



ihSD
INTEGRATED HARRINGTON
SEED DESTRUCTOR

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Devon Gilmour
McIntosh & Son
Katanning, Kulin, Albany & Esperance



M^C
McINTOSH & SON



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iHSD PARTICIPANTS

Commercial release on 29 February 2016



THE INVENTOR
Ray Harrington

THE COMMERCIAL SUPPORT
GRDC and University
of South Australia (Industry and
Government funding to commercialise)

THE DISTRIBUTOR
McIntosh Distribution



THE MANUFACTURER
deBruin Engineering



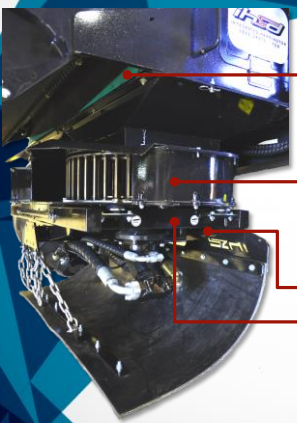
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iHSD FACTS

- 1** About 60hp @ 3000RPM mill speed
- 2** Rotor and Stator mills life span of 800 to 1000 hrs
- 3** Each unit includes a plate to enable yield loss calibration
- 4** 2 x 90cc exclusively designed Bosch-Rexroth counter rotating hydraulic motors, run on an independent iHSD hydraulic circuit
- 5** Negate the impact of the iHSD on the combine
- 6** Cab mounted 12" touch screen integrated with harvester CAN Bus
- 7** Cost from \$165,000 plus GST includes freight, install and start up on farm

2017 UPGRADES



- SIEVE RUBBER DEFLECTOR**
 - Highly abrasive, high wear
 - Rear flex panel, adjustable for crop types and moisture
- UPGRADED SCROLL**
 - Removed the clips and now it is bolted together
 - Hard wearing Stainless 3mm, upgraded from 2mm Mild Steel
 - New scroll fits the existing unit
- BASE PLATE MANUFACTURING PROCESS**
 - Evolved the manufacturing process, changed the way the base plate is machined and welded to enable a stronger design
- BEARING UNITS – BETWEEN THE MOTOR AND THE BASE PLATE**




2017 UPGRADES



- HYDRAULIC COOLING SYSTEM**
 - Upgraded cooler core – more cooling capacity
 - Upgraded hydraulic cooling fan
 - Increased through put and cleaning ability
 - Rotary screen available



- UPGRADED HYDRAULIC MOTOR**
 - Integrated with in-built speed sensors
 - Bosch- Rexroth motor, designed for the iHSD only




2017 UPGRADES



SIDE PANELS

- Enclosed the sides with an inspection hatch built in

INLET CHUTES

- Evolution of design



CAMERAS

- Stand Alone - Infrared




2017 UPGRADES



UPGRADE CAMPAIGN



- Upgrade packages have been dispatched & being fitted

AVAILABLE UNITS 2017

- Total 56 units
- 20 units ordered for Gt Southern
- 2 Case units left
- 3 NH units left

JOHN DEERE & CLAAS Update

- JD in factory now
- Commercial release 2018
- Claas first release this year

KEY POINTS

CLOSED LOOP HYDRAULICS



- ensuring constant 3000 RPM Mill Speed

HYDRAULIC DRIVE

- ensuring the Combine capacity and mills are not hindered

UPGRADED COOLING

- for Australian conditions
- 48 degrees Ambient Temp
- load tested 2.5 times - Oil set 100 degrees
- 40% Blocked - reduced oil to 74 degrees

RESULTS

Historical weed kill data on seed destructor

- Rygrass 95%
- Wild Radish 92%
- Wild Oats 99%
- Brome Grass 98%
- Old mills - both counter rotating @1400 rpm



2016/17 Harvest iHSD data collection

- New mills - one rotor mill moving at 3000rpm
- Metal hardness upgrade
- Impact damage to seed not ground into flour




ADVANTAGES

- Full residue retention (no burning)
- Nothing to manage after harvest
- High level of seed destruction
- One pass management process



2017 MONITORING

- 1 Material Flow
- 2 Mill wear
- 3 Horse power demand
- 4 Seed kill






DEALER NETWORK



WEST AUSTRALIA

McIntosh & Son

- Albany
- Esperance
- Katanning
- Kulin
- Merredin
- Moora
- Geraldton
- Wangan Hills

VICTORIA

O Connors

- Birchip
- Horsham
- Warracknabeal

Sunrise Ag

- Ouyen
- Swan Hill

SOUTH AUSTRALIA

Wise Farm Equipment

- Bordertown

Ranco Motors

- Pinnaroo

Ramsey Brothers

- Cleve
- Cummings
- Kimba
- Murray Bridge
- Riverton
- Wudinna



THANK YOU

Any questions?

