MOISTURE SENSOR

RDS Part.No.:	S/DC/500-10-217
Doc. Issue:	1 : 1/5/99
	\UK217-1.DTP

1.1 Scope

Left hand and right hand kits are available.

The RH kit is suitable for most US built combines.
The LH kit is suitable for New Holland TR and some other non-US built combines.

An additional spacer kit is required for CASE IH 2188 and 2388 models

The side mounting kit is particularly suited in situations where combining oily or dirty crops. It consists of a grain sampler which fits on the clean grain elevator of most combines and provide an accessible location for the moisture sensor. The intake housing will fit on the 'up' side of the elevator and the auger housing will empty back into the 'down' side of the elevator.

NOTE: Grain flow through the auger may be a problem if the auger is mounted vertically. To ensure that grain will flow more easily past the sensor, mount the auger housing at least 30° from vertical (preferably as near to horizontal as possible).

1.2 Mounting the grain sampler

1. Locate an area of the elevator that the intake and auger housing will fit and determine the length of 2¼" hose needed.

NOTE: A 15" length of hose is provided, but this should be cut down as short as possible for the installation. (A shorter hose will provide a quicker response to changing grain moisture levels).

2. Use the intake housing metal spacer as a template to mark the 4 mounting holes and the 51mm x 178mm (2" x 7") hole to be cut in the 'up' side of the elevator. Use the black plastic spacer to mark the mounting holes and the 95mm x 102mm (3¾" x 4") hole in the 'down' side of the elevator.

Figure 1
Right hand assembly:
(elevator running clockwise)

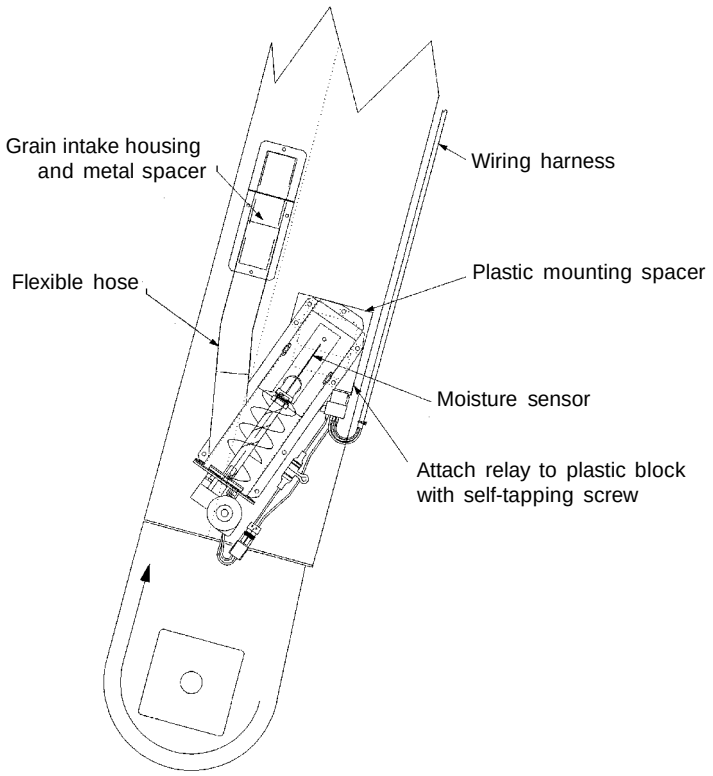
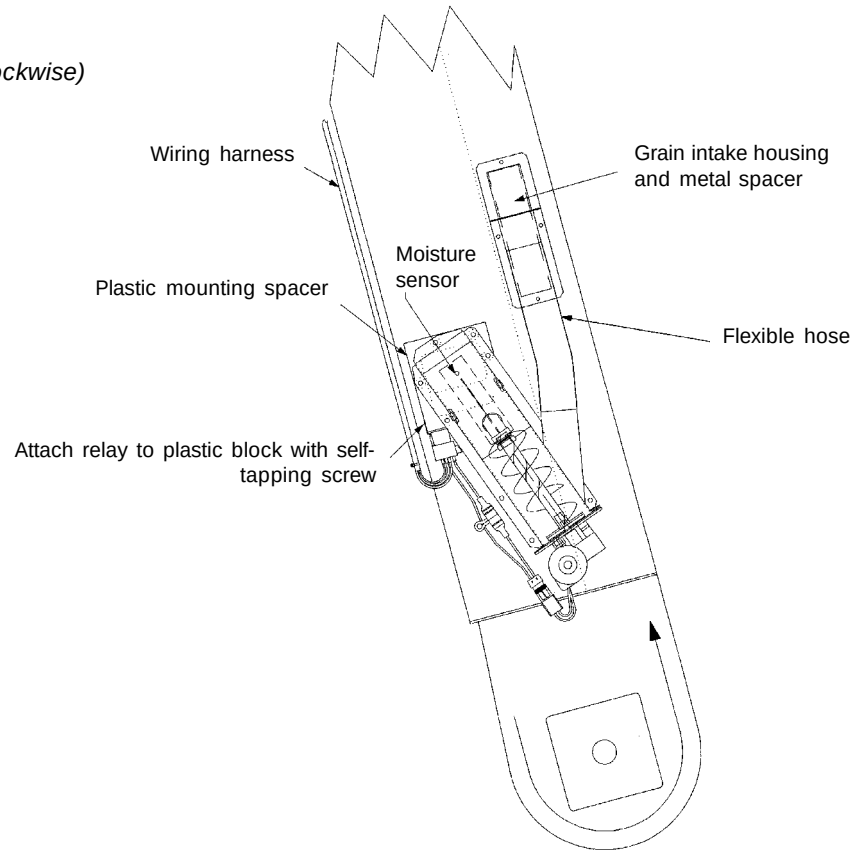


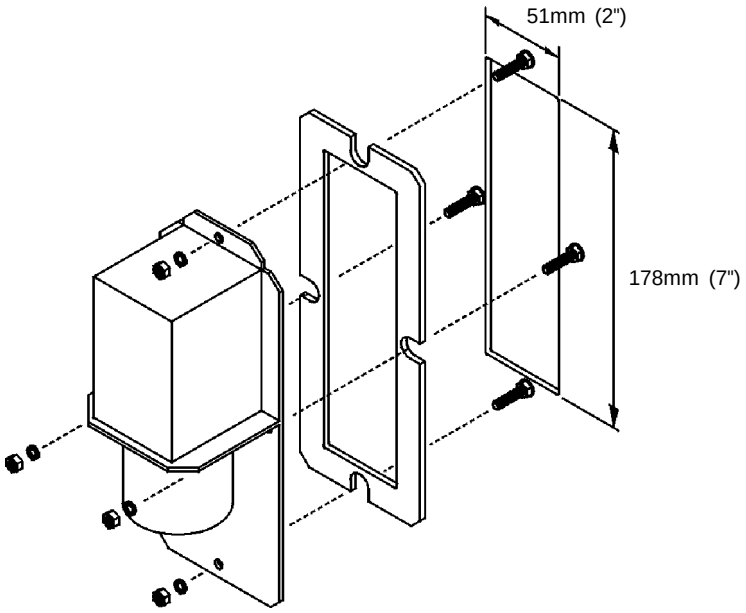
Figure 2
Left hand assembly:
(elevator running anti-clockwise)



3. Use a saw to cut the rectangular holes in the elevator. Be careful not to cut into the elevator paddles.

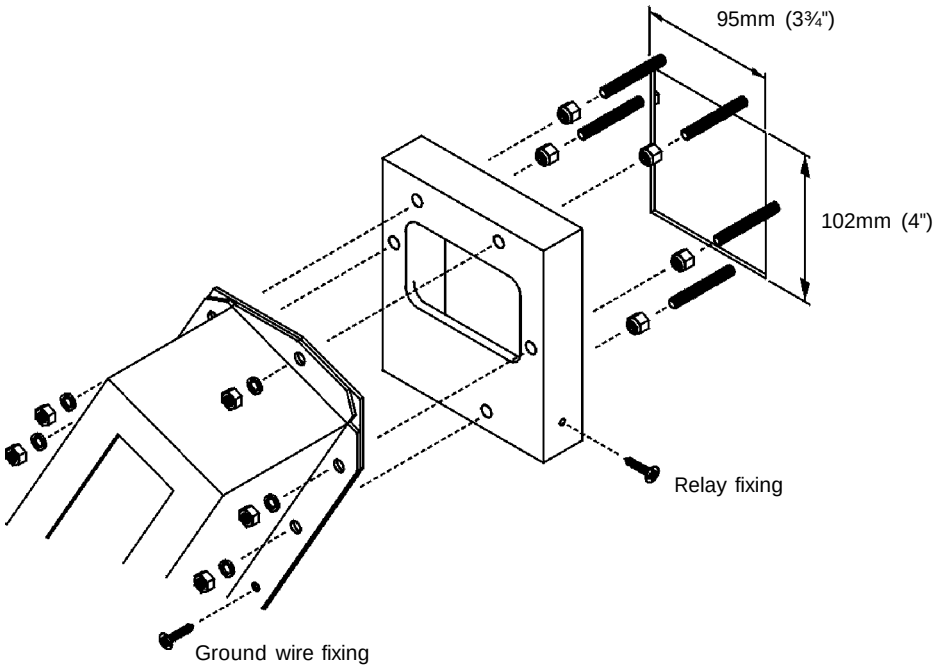
4. Drill the mounting holes for the intake housing 4.8mm (3/16") dia. and install (4) No. 8 x ¾" screws and nuts as studs in the 'up' elevator side. Place the metal spacer over the studs and assemble the intake housing to the elevator with No. 8 nuts (figure 3).

Figure 3
Mounting the intake housing



5. Drill the mounting holes for the auger housing 7.2mm (9/32") dia. and install (5) M6 x 50 screws (¼" x 2") and nuts as studs in the 'down' elevator side. Place the plastic spacer over the studs and assemble the auger housing to the elevator with M6 (¼)" nuts (figure 4).

Figure 4
Mounting the auger housing (right hand kit)



6. Latch the moisture sensor on to the auger housing, noting the grain flow direction marked on the sensor label. Attach the sensor ground wire to the flange of the auger housing with a No. 10 screw (figure 4).

7. Attach the relay in the wiring harness assembly to the plastic spacer block, with a No. 10 self-tapping screw, and connect the wiring harness to the auger drive motor wires. Route the harness and the sensor cable to the combine cab. Cable tie where possible to an existing wiring loom or hydraulic line.

8. Connect the sensor into the junction box (ref: Ceres 8000 Installation manual - section 2.6.4). The grain sampler requires a power supply seperate from the Ceres junction box and capable of supplying 20 amps.

   Connect the *red* wire to a switched +V supply, e.g. from the accessory terminal of the ignition switch, or another convenient terninal connected to the same circuit.

   Connect the *white* wire to a good grounding point, e.g. an existing earthing terminal.

   Connect the *white with red stripe* wire either on to the same terminal as the red wire, to the 'IGN +V' terminal in the Ceres 8000 junction box (or to terminal 4 of the grey Harting on a Ceres 2 installation). This wire provides a low current (0.13 amp) 12V supply to the relay, to switch the auger drive motor on and off.

1.3 Mounting on CASE 2188 and 2388 combines

Installation is identical apart from the following points:

Two 1¼" thick spacers are needed to position the sensor housing away from the bottom elevator shaft bearing. Place the spacer with the 3¾" x 4" opening next to the elevator side. Place the spacer with the 2½" x 3¾" opening next to the sensor housing.

Use (5) M6 x 75 (¼" x 3)" screws and nuts to mount the auger housing.

Attach the sampler shield to the bearing mounting bolts with M10 (3/8)" flat washers, lock washers and 3/8" or M10 nuts (figure 5).

Figure 5
Right hand assembly:
(CASE IH 2188 & 2388)