

# TOMATO HARVESTERS PRESENT AND FUTURE CHALLENGES

CTGA Meeting  
February 2, 2012

# Outline

- ① Product Family
- ① Machine Issues
- ① Emission Standards
- ① Future Developments

# Product Family

- ⦿ Commander
- ⦿ Johnson
- ⦿ Star
- ⦿ I-Star
- ⦿ Vine Diverter



# Commander

- ⦿ 2002 Heavy Duty Wheel Motors
- ⦿ 2003 Commander Wide
- ⦿ 2004 Bushing Pump
- ⦿ 2005 Choppers
- ⦿ 2005 Engine 225 HP
- ⦿ 2009 Cab Option
- ⦿ 2009 Commander 80



# Johnson

- ⦿ 2004 Heavy Duty Wheel Motors
- ⦿ 2005 Choppers
- ⦿ 2005 Engine 225 HP
- ⦿ 2012 Johnson 80



# Star

- ◎ 2007 Introduction
- ◎ 2009 Adjustable Axles
- ◎ 2010 CAN Based Electrical
- ◎ 2011 Blower Cleaning



# I-Star

- ⦿ 2011 Introduction
- ⦿ International Markets
- ⦿ Bed and Flat Cultured
- ⦿ Side-Shift Chassis
- ⦿ Optional Pickups
- ⦿ Pivot Header



# Vine Diverter

- ⦿ Introduced in 2010
- ⦿ Disc Pickup Only
- ⦿ Tractor Powered





# Machine Issues

- ⦿ Choppers - Safety
- ⦿ Dual Sort
- ⦿ Axles
- ⦿ Johnson Cross Conveyor

# Choppers - Safety

## Commander and Johnson Style

- Adjustable Back-Plate
- Pressure Comp System on Johnson
- Gear Pump Motor System on Commander



## Lockout – Switch

- All Models
- Recovery Shield on Commander
- VTA System Blocks Access on Johnson

# Dual Sort Options

## Raised Side Sort Version

- Multiple Variations  
Commander and Johnson



## Elevated Dual Sort

- No Upward Incline on  
Color Sort
- Not Available on Johnson

# Adjustable Axles

- Provides Wheel Spacing: 60 to 74 inch, 63 to 77", or 66 to 80.



- Support Weight on Stands and Block Frame.
- Pull Axle Pins.
- Remove Linkage Arm off Steering Cylinder and Leveling Cylinder.
- Actuate Sliders.
- Re-Install Pins
- Assemble Linkage Arms and Leveling Cylinders.

# Johnson Cross Conveyor

- ⦿ Widened cross conveyor to 46"
- ⦿ Eliminate power dam on backside
- ⦿ Fruit Conveyor extended up and over cross.
- ⦿ Reduces bearing count and one Ross motor.



# Emission Standards

- ⦿ EPA Time Table and Emission Plan
- ⦿ Engine Costs and Issues
- ⦿ Replacement Availability

# Engine Emission Plan

- Harvesters are Built under the Small Business Flex Program CFR1039.625

	Tier 1		Tier 2			Tier 3			Interim Tier 4			Final Tier 4					
Product	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
EPA Compliance 175-300 HP																	
Commander		*				*	*	*		*	*	*	*	*	*	*	
Johnson		*	*			*	*	*		*	*	*	*	*	*	*	
Star										*	*	*	*	*	*	*	

\* Flex Program

# Costs and Issues

- IT 4 Engines Costs are 80% Higher
- Final Tier 4 – Costs Unknown
- Repower Costs are Significant on Tomato Harvester
- All Applications are Certified by Engine Distributor and Deere Engineering



# Replacement Availability

- ⦿ Tier 0 Engines, 6076T – 172 HP
    - No Replacements Available
    - Reman Only, Short or Long Blocks
  - ⦿ Tier 1 Engine, 6081T – 200 HP (JFM 172HP)
    - No Replacements Available
    - Reman Only, Short or Long Blocks
  - ⦿ Tier 2 Engines, 6081H – 225 HP
    - No Replacements Available
    - Reman Only, Short or Long Blocks
  - ⦿ Tier 3 Engines 6068H – 225 HP
- 2009 AND OLDER MACHINES – NO REPLACEMENT ENGINES AVAILABLE

# Future Developments

- ⦿ Johnson 80 Machine
- ⦿ Telematics Project
- ⦿ Ferrari Trans-planter
- ⦿ Other

# Johnson 80 Machine

- ◉ Frame widened to accommodate 40 channel color sorters on each side.
- ◉ Side Transfers and Side Sorts all 10" wider.
- ◉ Transport of machine will require a pilot car.



# Telematics – M2M

- Wireless Link
- Access Machine Data Remotely
- Use of Triggers to Send Texts or Emails



# Telematics - Reporting



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Design Mode

Home Master View Suction Fan Below Operating Range LHP Simulator Edit Harvesters Import LHP Data Admin

## Master View

Harvester Details Engine Details Machine Data Engine Data Fuel Data Locate Harvester Gauges

### Customer:

contains

### Harvester Name:

contains

### Status:

- On
- Working
- Off

### Model:

- Johnson 80
- Commander
- Star NTD
- I-Star

### Serial:

contains

### Engine Serial:

contains

### Head Conveyor:

equals

### Suction Fan:

equals

To sort the table, click the column header.

ICON	HARVESTER	MODEL	STATUS	WARRANTY START	WARRANTY END	IMAGE
	<a href="#">STAR-2343-CTM-939203</a>	Star NTD	On	19 Jan 2012	29 Jan 2016	
	<a href="#">Harvester-9098-CTM-123445</a>	I-Star	Working	11 Jan 2012	27 Jan 2017	
	<a href="#">WEST-9873-CTM-03987S</a>	Johnson 80	Off	10 Jan 2012	27 Jan 2017	
	<a href="#">Red-1-CTM-909876</a>	Johnson 80	On	23 Jan 2015	29 Jan 2016	
	<a href="#">Yellow-1-CTM-9087934</a>	Johnson 80	Working	18 Jan 2012	31 Jan 2017	
	<a href="#">LIVE DEMO UNIT-911-313-12</a>	Johnson 80	Working	16 Jan 2012	31 Jan 2019	
	<a href="#">Green-4-CTM-9238432</a>	Johnson 80	On	11 Jan 2012	31 Jan 2013	
	<a href="#">890-87622-CTM-89204</a>	Johnson 80	Working	5 Jan 2012	29 Jan 2021	
	<a href="#">YTR-0983-CTM-12354</a>	Star NTD	Working	11 Jan 2012	31 Jan 2018	
	<a href="#">Asset123-CTM-78934</a>	Johnson 80	On	16 Jan 2012	30 Jan 2015	

10 25

1 2

Total Records: 11

# Telematics - Reporting



## Master View

Customer:  
 contains [ ]

Harvester Name:  
 contains [ ]

Status:  
 On  
 Working  
 Off

Model:  
 Johnson 80  
 Commander  
 Star NTD  
 I-Star

Serial:  
 contains [ ]

Engine Serial:  
 contains [ ]

Head Conveyor:  
 equals [ ]

To sort the table, click the column header.

ICON	HARVESTER	BATTERY	LOAD	RPM	COOLANT TEMP	OIL TEMP	OIL PRESSURE
	<a href="#">STAR-2343-CTM-939203</a>	99 V	99 lb	99 rpm	99 F	99 F	99 psi
	<a href="#">Harvester-9098-CTM-123445</a>	498 V	498 lb	498 rpm	498 F	498 F	498 psi
	<a href="#">WEST-9873-CTM-039875</a>	61 V	61 lb	61 rpm	61 F	61 F	61 psi
	<a href="#">Red-1-CTM-909876</a>	200 V	200 lb	200 rpm	200 F	200 F	200 psi
	<a href="#">Yellow-1-CTM-9087934</a>	450 V	450 lb	450 rpm	450 F	450 F	450 psi
	<a href="#">LIVE DEMO UNIT-911-313-12</a>	123 V	123 lb	123 rpm	123 F	123 F	123 psi
	<a href="#">Green-4-CTM-9238432</a>	350 V	350 lb	350 rpm	350 F	350 F	350 psi
	<a href="#">890-87622-CTM-89204</a>	275 V	275 lb	275 rpm	275 F	275 F	275 psi
	<a href="#">YTR-0983-CTM-12354</a>	234 V	643 lb	45 rpm	45 F	4 F	43 psi
	<a href="#">Asset123-CTM-78934</a>	410 V	410 lb	410 rpm	410 F	410 F	410 psi

Total Records: 11

# Telematics - Reporting



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 Design Mode

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## Master View

[Harvester Details](#) | [Engine Details](#) | [Machine Data](#) | [Engine Data](#) | [Fuel Data](#) | [Locate Harvester](#) | [Gauges](#)

To get more information click on marker

**Customer:**  
contains

**Harvester Name:**  
contains

**Status:**  
 On  
 Working  
 Off

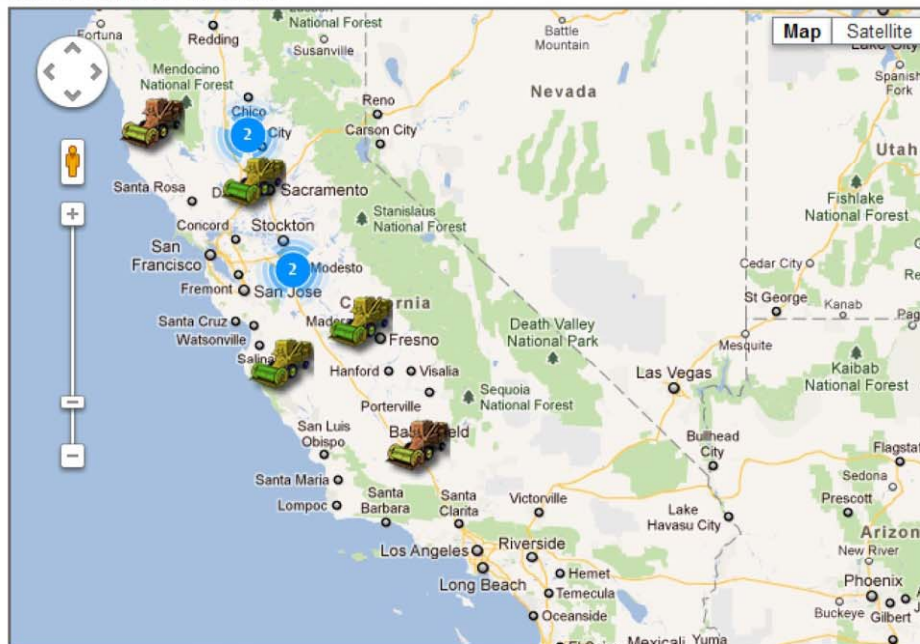
**Model:**  
 Johnson 80  
 Commander  
 Star NTD  
 I-Star

**Serial:**  
contains

**Engine Serial:**  
contains

**Head Conveyor:**  
equals

**Suction Fan:**  
equals



- STAR-2343-CTM-939203
- Harvester-9098-CTM-123445
- WEST-9873-CTM-03987S
- Red-1-CTM-909876
- Yellow-1-CTM-9087934
- LIVE DEMO UNIT-911-313-12**
- Green-4-CTM-9238432
- 890-87622-CTM-89204
- YTR-0983-CTM-12354
- Asset123-CTM-78934

# Ferrari Trans-planter



- Vertical Drop
- Indexing Carousel
- Mud Kicker with Pivot in Shoe





# Other

- Elevators and Rear Cross Conveyors
- Header, Shaker and Recovery Systems
- CAN Based Electrical Systems
- Customer Feedback

# WORLD AG EXPO



February 14-16, 2012  
Booth N-32

