutsch diagnostic connector (A) on the front of the operator's console in the windrower cab.
- 3. Activate CanWin Service Tool on the laptop.

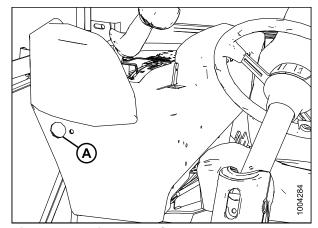


Figure 2.3: Windrower Cab

## 3 Specifications and Product Components

## 3.1 P1 Diagnostic Port Connection Specifications

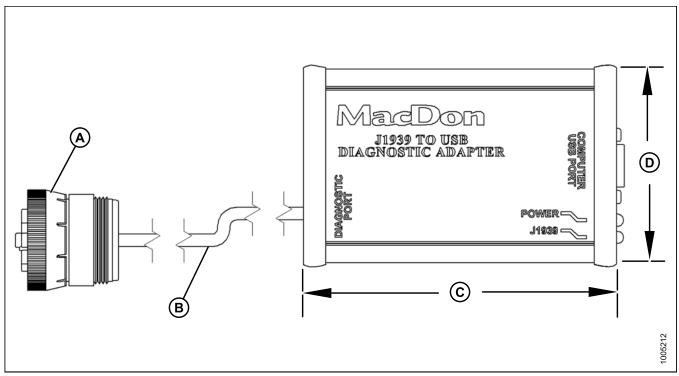


Figure 3.1: Can Convertor

A - Diagnostic Port Connection

B - Cable Length Approx. 1120 mm (44-1/16 in.)

C - 126 mm (4-15/16 in.)

D - 78 mm (3-1/16 in.)

#### **Power Requirements:**

Input Voltage: 10-18 Vdc

#### NOTE:

An internal 0.25 amp self-resetting fuse will disable the unit if the input voltage is greater than 18 Vdc for more than 2 seconds. To reset the adapter module, disconnect the diagnostic plug from the power source for 10 seconds, and then reconnect.

Current - Nominal: 30-40 mA

Load on CAN Bus pins is 1000 ohms.

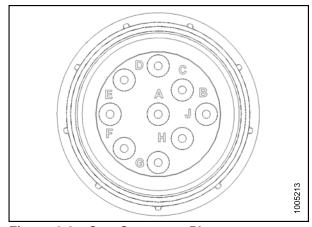


Figure 3.2: Can Convertor Plug (Deutsch #HD16-9-1939S, MD #134044)

### SPECIFICATIONS AND PRODUCT COMPONENTS

| Position Number | Function   | Description               |
|-----------------|------------|---------------------------|
| А               | Ground     | System ground             |
| В               | Power (V+) | +12 Vdc (battery)         |
| С               | CAN high   | J1939 CAN high signal     |
| D               | CAN low    | J1939 CAN low signal      |
| E               | CAN shield | J1939 CAN shield (ground) |
| F               | N/C        |                           |
| G               | N/C        |                           |
| Н               | N/C        |                           |
| J               | N/C        |                           |

## 3.2 P2 USB Port Connection (Mini USB "B") Specifications

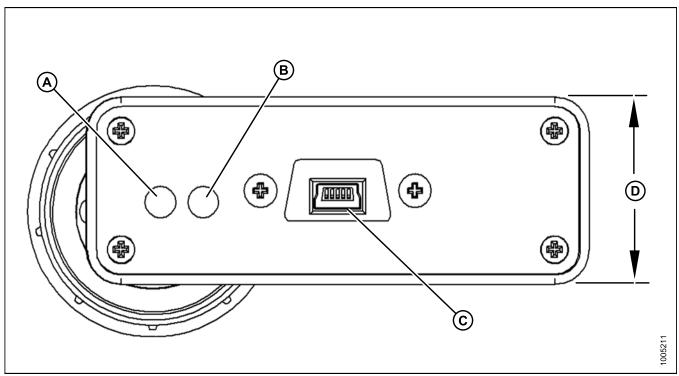


Figure 3.3: End of Can Convertor

A - J1939 Activity LED

B - Power LED

C - USB Port Connection (Computer)

D - 30 mm (1-3/16 in.)

| Position Number | Function      | Description                                     |
|-----------------|---------------|---|
| 1               | Power         | VBUS – USB Power – from the USB host or hub     |
| 2               | Bidirectional | D- = USB data signal, negative polarity         |
| 3               | Bidirectional | D+ = USB data signal, positive polarity         |
| 4               | ID            | Not connected                                   |
| 5               | Ground        | GND = USB signal ground                         |
| Shield          | Case ground   | Drain – Typically connected to the host PC case |

| Parameter | Description   | Min. | Typical | Max. | Units | Conditions  |
|-----------|---------------|------|---------|------|-------|---|
| USB_VCC   | Input voltage | 4.25 | 5.0     | 5.25 | Vdc   | Typical voltage is present when the USB cable is attached and the USB host or hub is powered. |
| Icc       | USB current   |      | 30      | 50   | mA    |   |



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