

# IQAN and VMMS parameters

# Table of Contents

1	2100I plus II .....	5
1.1	Variables.....	5
1.1.1	System.....	6
1.1.2	Configure.....	6
1.1.3	Options.....	9
1.1.4	Water Level .....	13
2	2100I plus III .....	14
2.1	Variables.....	14
2.1.1	System.....	15
2.1.2	Configure.....	15
2.1.3	Options.....	17
2.1.4	Water Level .....	20
3	Plus Global.....	21
3.1	VMMS.....	21
4	Impact .....	21
4.1	Variables.....	21
4.1.1	System.....	22
4.1.2	Configure.....	22
4.1.3	Options.....	23
5	Ramjet II.....	24
5.1	Variables.....	24
5.1.1	System.....	25
5.1.2	Configure.....	25
5.1.3	Options.....	26
6	Paradigm .....	27
6.1	Variables.....	27
6.1.1	System.....	28
6.1.2	.....	28
7	HXX.....	30
7.1	Variables.....	30
7.1.1	System.....	30

7.1.2	PTO Compressor .....	31
7.2	VMMS.....	31
8	Prodigy .....	31
8.1	Variables.....	31
8.2	System.....	31
8.2.1	PTO Compressor .....	31
8.3	VMMS.....	31
9	QX.....	31
9.1	Variables.....	31
9.1.1	System.....	32
9.1.2	Truck Setup Engineering .....	32
9.2	Pin Codes.....	35
10	FLXX.....	36
10.1	Variables.....	36
10.1.1	System.....	37
10.1.2	Configure.....	37
10.1.3	Options.....	38
11	APXX.....	39
11.1	Variables.....	39
11.1.1	System.....	40
11.1.2	Configure.....	40
11.1.3	Options.....	40
12	TRXX .....	41
12.1	Variables.....	41
12.1.1	System.....	41
12.1.2	Configure.....	41
12.1.3	Options.....	41
13	Guzzler .....	42
13.1	Variables.....	42
13.1.1	System.....	42
13.1.2	Truck Config .....	42
13.1.3	Options.....	43
13.2	VMMS.....	43



# 1 2100I plus II

Current 2100I version until February 2023.

## 1.1 Variables

Name	Type	Default
Machine ID	Text	NULL
Date And Time	Integer	-6
WO#	Integer	20000000
Vacuum Truck Type	State	Not Selected
Transfer Case Type	State	Not Selected
Transmission Type	State	Not Selected
Park Brake Type	State	Not Selected
Throttle Max RPM (water only)	Function	1000,0
Throttle Max RPM (Vacuum)	Function	1000
Throttle Type	State	Not Selected
Vacuum CNG Truck	Digital	FALSE
Vac Relief Load Management	Digital	FALSE
No Front Hose Reel	Digital	FALSE
Throttle VOG SA Swap (Detroit's)	Digital	TRUE
Recycler Filter Motor PVEA	Digital	TRUE
Rodder Pump Water Pressure Closed Loop	Digital	FALSE
Water Pump Type	State	Rodder Pump
Ignore Allision PTO Consent	Digital	FALSE
Boom Control Type	State	Standard
Body Keypad is 2x4	Digital	FALSE
Blower Type	State	Default
Pump Off	State	None
Recirculator	Digital	FALSE
Boom Type	State	Standard
Front Blower Controls	Digital	TRUE
Wireless Remotes	State	None
Boom Work Light	Digital	FALSE
Rear Work Light	Digital	FALSE
Side Work Light	Digital	FALSE
Hose Reel Work Light	Digital	FALSE
Strobes	State	None
Arrows	State	None
Cameras	State	Rear
Water Level Type	State	Float
Debris Body Level Type	State	None

Coolant Valve	Digital	FALSE
Blower Temp Sensor	Digital	FALSE
Boom OOP	Digital	FALSE
Body OOP	Digital	FALSE
Cont. Fill	Digital	FALSE
Tool package	State	None
Pipe Rack	Digital	FALSE
Vibrator	State	None
Pinch Roller	Digital	TRUE
Boiler	Digital	FALSE
VOG	Digital	FALSE
Recycler	Digital	FALSE
Out Of Position Alarm Silence	Digital	FALSE
Digital Scale System	Digital	FALSE
Vac Enhance/Anti-Splash	State	None
Cab Dump Controls	Digital	FALSE
Recycler Gray Water Sensor Type	State	All Switch's
Flusher	Digital	FALSE
TD1140 Type	State	Standard
DPF regen	Digital	FALSE
Boom OOP Disable Shift Selector	Digital	FALSE
Body OOP Disable Shift Selector	Digital	FALSE
Water Tank Diameter	State	28"
Center Water Tank Volume	Integer	224
Lower Water Tank Volume	Integer	245
Upper Water Tank Volume	Integer	1028
Sensor Height from Bottom of Tank	Integer	0

#### 1.1.1 System

Machine ID: Based on the WO serial number

Date and time: set to -6 for central time

#### 1.1.2 Configure

WO#: work order number of truck

Vacuum Truck Type:

0. Not Selected
1. DD-PD
2. HYD SEF-SS
3. HYD SEF-DS
4. HYP-PD

Look at unit type on order board

Transfer Case Type:

- 0. Not Selected
- 1. 35 Teeth 1:1.457
- 2. 40 Teeth 1:1.1
- 3. 40 Teeth 1:1.275
- 4. 47 Teeth 1:1
- 5. 38 Teeth 1:468
- 6. 40 Teeth, 1:1.468

Transfer Case Number Segment: 343

Transmission Type

- 0. Not Selected
- 1. Allison 3000 Dual PTO
- 2. Allison 4000
- 3. Manual
- 4. Allison 3000 single PTO

Look at work order to see PTO A and B if only A transmission is Allison 4000 if A and B is Allison 3000 Dual PTO.

PTO A segment: 264

PTO B segment: 270

Park Brake Type

- 0. Not Selected
- 1. J1939
- 2. Hardwired

All 2100I hardwired

Throttle Max RPM (water only)

From -1E7 to 1E7

Look at work order; typically, 1550

For hardwire throttle RPM is the same as the highest.

Throttle max RPM segment: 181 and 186

Throttle Max RPM (Vacuum)

From -1E7 to 1E7

Look at work order; typically, blower 1765 and fan 1650.

For hardwire throttle RPM is the same as the highest.

Blower Max RPM: segment 339

#### Throttle Type

0. Not Selected
1. Hardwired
2. TSC1-SA7
3. TSC1-SA39
4. TSC1-SA231
5. PTO-SA7
6. TSC1-SA7(Paccar MX)
7. PWM

Cummins engines use TSC1-SA7. Mx13 uses hardwire throttle on 2100I. A26 and Mack hardwired. Note with hardwire throttle RPM is limited on engine side not IQAN. Detroit uses TSC1-SA7. VOLVO uses hardwire.

#### Vacuum CNG Truck

False/True

#### Vac Relief Load Management

False/True

#### No Front Hose Reel

False/True

Set to true for Catch basin's

#### Throttle VOG SA Swap (Detroit's)

False/True

#### Recycler Filter Motor PVEA

Locked for EngTech

#### Rodder Pump Water Pressure Closed Loop

False/True

#### Water Pump Type

0. Rodder Pump
1. CAT pump w/o Charge Pump
2. CAT pump With Charge Pump

Typically changed for catch basin

#### Ignore Allison PTO Consent



False/True

Boom Control Type

- 0. Standard
- 1. Proportional

Body Keypad is 2x4

False/True

Typically, true and shown in BOM override as ADD/DELETE FOR DUMP KEYPAD. Or is in subsection of segment 206

Blower Type

- 0. None
- 1. Hibon VTB XL

Affects the blower Temperature shutdown/Warning

### 1.1.3 Options

Pump Off

- 0. None
- 1. External
- 2. Internal
- 3. Guzzler

Look at sales order since not always mentioned in Work order can be mentioned in segment 234

Ports off programming: internal

Reculator

False/True

Segment 417

Boom Type

- 0. Standard
- 1. 5x5
- 2. 10x15

Segment 285

Front Blower Controls

False/True

Can be mentioned in sales order as “hot shift”

True with fan units

#### Wireless Remotes

- 0. None
- 1. TD31140
- 2. TD3100
- 3. TD1140/T3100

Segment 209

#### Boom Work Light

False/True

Segment 226

#### Rear Work Light

False/True

Segment 227

#### Side Work Light

False/True

Segment 228

#### Hose Reel Work Light

False/True

Segment 229

#### Strobes

- 0. None
- 1. Standard
- 2. Mirror
- 3. Standard, Mirror

Segment 216

#### Arrows

- 0. None
- 1. Arrow Board
- 2. Arrow Bar
- 3. FS Arrow board

Segment 225

#### Cameras

- 0. Rear
- 1. Front, Rear
- 2. Sides, Rear
- 3. Front, Sides, Rear
- 4. None

Segment 235

Water Level Type

- 0. Float
- 1. Sensor

Segment 237

Debris Body Level Type

- 0. None
- 1. Float
- 2. Sensor

Segment 239

Coolant Valve

False/True

Segment 248

Blower Temp Sensor

False/True

Boom OOP

False/True

Segment 548

Body OOP

False/True

Segment 548

Cont. Fill

False/True

Segment 233

Tool package

- 0. None
- 1. Standard

2. 20 GPM

Pipe Rack

False/True

Vibrator

- 0. None
- 1. Hydraulic
- 2. Electric

Pinch Roller

False/True

Boiler

False/True

VOG

False/True

Recycler

False/True

Out Of Position Alarm Silence

False/True

Digital Scale System

False/True

Segment 253

Vac Enhance/Anti-Splash

- 0. None
- 1. 2-Pos
- 2. Variable

Cab Dump Controls

False/True

Recycler Gray Water Sensor Type

- 0. All Switches
- 1. LVL switch with overflow Switch
- 2. LVL switch with High/Low Switch

Locked until Recycler is turned on. Typically set to option 1; LVL switch with overflow switch, for recycler.

Flusher

False/True

TD1140 Type

- 0. Standard
- 1. Dump Controls

DPF regen

False/True

Boom OOP Disable Shift Selector

False/True

Body OOP Disable Shift Selector

False/True

#### 1.1.4 Water Level

Water Tank Diameter

- 0. 28"
- 1. 30"

Typically mentioned in first water tank in segment 360

Center Water Tank Volume

Integer value; see segment 376

Lower Water Tank Volume

Integer value check for left and right side

Left side: segment 361

Upper Water Tank Volume

Integer value check for left and right side

Right side: segment 370

Left side: segment 373

Sensor Height from Bottom of Tank

Integer value installed 3 inches from the bottom

Segment 376

## 2 2100I plus III

2100I plus version to start in February 2023. Replaces XC10 to MC44 due to IQAN 6 not supporting XC10.

### 2.1 Variables

Name	Type	Default
Machine ID	Text	NULL
Date And Time	Integer	-6
WO#	Integer	20000000
Vacuum Truck Type	State	Not Selected
Transfer Case Type	State	Not Selected
Transmission Type	State	Not Selected
Park Brake Type	State	Not Selected
Throttle Max RPM (water only)	Function	1000,0
Throttle Max RPM (Vacuum)	Function	1000
Throttle Type	State	Not Selected
Vacuum CNG Truck	Digital	FALSE
Vac Relief Load Management	Digital	FALSE
No Front Hose Reel	Digital	FALSE
Throttle VOG SA Swap (Detroits)	Digital	TRUE
Recycler Filter Motor PVEA	Digital	TRUE
Rodder Pump Water Pressure Closed Loop	Digital	FALSE
Water Pump Type	State	Rodder Pump
Ignore Allision PTO Consent	Digital	FALSE
Particle GPS	Digital	FALSE
Body Keypad is 2x4	Digital	FALSE
Pump Off	State	None
Reculator	Digital	FALSE
Boom Type	State	Standard
Front Blower Controls	Digital	TRUE
Wireless Remotes	State	None
Boom Work Light	Digital	FALSE
Rear Work Light	Digital	FALSE
Side Work Light	Digital	FALSE
Hose Reel Work Light	Digital	FALSE
Strobes	State	None
Arrows	State	None
Cameras	State	Rear
Water Level Type	State	Float
Debris Body Level Type	State	None
Coolant Valve	Digital	FALSE
Blower Temp Sensor	Digital	FALSE
Boom OOP	Digital	FALSE

<b>Body OOP</b>	Digital	FALSE
<b>Cont. Fill</b>	Digital	FALSE
<b>Tool package</b>	State	None
<b>Pipe Rack</b>	Digital	FALSE
<b>Vibrator</b>	State	None
<b>Pinch Roller</b>	Digital	TRUE
<b>Boiler</b>	Digital	FALSE
<b>VOG</b>	Digital	FALSE
<b>Recycler</b>	Digital	FALSE
<b>Digital Scale System</b>	Digital	FALSE
<b>Vac Enhance/Anti-Splash</b>	State	None
<b>Cab Dump Controls</b>	Digital	FALSE
<b>Recycler Gray Water Sensor Type</b>	State	Lvl Sense with Overflow Switch
<b>Flusher</b>	Digital	FALSE
<b>TD1140 Type</b>	State	Standard
<b>DPF regen</b>	Digital	FALSE
<b>Boom OOP Disable Shift Selector</b>	Digital	FALSE
<b>Body OOP Disable Shift Selector</b>	Digital	FALSE
<b>Accumulator</b>	Digital	TRUE
<b>Freewheel</b>	Digital	TRUE
<b>WindGuide</b>	Digital	TRUE

### 2.1.1 System

Machine ID: Based on the WO serial number

Date and time: set to -6 for central time

### 2.1.2 Configure

WO#: work order number of truck

Vacuum Truck Type:

0. Not Selected
1. DD-PD
2. HYD SEF-SS
3. HYD SEF-DS
4. HYP-PD

Transfer Case Type:

0. Not Selected
1. 35 Teeth 1:1.457
2. 40 Teeth 1:1.275
3. 47 Teeth 1:1
4. 38 Teeth 1:468

Transmission Type

0. Not Selected
1. Allison 3000 Dual PTO
2. Allison 4000
3. Manual
4. Allison 3000 single PTO

#### Park Brake Type

0. Not Selected
1. J1939
2. Hardwired

#### Throttle Max RPM (water only)

From -1E7 to 1E7

Look at work order; typically, 1550

For hardwire throttle RPM is the same as the highest.

#### Throttle Max RPM (Vacuum)

From -1E7 to 1E7

Look at work order; typically, blower 1765 and fan 1650.

For hardwire throttle RPM is the same as the highest.

#### Throttle Type

0. Not Selected
1. Hardwired
2. TSC1-SA7
3. TSC1-SA39
4. TSC1-SA231
5. PTO-SA7
6. TSC1-SA7(Paccar MX)
7. PWM

#### Vacuum CNG Truck

False/True

#### Vac Relief Load Management

False/True

#### No Front Hose Reel

False/True

#### Throttle VOG SA Swap (Detroit's)



False/True

Recycler Filter Motor PVEA

Locked for EngTech

Rodder Pump Water Pressure Closed Loop

False/True

Water Pump Type

- 0. Rodder Pump
- 1. CAT pump w/o Charge Pump
- 2. CAT pump With Charge Pump

Ignore Allision PTO Consent

False/True

Particle GPS

False/True

Body Keypad is 2x4

False/True

### 2.1.3 Options

Pump Off

- 0. None
- 1. External
- 2. Internal
- 3. Guzzler

Recirculator

False/True

Boom Type

- 0. Standard
- 1. 5x5
- 2. 10x15

Front Blower Controls

False/True

Wireless Remotes

- 0. None
- 1. TD31140

2. TD3100
3. TD1140/T3100

Boom Work Light

False/True

Rear Work Light

False/True

Side Work Light

False/True

Hose Reel Work Light

False/True

Strobes

0. None
1. Standard
2. Mirror
3. Standard, Mirror

Arrows

0. None
1. Arrow Board
2. Arrow Bar
3. FS Arrow board

Cameras

0. Rear
1. Front, Rear
2. Sides, Rear
3. Front, Sides, Rear
4. None

Water Level Type

0. Float
1. Sensor

Debris Body Level Type

0. None
1. Float
2. Sensor

Coolant Valve

False/True

Blower Temp Sensor

False/True

Boom OOP

False/True

Body OOP

False/True

Cont. Fill

False/True

Tool package

- 0. None
- 1. Standard
- 2. 20 GPM

Pipe Rack

False/True

Vibrator

- 0. None
- 1. Hydraulic
- 2. Electric

Pinch Roller

False/True

Boiler

False/True

VOG

False/True

Recycler

False/True

Digital Scale System

False/True

Vac Enhance/Anti-Splash

- 0. None
- 1. 2-Pos
- 2. Variable

Cab Dump Controls

False/True

Recycler Gray Water Sensor Type

Locked for EngTech

Flusher

False/True

TD1140 Type

- 0. Standard
- 1. Dump Controls

DPF regen

False/True

Boom OOP Disable Shift Selector

False/True

Body OOP Disable Shift Selector

False/True

Accumulator

False/True

Freewheel

False/True

wind guide

False/True

#### 2.1.4 Water Level

Water Tank Diameter

- 0. 28"
- 1. 30"

Center Water Tank Volume

Integer value

Lower Water Tank Volume

Integer value check for left and right side

Upper Water Tank Volume

Integer value check for left and right side

Sensor Height from Bottom of Tank

Integer value installed 3 inches from the bottom

### 3 Plus Global

Similar to 2100 but with Vmms. Typically used for overseas/international.

#### 3.1 VMMS

See plus global folder in programming to see what VMM to used based on type of unit for plus Global

### 4 Impact

#### 4.1 Variables

Name	Type	Default
Machine ID	Text	NULL
Date And Time	Integer	-6
WO#	Integer	20000000
Park Break Type	State	Not Selected
Trans Type	State	Allison
Throttle Type	State	Not Selected
Throttle Max RPM	Function	1000
No front Hose Reel	Digital	FALSE
Ignore Allision PTO Consent	Digital	FALSE
Recirc Multiflow	Integer	6
PTO Ratio	Function	1.28
Enable 500K Chassis	Digital	FALSE
Allison SA	Integer	49
Blower Temp Sensor	Digital	FALSE
Boom Type	State	Standard
Boom Work Lights	Digital	FALSE
Continuous fill	Digital	FALSE
Debris Body Level Type	State	None
Hose Reel Work Lights	Digital	FALSE
Pinch Roller	Digital	TRUE
Rear Work Lights	Digital	FALSE
Water Level Type	State	Float
Side Work Lights	Digital	FALSE

Recirc	Digital	FALSE
Wireless	Digital	FALSE
Sludge Pump	Digital	FALSE
Water Heater	Digital	FALSE
Body Dump Keypad	Digital	FALSE
Hose Reel Lock	Digital	FALSE
Hose Reel Ext/Ret	Digital	FALSE
Hyd Tool Package	Digital	FALSE
Strobes	Digital	FALSE

#### 4.1.1 System

Machine ID: Based on the WO serial number

Date and time: set to -6 for central time

#### 4.1.2 Configure

WO#

work order number from -200000000 to 200000000

Park Break Type

- 0. Not Selected
- 1. Hardwire
- 2. J1939

All hardwired

Trans Type

- 0. Allison
- 1. Manual

Throttle Type

- 0. Not Selected
- 1. Hardwire
- 2. TSC1-SA7
- 3. TSC1-SA7(Paccar MX)

Throttle Max RPM

-10000000 to 10000000

No front Hose Reel

False/True

Ignore Allison PTO Consent

False/True

Recirc Multiflow

-10000000 to 10000000

PTO Ratio

-10000000 to 10000000

Enable 500K Chassis

False/True

Allision SA

Allison Source Address

#### 4.1.3 Options

Blower Temp Sensor

False/True

Boom Type

- 0. Standard
- 1. 5x5
- 2. 10x15

Boom Work Lights

False/True

Continuous fill

False/True

Debris Body Level Type

- 0. None
- 1. Float
- 2. Sensor

Hose Reel Work Lights

False/True

Pinch Roller

False/True

Rear Work Lights

False/True

Water Level Type

0. Float  
 1. Sensor  
 Side Work Lights  
 False/True  
 Recirc  
 False/True  
 Wireless  
 False/True  
 Sludge Pump  
 False/True  
 Water Heater  
 False/True  
 Body Dump Keypad  
 False/True  
 Hose Reel Lock  
 False/True  
 Hose Reel Ext/Ret  
 False/True  
 Hyd Tool Package  
 False/True  
 Strobes

## 5 Ramjet II

### 5.1 Variables

Name	Type	Default
Machine ID	Text	NULL
Date And Time	Integer	-6
WO#	Integer	20000000
Park Break Type	State	Not Selected
Throttle Type	State	Not Selected
Throttle Max RPM	Function	1000



Front/Rear Hose Reel	State	Rear Hose Reel
Single PTO	Digital	FALSE
Enable HXX Mode Icon	Digital	FALSE
250K Chassis Baud Rate	Integer	250
Hardwire PTO	Digital	FALSE
Continuous Fill	Digital	FALSE
Hose Reel Work Lights	Digital	FALSE
Pinch Roller	Digital	TRUE
Rear Work Lights	Digital	FALSE
Water Level Type	State	Float
Side Work Lights	Digital	FALSE
Recirc	Digital	FALSE
Wireless	Digital	FALSE
Keypad Actuated		
Accumulator	Digital	FALSE
Hyd Wind Guide	Digital	FALSE
Hose Reel Extend/Retract	Digital	FALSE, TRUE
Cabinet Heaters	Digital	FALSE
Water Heater Option	Digital	FALSE
Strobes	Digital	FALSE
Freewheel	Digital	FALSE

#### 5.1.1 System

Machine ID: Based on the WO serial number

Date and time: set to -6 for central time

#### 5.1.2 Configure

Work Order

work order number from -200000000 to 200000000

Park Break Type

- 0. Not Selected
- 1. Hardwire
- 2. J1939

Typically J1939

Throttle Type

- 0. Not Selected
- 1. hardwire
- 2. TSC1 -SA7
- 3. TSC1 -SA7 (Paccar MX)

Throttle Max RPM

From -1E7 to 1E7

Look at segment 176

Front/Rear Hose Reel

- 0. Rear Hose Reel
- 1. Front Hose Reel

Single PTO

False/True

Segment 178 and 184

Enable HXX Mode Icon

False/True

250K Chassis Baud Rate

250K or 500K

Hardwire PTO

False/True

### 5.1.3 Options

Continuous Fill

False/True

Hose Reel Work Lights

False/True

Can be listed as manhole and OP for the work lights.

Pinch Roller

True/False

Segment 239

Rear Work Lights

False/True

Water Level Type

- 0. Float
- 1. Sensor

Segment 167

Side Work Lights

False/True

Recirc

False/True

Segment 239

Wireless

False/True

Segment 132

Keypad Actuated Accumulator

False/True

Hyd Wind Guide

False/True

Hose Reel Extend/Retract

False/True

Cabinet Heaters

False/True

Elec cargo are cabinet heaters

Water Heater Option

False/True

Strobes

False/True

Freewheel

False/True

## 6 Paradigm

### 6.1 Variables

Name	Type	Default
Machine ID	Text	Null
Date And Time	Integer	-6
WO#	Integer	0
Throttle Type	State	Not Selected
Water Pump Type	State	Not Selected

Water Level Sensor Type	State	Not Selected
Park Brake Type	State	Not Selected
Compressor Type	State	Not Selected
Blower Tooth Count	Integer	30
Water Pump Tooth Count	Integer	40
Option 1 - Recirc	Digital	FALSE
Option 2 - Water Heater	Digital	FALSE
Option 3 - Hopper Vibrator	Digital	FALSE
Option 4 - DigRight	Digital	FALSE
Option 5 - Load Limit	Digital	FALSE
Option 6	Digital	FALSE
Option 7	Digital	FALSE
Option 8	Digital	FALSE
Option 9	Digital	FALSE
Option 10	Digital	FALSE
Option 11	Digital	FALSE
Option 12	Digital	FALSE
Baud Rate	Integer	250
Allison PTO Consent		
Request SA	Integer	49

#### 6.1.1 System

Machine ID: Based on the WO serial number

Date and time: set to -6 for central time

#### 6.1.2

WO#

work order number from -200000000 to 200000000

Throttle Type

- 0. Not Selected
- 1. TSC1
- 2. PTO Set/Acc
- 3. PTO Set/Coast

Water Pump Type

- 0. Not Selected
  - 1. No Water Pump
  - 2. Washdown (4 GPM)
  - 3. Full Size ( 8GPM )
- Segment 140

Water Level Sensor Type

- 0. Not Selected
- 1. Float Switch
- 2. Continuous Level

Typically Continuous Level

#### Park Brake Type

- 0. Not Selected
- 1. J1939
- 2. Hardwire

Set to J1939

#### Compressor Type

- 0. Not Selected
- 1. No Compressor
- 2. Boss (Small Air)
- 3. Vanair (Big Air)
- 4. Vanair (Small Air)

Segment 336

#### Blower Tooth Count

Typically, 30

#### Water Pump Tooth Count

Typically, 40

#### Option 1 – Recirc

False/True

Segment 245

#### Option 2 - Water Heater

False/True

Segment 119

#### Option 3 - Hopper Vibrator

False/True

#### Option 4 – DigRight

False/True

Look at sales order since may not be listed in work order

#### Option 5 - Load Limit

False/True

Option 6

False/True

Option 7

False/True

Option 8

False/True

Option 9

False/True

Option 10

False/True

Option 11

False/True

Option 12

False/True

Baud Rate

Typically 250, can be 500

Allison PTO Consent Request SA

Source address of Allison typically 49 which is 0x31

## 7 HXX

Uses both IQAN and VMMS

### 7.1 Variables

Name	Type	Default
Machine ID	Text	NULL
Date And Time	Integer	-6
PTO Compressor Type	Digital	False

#### 7.1.1 System

Machine ID: Based on the WO serial number

Date and time: set to -6 for central time

### 7.1.2 PTO Compressor

False/True

False; Vactor

True; VanAir

## 7.2 VMMS

See segment 140 on Work order for typical 20 or 10 Gal separate VMMS for 10 and 20

## 8 Prodigy

Similar to HXX for programming

### 8.1 Variables

Name	Type	Default
Machine ID	Text	NULL
Date And Time	Integer	-6
PTO Compressor Type	Digital	False

### 8.2 System

Machine ID: Based on the WO serial number

Date and time: set to -6 for central time

#### 8.2.1 PTO Compressor

False/True

False; Vactor

True; VanAir

### 8.3 VMMS

See segment 140 on Work order for typical smaller Gallons. Use same VMMS program file in the HXX folder

## 9 QX

### 9.1 Variables

Name	Type	Default
Machine ID	Text	NULL
Date And Time	Integer	-6
WO#	Integer	1000001
Throttle Type	State	Not Selected
Trans_Type	State	Not Selected

<b>Vacuum Type</b>	State	Not Selected
<b>Transfer Case Type</b>	State	Not Selected
<b>Park Brake Type</b>	State	Not Selected
<b>Fan Tooth Count</b>	Integer	30
<b>Recirc Comp Value %</b>	Integer	10
<b>GT Cell Module</b>	Digital	FALSE
<b>Option 2 - Recirc</b>	Digital	TRUE
<b>Option 3 - Spare</b>	Digital	FALSE
<b>Option 4 - Air Compressor</b>	Digital	FALSE
<b>Option 5 - Water Heater</b>	Digital	TRUE
<b>Option 6 - Knife Gate</b>	Digital	FALSE
<b>Option 7 - Sludge Pump</b>	Digital	FALSE
<b>Option 8 - Tool Package</b>	Digital	FALSE
<b>Option 9 - Vacuum Enhancer</b>	Digital	FALSE
<b>Option 10 - Driver Work Lts</b>	Digital	TRUE
<b>Option 11 - Pass Work Lts</b>	Digital	FALSE
<b>Option 13 - Boom Work Lts</b>	Digital	TRUE
<b>Option 12 - Rear Work Lts</b>	Digital	FALSE
<b>Option 14 - Beacon Lts</b>	Digital	TRUE
<b>Option 15 - Mirror Strobe</b>	Digital	FALSE
<b>Option 16 - Spare</b>	State	Not Enabled
<b>Option 17 - Cabinet Heaters</b>	Digital	TRUE
<b>Option 18 - Heat Cord</b>	Digital	FALSE
<b>Option 19 - Scale System</b>	Digital	FALSE
<b>Option 20 - Body Level Sensor</b>	Digital	FALSE
<b>Option 21 - Hydraulic Oil type</b>	State	None
<b>Option 22 Hose Reel</b>	Digital	FALSE
<b>Option 23 Load limit switch</b>	Digital	FALSE
<b>Option 24 Side hydraulic enabled</b>	Digital	FALSE
<b>MC43 Cabinet Lights</b>	Digital	FALSE
<b>Option 25 DOT Strokes</b>	Digital	TRUE

#### 9.1.1 System

Machine ID: Based on the WO serial number

Date and time: set to -6 for central time

#### 9.1.2 Truck Setup Engineering

WO#

work order number from -200000000 to 200000000



#### Throttle Type

- 0. Not Selected
- 1. Hardwire
- 2. TSC1-SA7
- 3. TSC1-SA39
- 4. TSC1-231
- 5. PTO-SA7
- 6. TSC1-SA7-Paccar

#### Trans Type

- 0. Not Selected
- 1. Manual
- 2. Allison 250K
- 3. Allison 500K
- 4. Ultrashift 11
- 5. Ultrashift 13
- 6. Ultrashift 18

#### Vacuum Type

- 0. Not Selected
- 1. Roots 824
- 2. Robuschi 145
- 3. Fan

#### Transfer Case Type

- 0. Not Selected
- 1. 1:1.100
- 2. 1:1.275
- 3. 1:1.470

#### Park Brake Type

- 0. Not Selected
- 1. J1939
- 2. Hardwire

#### Fan Tooth Count

Typically set to 30

#### Recirc Comp Value %

Typically set to 10

#### GT Cell Module

False/True

Option 2 – Recirc

True/False

Option 3 – Spare

Second Operator Station

False/True

Option 4 - Air Compressor

False/True

Option 5 - Water Heater

True/False

Option 6 - Knife Gate

False/True

Option 7 - Sludge Pump

False/True

Option 8 - Tool Package

False/True

Option 9 - Vacuum Enhancer

False/True

Option 10 - Driver Work Lts

True/False

Option 11 - Pass Work Lts

False/True

Option 13 - Boom Work Lts

True/False

Option 12 - Rear Work Lts

False/True

Option 14 - Beacon Lts

True/False

Option 15 - Mirror Strobe

False/True

Option 16 – Spare

Arrow Board

Option 17 - Cabinet Heaters

True/False

Option 18 - Heat Cord

False/True

Option 19 - Scale System

False/True

Option 20 - Body Level Sensor

False/True

Option 21 - Hydraulic Oil type

- 0. None
- 1. ISO-22
- 2. ISO-32
- 3. ISO-46

Option 22 Hose Reel

False/True

Option 23 Load limit switch

False/True

Option 24 Side hydraulic enabled

False/True

MC43 Cabinet Lights

False/True

Option 25 DOT Strokes

True/False

## 9.2 Pin Codes

To program truck password: Ben\$Bacha1

Truck Engineering	2000
Compensator	2001

Truck Setup	2002
Boom Setup	2003
Hyd Overrides	2004
Fan Overrides	2005
Blocking valve recir	2006
Keypad Addressing	2000
Cat Pump setting	2000

## 10 FLXX

### 10.1 Variables

Name	Type	Default
<b>Machine ID</b>	Text	NULL
<b>Date And Time</b>	Integer	-6
<b>WO#</b>	Integer parameter	20000000
<b>Body Locks</b>	Digital parameter	FALSE
<b>Hyd Oil Type</b>	State parameter	ISO-32
<b>Throttle Max RPM</b>	Function parameter	2150
<b>Throttle Type</b>	State parameter	Not Selected
<b>Transmission Type</b>	State parameter	Not Selected
<b>Aux Pump Has Torque Limiter</b>	Digital parameter	TRUE
<b>Allison Consent Source Address</b>	State parameter	SA 49
<b>Boom Work Lights</b>	Digital parameter	TRUE
<b>Cabinet Heaters</b>	Digital parameter	TRUE
<b>Debris Body Level Type</b>	State parameter	None
<b>Driver Side Work Lights</b>	Digital parameter	FALSE
<b>Passenger Side Work Lights</b>	Digital parameter	TRUE
<b>Rear Work Lights</b>	Digital parameter	TRUE
<b>Recirc</b>	Digital parameter	TRUE
<b>Vac Enhance</b>	Digital parameter	TRUE
<b>Vibrator</b>	Digital parameter	TRUE
<b>Water Heater</b>	Digital parameter	TRUE
<b>Water Level Type</b>	State parameter	Float
<b>Air Compressor Type</b>	State parameter	None
<b>Tool Package</b>	Digital parameter	TRUE
<b>Sludge Pump</b>	Digital parameter	FALSE
<b>Strobes</b>	Digital parameter	TRUE
<b>DigFAST</b>	Digital parameter	TRUE

### 10.1.1 System

Machine ID: Based on the WO serial number

Date and time: set to -6 for central time

### 10.1.2 Configure

WO#

work order number from -200000000 to 200000000

Body Locks

False/True

Hyd Oil Type

- 0. ISO-32
- 1. ISO-22
- 2. ISO-46

In subsection of segment 100

Throttle Max RPM

See build ticket for RPM

Default at 2150

Throttle Type

- 0. Not Selected
- 1. Hardwire (needs Programming)
- 2. TSC1-SA7
- 3. TSC1-SA7 (Paccar MX)

Transmission Type

- 0. Not Selected
- 1. Manual
- 2. Allison

Aux Pump Has Torque Limiter

True/False

Allison Consent Source Address

- 0. SA 49
- 1. SA 49
- 2. SA3 3

Source Address in decimal

### 10.1.3 Options

Boom Work Lights

True/False

Cabinet Heaters

True/False

Debris Body Level Type

- 0. None
- 1. Float
- 2. Sensor

Driver Side Work Lights

False/True

Passenger Side Work Lights

True/False

Rear Work Lights

True/False

Recirc

True/False

Vac Enhance

True/False

Vibrator

True/False

Water Heater

True/False

Water Level Type

- 0. Float
- 1. Sensor

In subsegment of segment 159

Air Compressor Type

- 0. None
- 1. 185CFM /150PSI
- 2. 200CFM /200PSI

3. 300CFM / 250PSI
4. 300CFM /110PSI

CFM = cubic feet per minute

PSI = Pounds per Square Inch

Tool Package

True/False

Sludge Pump

False/True

Strobes

True/False

DigFAST

True/False

## 11 APXX

### 11.1 Variables

Name	Type	Default
<b>Machine ID</b>	Text parameter	NULL
<b>Date And Time</b>	Integer parameter	-6
<b>WO#</b>	Integer parameter	20000000
<b>Truck Type</b>	State parameter	APXX Classic
<b>Blower Type</b>	State parameter	Roots 824
<b>Throttle Type</b>	State parameter	TSC1 SA7
<b>Max Engine RPM</b>	Integer parameter	1850
<b>Trans Type</b>	State parameter	Allison 3000
<b>Air Compressor Type</b>	State parameter	None
<b>Vibrator</b>	Digital parameter	FALSE
<b>Recirc</b>	Digital parameter	FALSE
<b>Vac Enhance</b>	Digital parameter	FALSE
<b>Water Heater</b>	Digital parameter	FALSE

### 11.1.1 System

Machine ID: Based on the WO serial number

Date and time: set to -6 for central time

### 11.1.2 Configure

WO#

work order number from -200000000 to 200000000

Truck Type

- 0. APXX Classic
- 1. APXX Simple
- 2. FLXX Classic
- 3. FLXX Simple

Simple: more electrical and software controls

Classic: more mechanical controls

Blower Type

- 0. Roots 824
- 1. Roots 624
- 2. Hibon 8702
- 3. Robuschi 145

Throttle Type

- 0. TSC1 SA7
- 1. Hardwire

Max Engine RPM

See work order for max RPM defaults to 1850

Trans Type

- 0. Allison 3000
- 1. Allison 400
- 2. Manual

### 11.1.3 Options

Air Compressor Type

- 0. None
- 1. 185 CFM/150PSI
- 2. 200 CFM/200PSI
- 3. 300 CFM/250PSI
- 4. 300 CFM/110PSI



CFM = cubic feet per minute

PSI = Pounds per Square Inch

Vibrator

False/True

Recirc

False/True

Vac Enhance

False/True

Water Heater

False/True

## 12 TRXX

### 12.1 Variables

Name	Type	Default
Machine ID	Text	NULL
Date And Time	Integer	-6
WO#	Integer	20000000
Electric 4 Way Valve	Digital	TRUE
Wireless	State	CarTek
Strobes	Digital	TRUE
Arrowboard	Digital	FALSE
Tool Package	State	Default state
Water Heater	Digital	FALSE
Work Lights	Digital	TRUE

#### 12.1.1 System

Machine ID: Based on the WO serial number

Date and time: set to -6 for central time

#### 12.1.2 Configure

WO#

work order number from -200000000 to 200000000

#### 12.1.3 Options

Electric 4 Way Valve

True/False

Wireless

- 0. CarTek
- 1. R260

Strobes

True/False

Arrow board

False/True

Tool Package

- 0. Default State
- 1. None
- 2. Hyd. Tool Package

Water Heater

False/True

Work Lights

True/False

## 13 Guzzler

Program new box with A30. For 250K CAN plug in A31 and A29 if 500K CAN use A28 instead of A29

### 13.1 Variables

Name	Type	Default
Machine ID	Text	NULL
Date And Time	Integer	-6
Trans Type	State	None
Throttle Max RPM	Function	1650
Throttle Type	State	TSC1 SA7
250K Throttle Desired RPM message Selection	State	Auto
500K Throttle Desired RPM message Selection	State	Auto
Allison Range ID	Digital	True

#### 13.1.1 System

Machine ID: Based on the WO serial number

Date and time: set to -6 for central time

#### 13.1.2 Truck Config

Throttle Type

- 0. TSC1 SA7 Priority 3
- 1. TSC1 SA7 MX Priority 3

2. TSC1 SA 7 Priority 4

TSC1 SA 7 Priority 4 is for DD15 engines

Trans Type

0. None
1. Manual Trans
2. Auto Trans

Throttle Max RPM

Reference build ticket default is 1650

250K Throttle Desired RPM Message Selection

0. Auto
1. ECU
2. PTO

500K.Throttle Desired RPM Message Selection

0. Auto
1. ECU
2. PTO

Allison Range ID

True/False

Adjusts the range indicator for Alison or Eaton Ultrashift

### 13.1.3 Options

## 13.2 VMMS

Used on older boxes that do not need 500K. currently being phased out.