



# i4300 Installation guide for Grove Industrial Cranes



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## Contents

Introduction

Component Mounting Steps:

- 1 Console
- 2 Canbus Interface box
- 3 Junction Box
- 4 Cable Reel
- 5 Loop Kit (Cable reel)
- 6 Proximity Sensor
- 7 Pressure Sensors
- 8 Wiring



# Introduction

The installation of the RaycoWylie i4300 system should be performed by an experienced technician. The purpose of this document is to provide general guidelines by following the below steps. We suggest assembling all components first and doing all wiring last. For wiring instructions, see provided wiring diagram.

**Precaution: Before tearing down the old system, investigate the lock-out wiring. Taking pictures may be a good idea. When wiring the new system, you will need to know where the lock-out wires were to begin with.**

## Component Mounting Steps:

### 1 Console p/n 33D4300



If this system is replacing a Wylie W1258 or i3500, mount console in existing bolt holes on the dashboard using supplied bracket and hardware p/n 22KCF0034



If replacing a system other than a Raycowylie, mount console using supplied bracket with or without the flat bar to make mounting as aesthetic as possible.

### 2 Canbus Interface Box p/n 33M0109

Install either at foot level or behind the seat in the cab (see below pictures)



OR

## Precaution:



OK to install behind seat in cab



DO NOT install behind seat in cab

## 3 Junction Box p/n 33J0012



Using supplied hardware install in an area of your choice close to the 33M0109, preferably in the cab.

## 4 Cable Reel



If replacing a W1258 or i3500 cable reel, use supplied adapting bracket and hardware to fit in existing bolt holes on the boom. If replacing another manufacturer's cable reel, do not use the adapting bracket, mount cable reel directly on boom using welding lugs (not supplied). The cable reel has to turn clock-wise, which means that when you install it on the left side of the boom, the cable exits the reel from the bottom. Pass the spool cable through the existing cable guides on the boom and attach with supplied loop kit.

Caution: Do not let the cable loose and free wheel back into the reel. Rapid rotation of the reel can damage the length sensor.

**\*\*Do not tension. This cable reel has been pre-tensioned at factory.**

Your new cable reel contains a length and angle sensor which need calibrating. Calibration should be performed by an experienced technician after complete system assembly.



Connect the Canbus cable to the cable reel

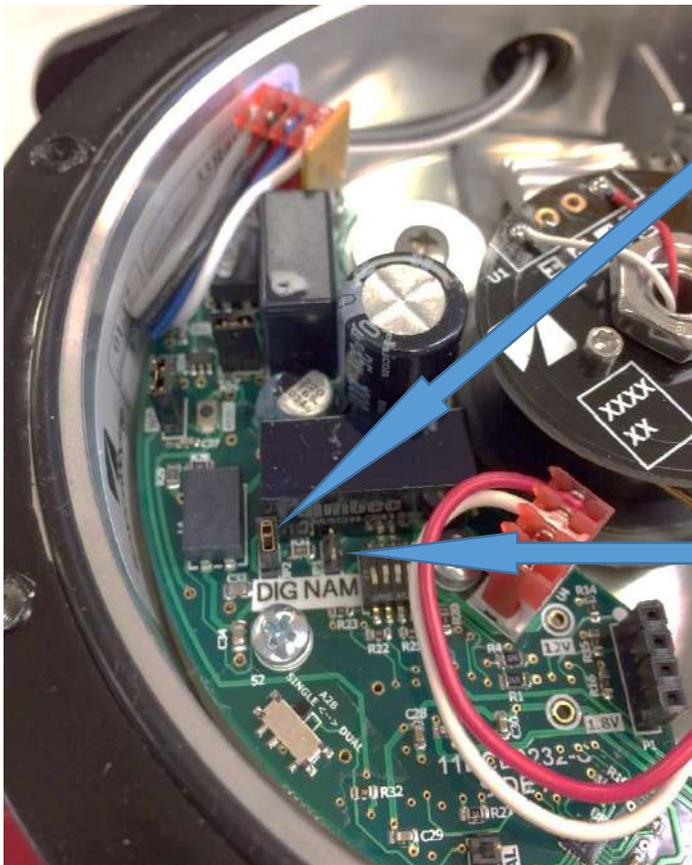


There is most likely a tube welded on the side of the crane where the cable for the old reel passed through. The Canbus cable connector is most likely larger than the tube. If this is the case, run the canbus cable along the exterior of the tube and secure adequately.

The spooling cable of the new cable reel has a deutsch connector ending. If the existing A2B switch has a different type of connector, you will need to cut it off and replace by the supplied deutsch connector kit 22TCD1020-01



**\*\* The new cable reel is digital. If your existing A2B wiring includes a resistance network, then switch the jumper inside the cable reel from DIG to NAM (digital to analog).**



Jumper on DIG

Put jumper on NAM only if you need to switch to analog

**\*\* Note that the RaycoWylie system is expecting to see a short on the A2B line during normal operation. During a two-block event, an open circuit is needed. Ensure that the A2B wires that you are using will provide this condition.**

## 5 Loop kit Assembly



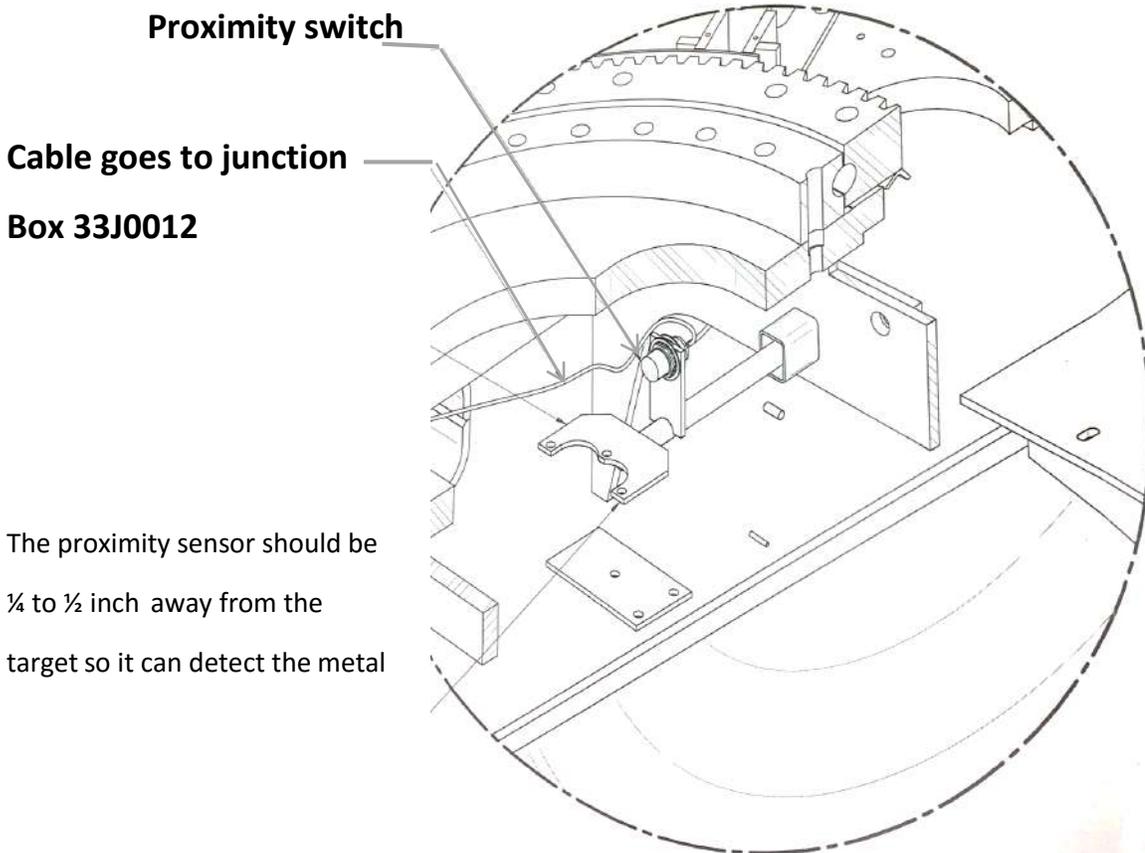
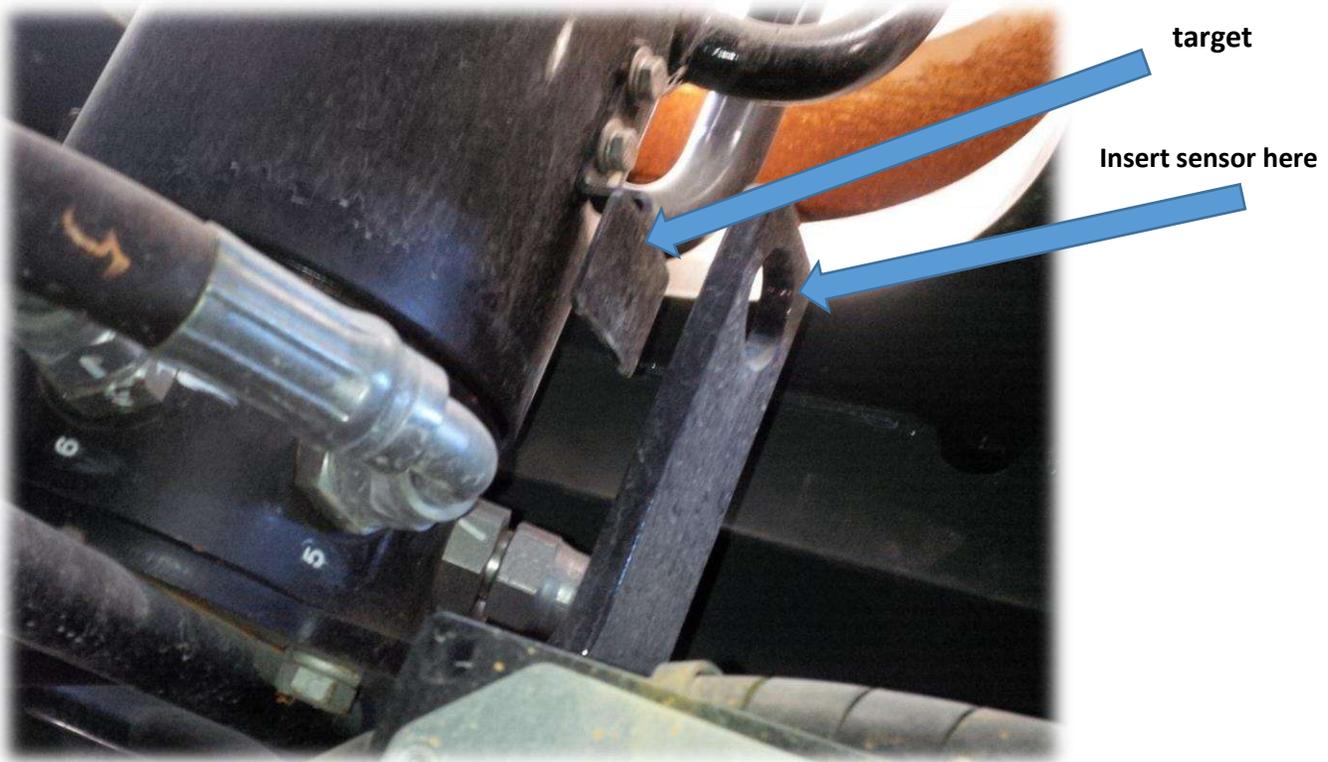
Assemble loop kit and fix to existing end of boom bracket as seen in the below picture leaving enough cable beyond the loop kit to connect to the A2B



## 6 Proximity Switch p/n 11SSX0021



The proximity switch/sensor is used to detect the over-front section of the crane, allowing higher capacity when slewing over front. Locate the existing proximity sensor under the turret and replace by the new using the same existing bracket. See picture below.



## 7 Pressure Sensors



Although the pressure sensors/transducers are exactly the same, their programming is different therefore it is important to connect them in the instructed locations. If upgrading from a Wylie W1258 or i3500, simply disconnect existing pressure sensors and replace by the new. We have supplied two possible adaptors, but since it is difficult to tell what is already on the machine, you may need to contact your local hydraulics supplier for the proper fitting if these are not suitable.

The new pressure sensors are CANbus and will connect directly into the wiring scheme without passing through an interface box. See wiring diagram.

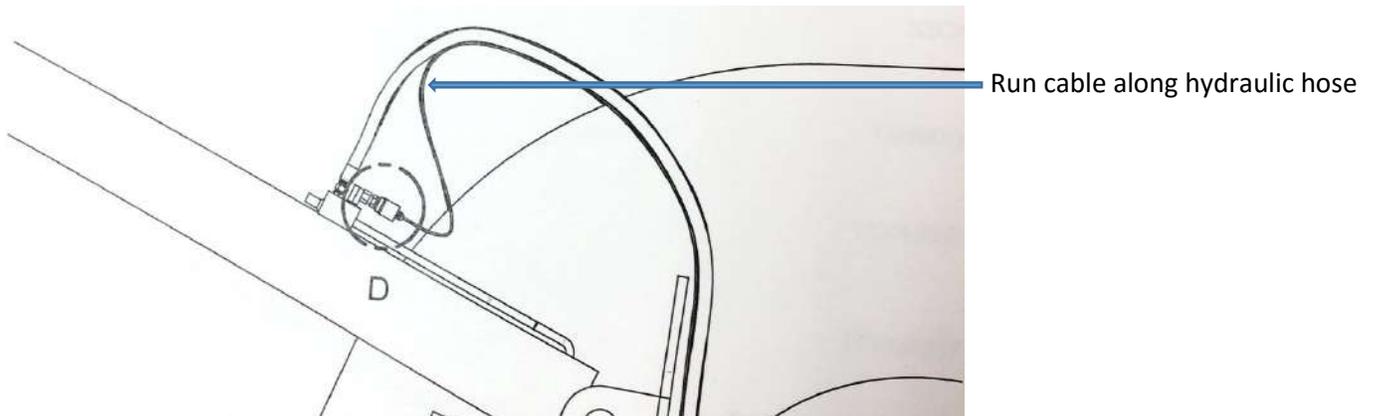
**\*\*Pressure transducers must be installed when the boom lift cylinders are fully retracted.**

**Single cylinder crane:** Connect the bore side pressure sensor p/n 33C4020-B0 to the bore side and the rod side pressure sensor p/n 33C4020-B1 to the rod side

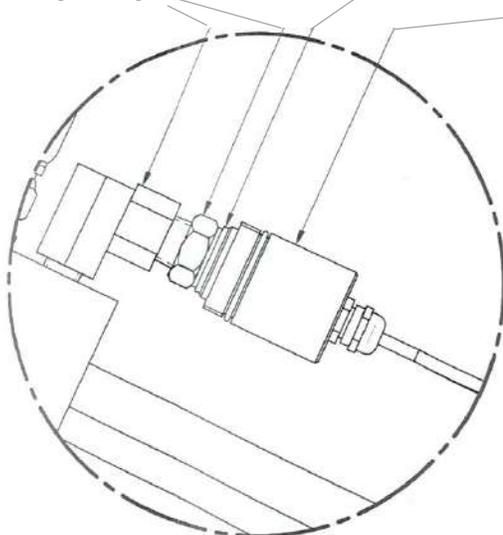
**Dual Cylinder crane:** Connect the two bore side pressure sensors p/n 33C4020-B0 and 33C4020-B2 to the bore side and the rod side pressure sensor p/n 33C4020-B1 to the rod side.

**\*\*Do not forget to bleed the lines (let the air out) as remaining air will affect the load reading.**

**Bore side:**

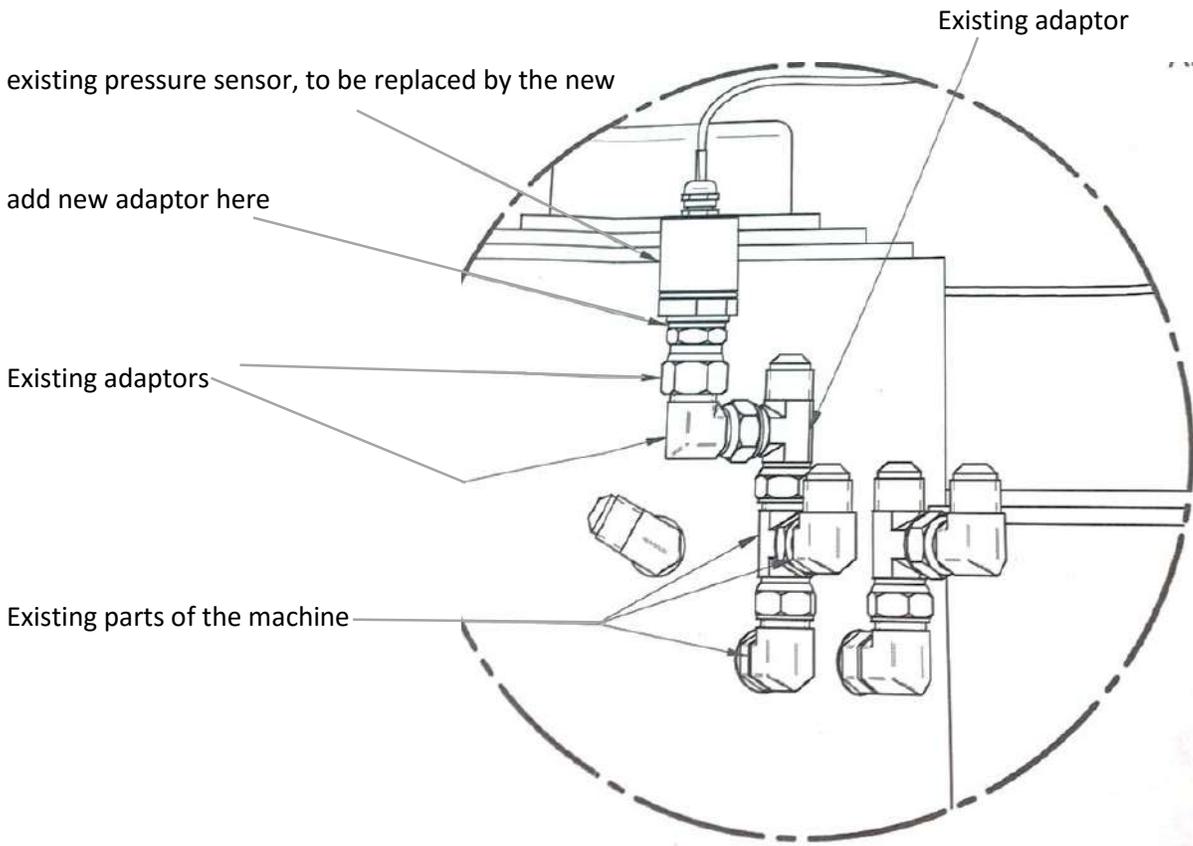
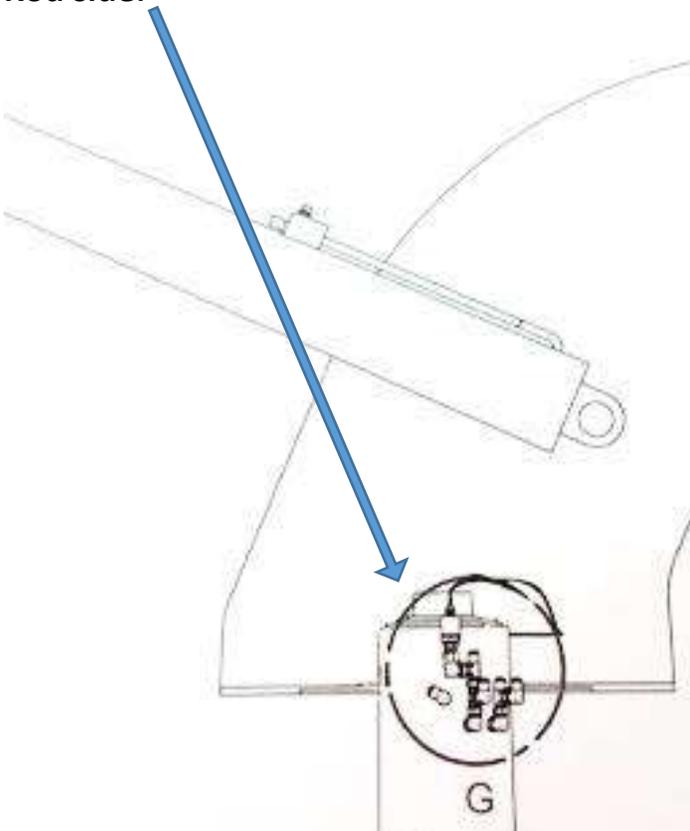


Existing fittings      add new fitting here      existing pressure sensor, to be replaced by the new



Detail D

Rod side:



## 8 Wiring

You are now ready to wire the system. Refer to the supplied wiring diagram.

**Note: The Raycowylie lock-out control voltage (12VDC from the relay box pin 9) can only be used to supply the coil of the lock-out relay. A separate 12VDC supply must be used to attach to “common” of the lock-out relay, supplying the solenoids for boom down, telescope out and winch up.**