2110A/2108A
"Peanut Tech" Package
Electrical & Troubleshooting Information

2nd Edition, Beg. S/N 550000

AMADA

March 2017
MAN145rev1

©2017

"Peanut Tech" Monitoring and Control Packages are manufactured By AMADAS Industries*:*

You can find us on the Web at:
www.amadas.com

or e-mail us at
amadas@amadas.com

P.O. Box 1833
Suffolk, VA 23439
(mailing)

1100 Holland Road
Suffolk, VA 23434
(shipping)

(757) 539-0231 (phone)
(757) 934-3264 (FAX)

P.O. Box 3687
Albany, GA 31701
(mailing)

1701 South Slappey Blvd.
Albany, GA 31706
(shipping)

(229) 439-2217 (phone)
(229) 439-9343 (FAX)

Table of Contents

Safety Section

Section 1.....Electrical Schematics

Section 2.....Connector Terminals

Section 3.....Circuit Codes

Section 4.....Drawings

Section 5..... *"Peanut Tech"* Monitoring and Control

Section 6....."*Peanut Tech"* Production Programming [Contact AMADAS Industries]

Section 7..... *"Peanut Tech"* Run-in Procedure

Section 8.....Troubleshooting

Safety

Safety at All Times! 2
Safety Practices 3
Safety Decals 10

This symbol means:

ATTENTION!

BECOME ALERT!

YOUR SAFETY IS INVOLVED!

Safety at All Times!

You, the operator, can help avoid accidents or injury by observing the precautions in this section and insisting that others working for or with you also follow them.

- Do NOT attempt to operate this equipment under the influence of drugs or alcohol, or prescription/over-the-counter drugs that may cause impairment.
- This equipment is dangerous to children and persons unfamiliar with its operation. They should never be allowed to operate this machinery or remain in its vicinity while in operation.
- Only a trained operator familiar with this machinery and trained in its operation should be allowed to operate this machine. Do NOT allow any person to operate or perform maintenance on this machine until he or she has read this manual and understands the safety precautions.
- To prevent injury or death, use a tractor equipped with a Rollover Protective System (ROPS).
- NEVER exceed the limits of a piece of machinery. If its ability to perform a job safely is in question, DO NOT TRY TO DO THAT JOB.

Shields

- Certain photographs or illustrations in this manual may show a safety shield removed. However, NEVER operate this machine without all shields correctly in place!
- If a shield must be removed to make a repair or adjustment, replace the shield prior to use.

Safety Decals

- Replace any CAUTION, WARNING, DANGER, or instruction safety decal that is not readable or is missing.
- Do NOT paint over, remove, or deface any safety sign or warning decals.

Look for the Safety Alert Symbol!

The Safety Alert Symbol indicates a potential safety hazard to personnel and that extra precaution must be taken. When you see this symbol on the machine, remain alert and carefully read the message that follows it. ALWAYS follow the recommended precautions and safe operating procedures accompanying this symbol. If you have any questions, please contact your dealer or the manufacturer.

Safety Signal Words Used

Three safety signal words are used on the machine and in this manual to indicate the degree or level of hazard seriousness. These three words are:

⚠DANGER

Indicates an imminently hazardous situation that, if not avoided, will result in death or serious injury. This signal word is to be limited to the most extreme situations, typically for machine components that, for functional purposes, cannot be guarded.

⚠WARNING

Indicates a potentially hazardous situation that, if not avoided, could result in death or serious injury, and includes hazards that are exposed when guards are removed. It may also be used to alert against unsafe practices.

⚠CAUTION

Indicates a potentially hazardous situation that, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.

NOTE! This section covers general safety. Some items may not apply to this type of machine.

Safety Practices

Transport Machine Safely

- Comply with state and local laws.
- Be familiar with tractor operations and follow all safety instructions in the tractor's manual.
- Before moving away, always check immediate vicinity (e.g., for children).
- NEVER exceed a maximum speed of 20 MPH.
- Always adapt ground speed to road or field conditions, making sure you have adequate control of steering and stopping.
- Avoid sharp turns, holes, ditches, and obstructions which may cause the tractor to tip, particularly on hillsides.
- Use following tow load weight ratios as guidelines:

  20 MPH when weight is less than or equal to the weight of the tractor

  10 MPH when weight is more than weight of the tractor
- NEVER tow a load more than double the weight of the tractor!
- Sudden braking can cause a towed load to swerve and upset. Reduce speed if towed load is not equipped with brakes.

Avoid Electrical Power Lines

- Make sure all components are secured in the proper position before transporting machine (for example: basket bin lip extension, mower deck, off-loading conveyor, etc.).
- AVOID all lines, particularly low-hanging electrical cables, during transport.

⚠DANGER

Contact with electrical lines will cause the operator to suffer severe electrical shock or possibly death.

Use a Safety Chain

- Use a safety chain to help control machinery if it separates from the tractor drawbar.
- Use a chain with strength rating equal to greater than the gross weight of the towed machine.
- Attach the chain to the tractor drawbar support, allowing only enough slack in the chain for turning.
- Do NOT use a safety chain for towing.

NOTE! This section covers general safety. Some items may not apply to this type of machine.

Avoid High Pressure Fluids

⚠ CAUTION

- Use extreme care when working with hydraulic components and high pressure sprays.
- Escaping fluid or spray under pressure can penetrate the skin, causing serious injury.
- To avoid injury, relieve pressure before disconnecting hydraulic or other lines.
- Tighten all connections before applying hydraulic or spray pressure.
- Search hoses/connections for leaks with a piece of cardboard.
- Take appropriate safety measures to protect hands, body, and face from high pressure fluids.
- Always wear appropriate safety gear to protect hands, body and face from exposure to high pressure fluids.
- Never try to block the flow or search for leaks of high pressure fluids with your hands even if wearing gloves. High pressure fluids can penetrate gloves as well as your skin.
- Always avoid direct contact of any high pressure fluid flow.
- If an accident occurs, respond as follows:
  - o Seek medical treatment immediately. Any fluid injected into the skin must be surgically removed within a few hours or gangrene may result.
  - o Alert the medical professionals that a fluid injection or high pressure spray injury has occurred.
  - o Give information on the type of fluid or spray and time the accident occurred. If known, include the amount of fluid injected and/or the system injection pressure.
  - o Surgery will most likely be required, so no food or drink for the affected person.

Doctors unfamiliar with this type of injury should reference a knowledgeable medical source. Such information is available in English from Deere & Company Medical Department in Moline, Illinois, U.S.A., by calling 1-800-822-8262 or +1 309-748-5636.

VERY IMPORTANT!! Although in some cases there is little or no pain from an injection or high pressure spray accident, THIS IS A SERIOUS EVENT THAT MUST BE TREATED BY MEDICAL PROFESSIONALS!!!

NOTE! This section covers general safety. Some items may not apply to this type of machine.

Work in Ventilated Area

Engine exhaust fumes can cause sickness or death.

- If it is necessary to run an engine in an enclosed area, remove the exhaust fumes from the area with an exhaust pipe extension.
- If you do not have an exhaust pipe extension, open the doors and get outside air into the area.

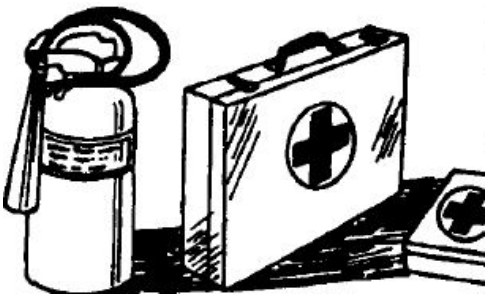
AMADAS DOES NOT RECOMMEND RUNNING ANY ENGINE IN AN ENCLOSED AREA EVEN WITH VENTILATION.

Handle Fuel Safely – Avoid Fires

- Handle fuel with care; it is highly flammable.
- Do NOT refuel the machine while smoking or when near open flame or sparks.
- Always stop engine before refueling machine.
- Fill fuel tank outdoors.
- Prevent fires by keeping machine clean of accumulated trash, grease, and debris.
- Always clean up spilled fuel.

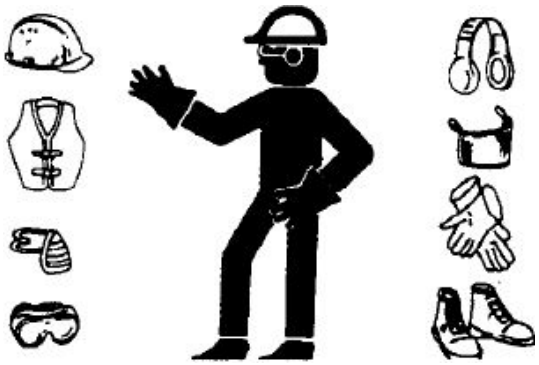
Prepare for Emergencies

- Be prepared if a fire starts.
- Keep a first aid kit and fire extinguisher handy.
- Keep emergency numbers for doctors, ambulance service, hospital, and fire department near your telephone.



Wear Protective Clothing

- Wear close-fitting clothing and safety equipment appropriate to the job.
- Operating equipment safely requires the full attention of the operator. Do NOT wear radio or music headphones while operating machine.



NOTE! This section covers general safety. Some items may not apply to this type of machine.

Handle Chemical Products Safely

- Direct exposure to hazardous chemicals can cause serious injury. Potentially hazardous chemicals used with AMADAS equipment include such items as lubricants, coolants, paints, and adhesives.
- Before you start any job using a hazardous chemical, check the MSDS so that you are aware of the risks and know how to proceed safely. Carefully follow all procedures, using only recommended equipment.
- See your AMADAS dealer for MSDS on chemical products used with AMADAS equipment.

Avoid Contact with Moving Parts

- Wear close-fitting clothing to avoid entanglement with moving parts.
- Keep hands, feet, and clothing away from power-driven parts.
- Never clean, lubricate or adjust machine when it is running.

Remove Accumulated Crop Debris

- The buildup of chaff and crop debris near moving parts or heat sources is a hazard.
- Check and clean these areas frequently.
- Before performing any inspection or service, engage parking brake, turn off engine, and remove key.

Practice Safe Maintenance

- Understand the service procedure before doing work. Use proper tools and refer to the User Manual.
- Keep service area clean and dry.
- Lower machine to ground, engage parking brake, turn off engine, and remove key before performing maintenance.
- Allow time for the machine to cool completely.
- Never lubricate, service, or adjust machine while it is moving.
- Keep hands, feet, and clothing from power-driven parts.
- Securely support any machine elements that must be raised for service work.
- Keep all parts in good condition and properly installed.
- Fix any damage immediately; replace worn or broken parts.
- Keep the machine free of any buildup of grease, oil, or debris.

NOTE! This section covers general safety. Some items may not apply to this type of machine.

Remove Paint/Protective Coating Before Welding Or Heating

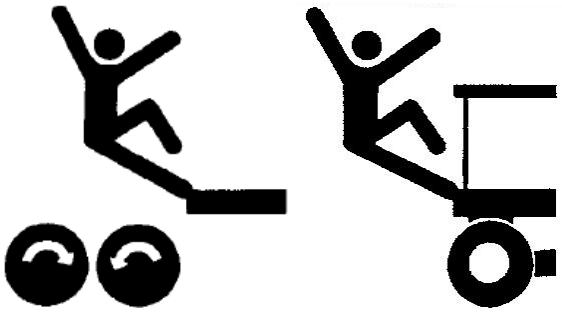
- Avoid potentially toxic fumes and dust.
- Hazardous fumes can be generated when paint or coatings are heated by welding, soldering, or by using a torch.
- Do all work outside or in a well-ventilated area.
- Remove paint/coatings before welding or heating:
  - If you sand or grind paint, avoid breathing the dust. Wear an approved respirator.
  - If you use solvent or paint stripper, remove stripper with soap and water before welding.
  - Remove solvent or paint stripper containers and other flammable material from the area.
  - Allow any fumes to disperse for at least 15 minutes before welding or heating.
- Do NOT use a chlorinated solvent in areas where welding will take place.
- Do all work in an area that is well-ventilated to carry toxic fumes and dust away.
- Dispose of paint/coatings and solvent properly.

Avoid Using Heat Near Pressurized Fluid Lines

- Flammable spray can be generated by heating near pressurized fluid lines, resulting in severe burns to yourself and bystanders.
- Do NOT heat by welding, soldering, or using a torch near pressurized fluid lines or other flammable materials. Pressurized lines can accidentally burst when heat goes beyond the immediate flame area.

Keep Riders off of Machine

- Only allow the operator on the machine. Riders obstruct the operator's view, which results in the machine being operated in an unsafe manner.
- Riders are subject to injury such as being thrown off of the machine.
- Children should NEVER be allowed on the machine.

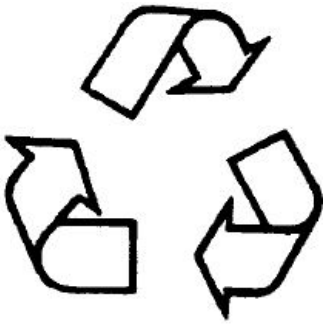


NOTE! This section covers general safety. Some items may not apply to this type of machine.

Dispose Of Waste Properly

Improperly disposing of waste can threaten the environment and ecology. Potentially harmful waste includes items such as oil, fuel, coolant, brake fluid, filters, and batteries.

- Use leak-proof containers when draining fluids.
- Do NOT use food or beverage containers that may mislead someone into drinking from them.
- Do NOT pour waste onto the ground, down a drain or into a water source.
- Inquire about the proper way to recycle or dispose of waste from your local environmental or recycling center, FEMA, or from your AMADAS dealer.



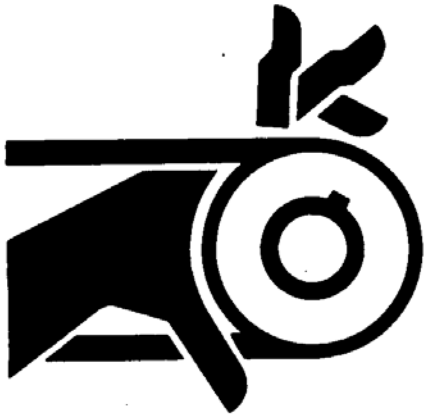
Support Machine Properly

- Always lower the attachment or implement to the ground before you work on the machine. If the work requires that the machine or attachment be lifted, provide secure support for them. If left in a raised position, hydraulically supported devices can settle or leak down.
- Do NOT support the machine on cinder blocks, hollow tiles, or props that may crumble under continuous load.
- Do NOT work under a machine that is supported solely by a jack.
- Follow all safety procedures in this manual for supporting the machine.
- When implements or attachments are used with a machine, always follow safety precautions listed in the implement or attachment operator's manual.

Service Drive Belts Safely

When servicing drive belts, always observe these precautions:

- Avoid serious injury from hand or arm entanglement. Never attempt to clean, check, or adjust belts while the machine is running. Always shut off the engine, set the parking brake and remove the key.
- Do NOT attempt to clean belts with flammable cleaning solvents.

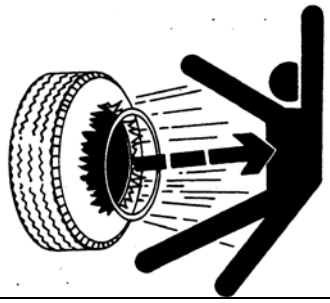


NOTE! This section covers general safety. Some items may not apply to this type of machine.

Service Tires Safely

Explosive separation of a tire and rim parts can cause serious injury or death.

- Do NOT attempt to mount a tire unless you have the proper equipment and experience to perform the job.
- Always maintain the correct tire pressure.
- Do NOT inflate the tires above the recommended pressure.
- Never weld or heat a wheel and tire assembly. The heat can cause an increase in air pressure resulting in a tire explosion. Welding can structurally weaken or deform the wheel.
- When inflating the tires, use a clip-on chuck and extension hose long enough to allow you to stand to one side and NOT in front of or over the tire assembly. Use a safety cage if available.
- Check wheels for low pressure, cuts, bubbles, damaged rims, or missing lug bolts and nuts. NEVER fill a damaged tire or one that is missing lug bolts or nuts.



Pay Close Attention to Notes

- Throughout the manual, information that needs to be emphasized is set apart with either a "NOTE!" or "IMPORTANT!" heading.
- Please be sure to carefully read this information, as it usually indicates a situation that could cause machine damage.

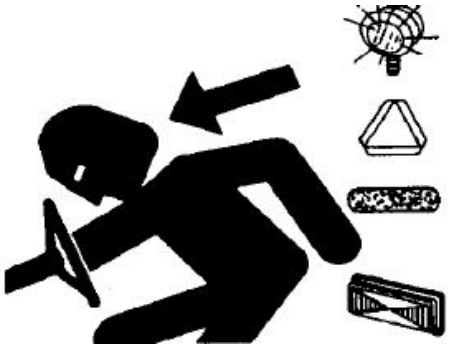
Maintain Your Machine

- It is crucial you maintain your machine in proper working condition.
- Perform all scheduled maintenance and repairs in a timely manner.
- Do NOT perform unauthorized modifications to the machine as these could impair the function and/or safety of the machine and affect machine life.

Use Safety Lights and Devices

Slow moving tractors, self-propelled equipment and towed implements or attachments can create hazards when driven on public roads. They are difficult to see, especially at night.

- Whenever you drive on public roads, use flashing lights and turn signals according to local regulations.
- To increase visibility, use the lights and devices provided with your machine.
- Keep safety items in good condition.
- Replace missing or damaged items.



Safety Decals

Safety decals identify specific hazards, as well as general safety. A signal word (⚠DANGER, ⚠WARNING, or ⚠CAUTION) is included on each decal to alert you to the severity of the hazard.

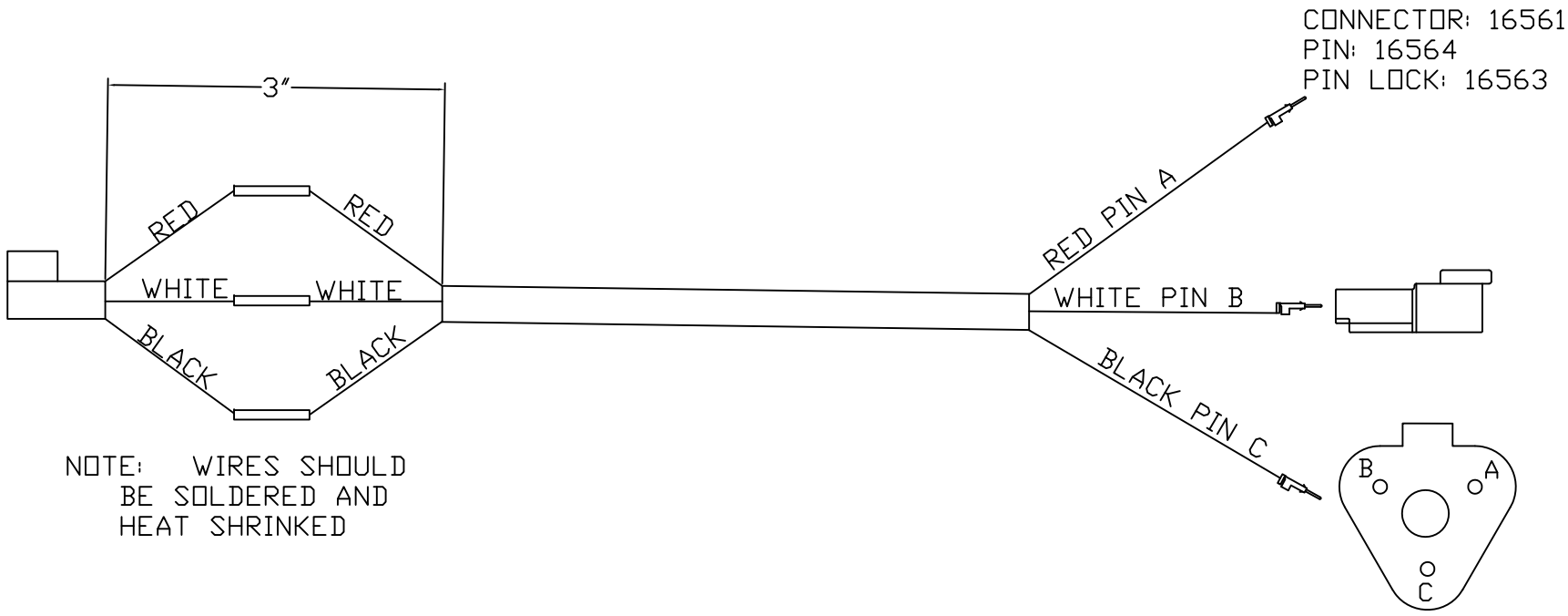
Please note the following about the decals:

- Keep them clean and legible.
- Never remove a safety decal from the machine.
- When you replace a part with a safety decal, also replace that decal.
- For replacement decals, call your AMADAS dealer.
- Replacement safety decals are available free of charge.

Section 1

Electrical Schematics

S16566 Air Pressure Assembly S-1.2
S16662 Tech Relay Box S-1.3
S16664 Tech Display Box S-1.4
16660 Tech Display Adapter S-1.5
16668 Tech Package Harness ..... S-1.6 – S-1.6b

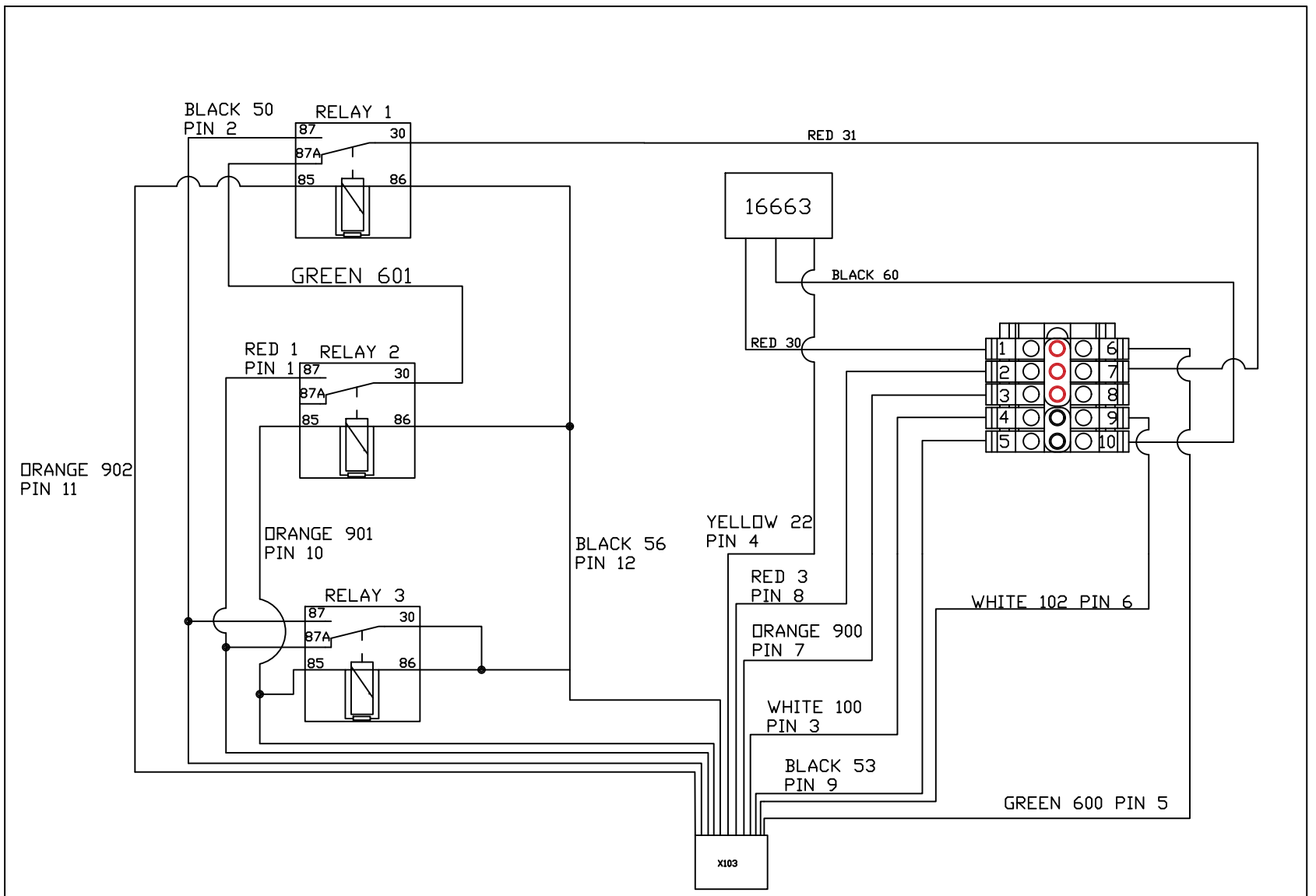


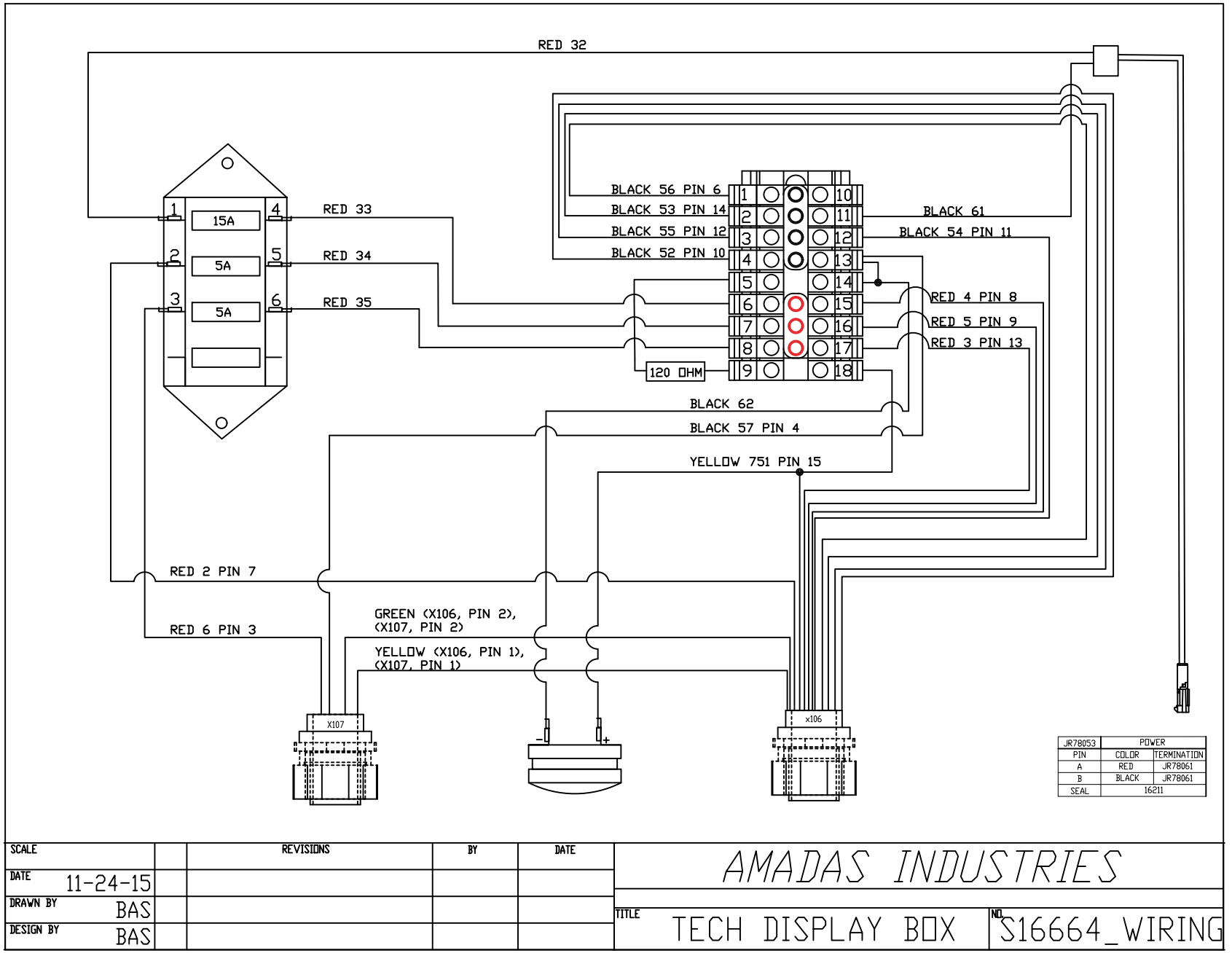
NOTE: WIRES SHOULD BE SOLDERED AND HEAT SHRINKED

SCALE		REVISIONS	BY	DATE
DATE 11/5/15				
DRAWN BY BAS				
DESIGN BY BAS				

AMADAS INDUSTRIES

TITLE ASSEMBLY, AIR PRESS. NO. S16566_WIRING


BLACK 50
PIN 2
RELAY 1
87
30
87A
85
86
RED 31
16663
GREEN 601
BLACK 60
RED 30
RED 1
PIN 1
RELAY 2
ORANGE 902
PIN 11
ORANGE 901
PIN 10
BLACK 56
PIN 12
YELLOW 22
PIN 4
RED 3
PIN 8
RELAY 3
WHITE 102 PIN 6
ORANGE 900
PIN 7
WHITE 100
PIN 3
BLACK 53
PIN 9
GREEN 600 PIN 5
1
2
3
4
5
6
7
8
9
10
X103
SCALE
DATE 11/16/15
DRAWN BY BAS
DESIGN BY BAS
REVISIONS
BY
DATE
AMADAS INDUSTRIES
TITLE
TECH RELAY BOX
NO.
S16662_WIRING

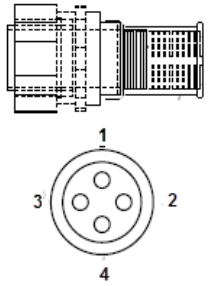


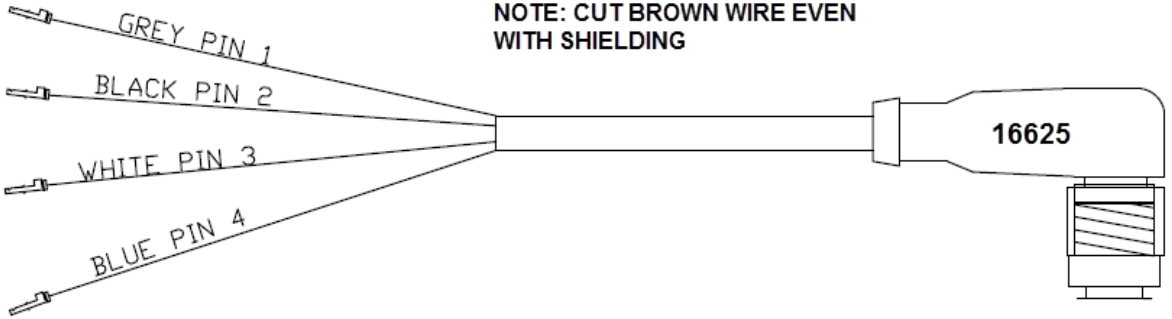
SCALE		REVISIONS	BY	DATE
DATE 11-24-15				
DRAWN BY BAS				
DESIGN BY BAS				

AMADAS INDUSTRIES

TITLE TECH DISPLAY BOX NO. S16664_WIRING

CONNECTOR: 16984
BACKSHELL: 16987
PINS: 16191



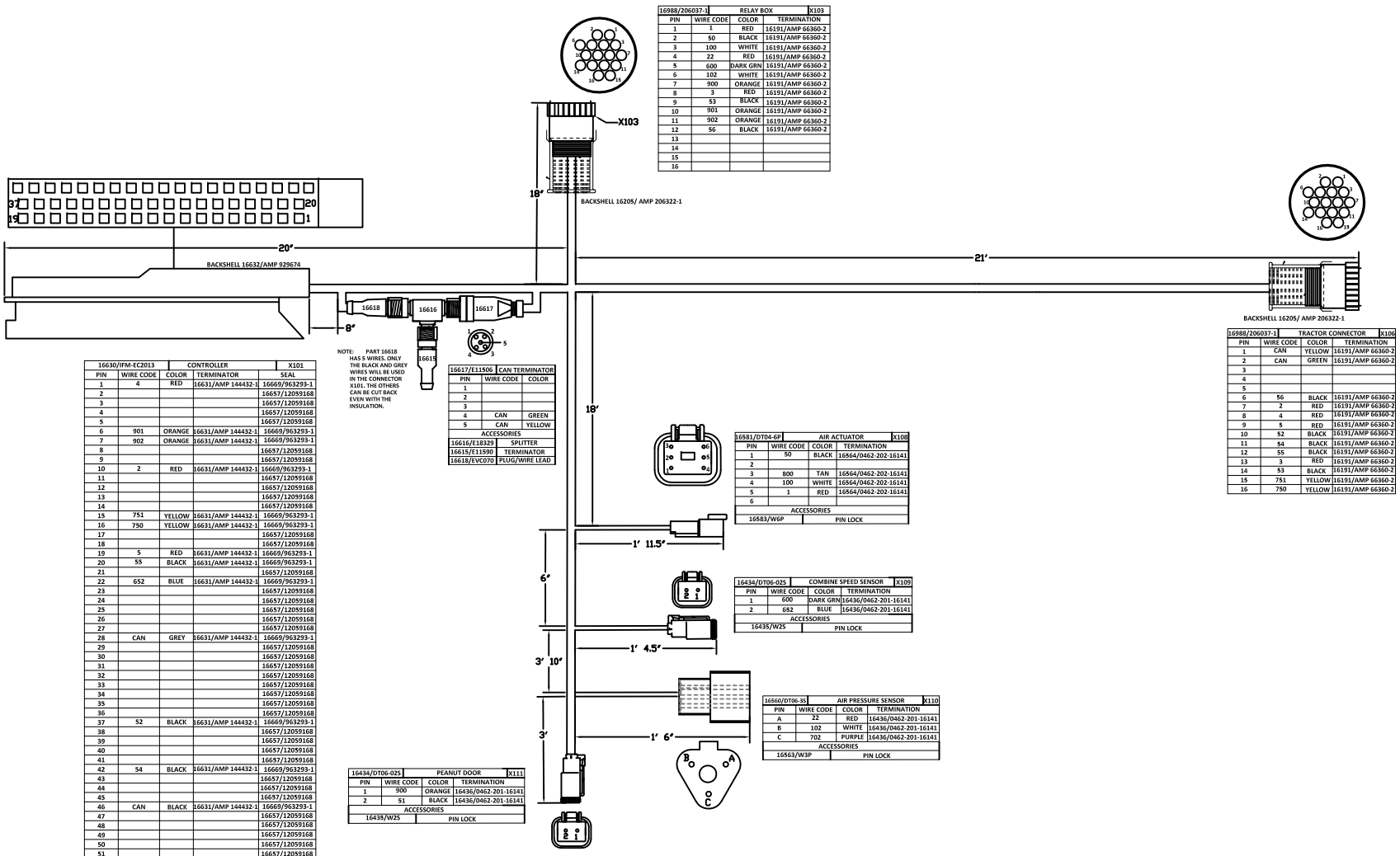


NOTE: CUT BROWN WIRE EVEN WITH SHIELDING

SCALE		REVISIONS	BY	DATE
DATE 11/5/15				
DRAWN BY BAS				
DESIGN BY BAS				

AMADAS INDUSTRIES

TITLE ADAPTER, TECH. DISPLAY NO. 16660_WIRING



16988/206037-1	RELAY BOX		X103
PIN	WIRE CODE	COLOR	TERMINATION
1	1	RED	16191/AMP 66360-2
2	50	BLACK	16191/AMP 66360-2
3	100	WHITE	16191/AMP 66360-2
4	22	RED	16191/AMP 66360-2
5	600	DARK GRN	16191/AMP 66360-2
6	102	WHITE	16191/AMP 66360-2
7	900	ORANGE	16191/AMP 66360-2
8	3	RED	16191/AMP 66360-2
9	53	BLACK	16191/AMP 66360-2
10	901	ORANGE	16191/AMP 66360-2
11	902	ORANGE	16191/AMP 66360-2
12	56	BLACK	16191/AMP 66360-2
13			
14			
15			
16			

16988/206037-1	TRACTOR CONNECTOR		X100
PIN	WIRE CODE	COLOR	TERMINATION
1	CAN	YELLOW	16191/AMP 66360-2
2	CAN	GREEN	16191/AMP 66360-2
3			
4			
5			
6	56	BLACK	16191/AMP 66360-2
7	2	RED	16191/AMP 66360-2
8	4	RED	16191/AMP 66360-2
9	5	RED	16191/AMP 66360-2
10	52	BLACK	16191/AMP 66360-2
11	54	BLACK	16191/AMP 66360-2
12	55	BLACK	16191/AMP 66360-2
13	3	RED	16191/AMP 66360-2
14	53	BLACK	16191/AMP 66360-2
15	751	YELLOW	16191/AMP 66360-2
16	750	YELLOW	16191/AMP 66360-2

16630/IFM-EC2013	CONTROLLER			X101
PIN	WIRE CODE	COLOR	TERMINATOR	SEAL
1	4	RED	16631/AMP 144432-1	16669/963293-1
2				16657/12059168
3				16657/12059168
4				16657/12059168
5				16657/12059168
6	901	ORANGE	16631/AMP 144432-1	16669/963293-1
7	902	ORANGE	16631/AMP 144432-1	16669/963293-1
8				16657/12059168
9				16657/12059168
10	2	RED	16631/AMP 144432-1	16669/963293-1
11				16657/12059168
12				16657/12059168
13				16657/12059168
14				16657/12059168
15	751	YELLOW	16631/AMP 144432-1	16669/963293-1
16	750	YELLOW	16631/AMP 144432-1	16669/963293-1
17				16657/12059168
18				16657/12059168
19	5	RED	16631/AMP 144432-1	16669/963293-1
20	53	BLACK	16631/AMP 144432-1	16669/963293-1
21				16657/12059168
22	652	BLUE	16631/AMP 144432-1	16669/963293-1
23				16657/12059168
24				16657/12059168
25				16657/12059168
26				16657/12059168
27				16657/12059168
28	CAN	GREY	16631/AMP 144432-1	16669/963293-1
29				16657/12059168
30				16657/12059168
31				16657/12059168
32				16657/12059168
33				16657/12059168
34				16657/12059168
35				16657/12059168
36				16657/12059168
37	52	BLACK	16631/AMP 144432-1	16669/963293-1
38				16657/12059168
39				16657/12059168
40				16657/12059168
41				16657/12059168
42	54	BLACK	16631/AMP 144432-1	16669/963293-1
43				16657/12059168
44				16657/12059168
45				16657/12059168
46	CAN	BLACK	16631/AMP 144432-1	16669/963293-1
47				16657/12059168
48				16657/12059168
49				16657/12059168
50				16657/12059168
51				16657/12059168
52	51	BLACK	16631/AMP 144432-1	16669/963293-1
53	800	TAN	16631/AMP 144432-1	16669/963293-1
54	702	PURPLE	16631/AMP 144432-1	16669/963293-1
55				16657/12059168

16617/E11506	CAN TERMINATOR	
PIN	WIRE CODE	COLOR
1		
2		
3		
4	CAN	GREEN
5	CAN	YELLOW
ACCESSORIES		
16616/E18325	SPLITTER	
16615/E11590	TERMINATOR	
16618/EVC070	PLUG/WIRE LEAD	

16581/DT04-6P	AIR ACTUATOR		X108
PIN	WIRE CODE	COLOR	TERMINATION
1	50	BLACK	16564/0462-202-16141
2			
3	800	TAN	16564/0462-202-16141
4	100	WHITE	16564/0462-202-16141
5	1	RED	16564/0462-202-16141
6			
ACCESSORIES			
16583/W6P	PIN LOCK		

16434/DT06-02S	COMBINE SPEED SENSOR		X109
PIN	WIRE CODE	COLOR	TERMINATION
1	600	DARK GRN	16436/0462-201-16141
2	652	BLUE	16436/0462-201-16141
ACCESSORIES			
16435/W2S	PIN LOCK		

16560/DT06-3S	AIR PRESSURE SENSOR		X110
PIN	WIRE CODE	COLOR	TERMINATION
A	22	RED	16436/0462-201-16141
B	102	WHITE	16436/0462-201-16141
C	702	PURPLE	16436/0462-201-16141
ACCESSORIES			
16563/W3P	PIN LOCK		

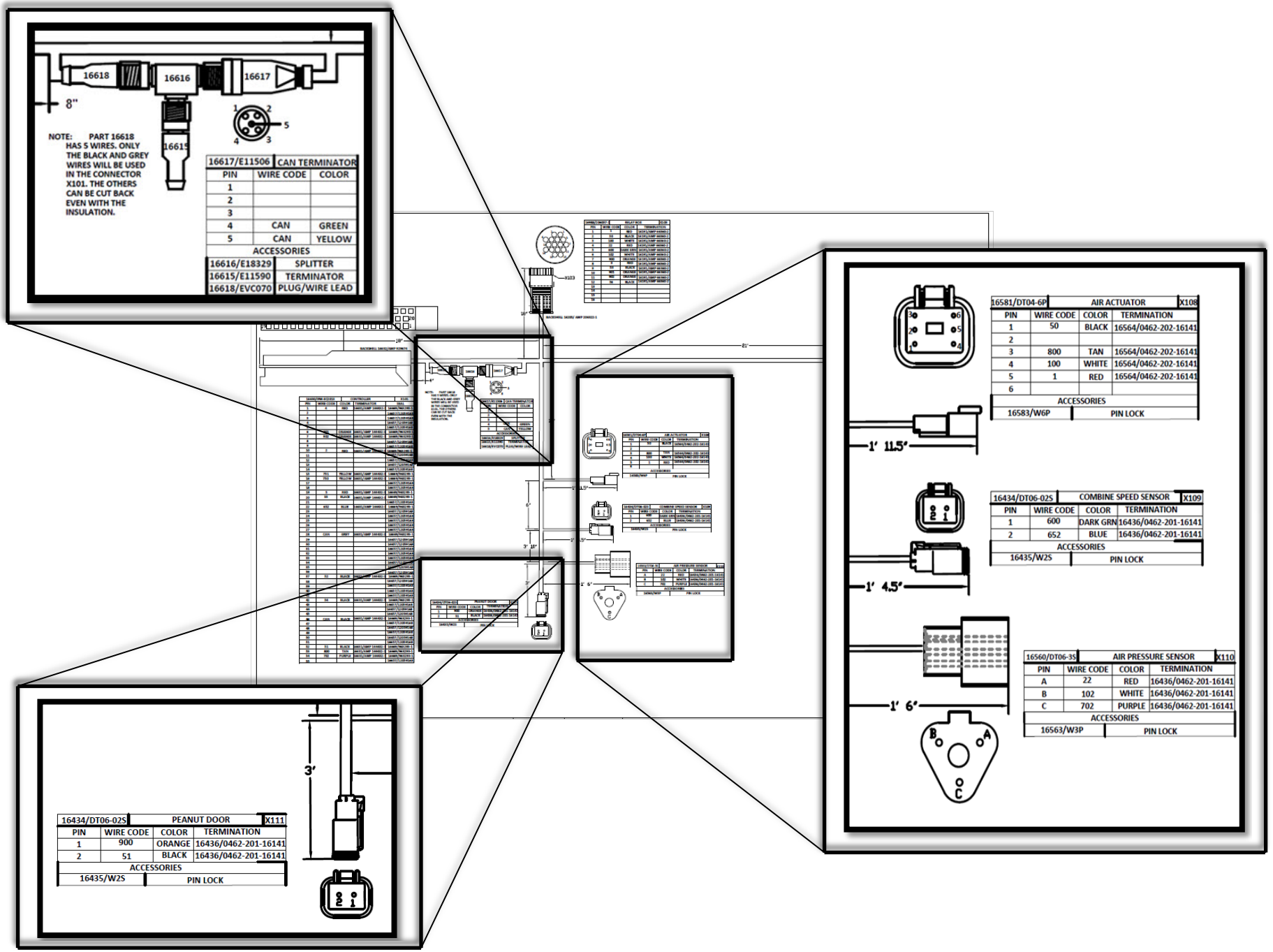
16434/DT06-02S	PEANUT DOOR		X111
PIN	WIRE CODE	COLOR	TERMINATION
1	900	ORANGE	16436/0462-201-16141
2	51	BLACK	16436/0462-201-16141
ACCESSORIES			
16438/W2S	PIN LOCK		

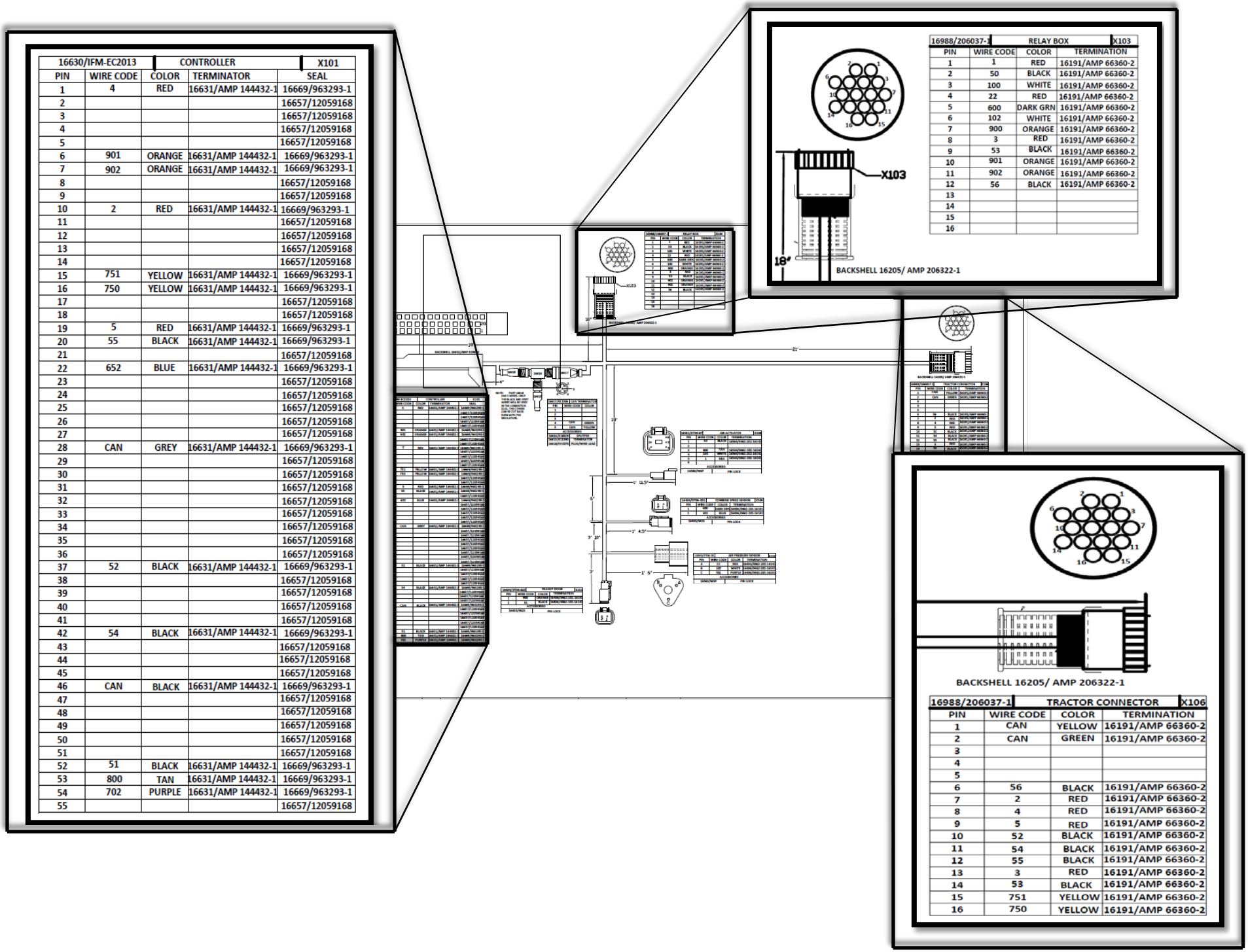
S-1.6

SCALE		REVISIONS	BY	DATE
DATE	11/5/15			
DRAWN BY	BAS			
DESIGN BY	BAS			

AMADAS INDUSTRIES

TITLE **HARNESS, TECH PACKAGE** NO. **16668**


16618
16616
16617
16619
8"
NOTE: PART 16618 HAS 5 WIRES. ONLY THE BLACK AND GREY WIRES WILL BE USED IN THE CONNECTOR X101. THE OTHERS CAN BE CUT BACK EVEN WITH THE INSULATION.
16617/E11506 CAN TERMINATOR
PIN WIRE CODE COLOR
1
2
3
4 CAN GREEN
5 CAN YELLOW
ACCESSORIES
16616/E18329 SPLITTER
16615/E11590 TERMINATOR
16618/EVC070 PLUG/WIRE LEAD
16581/DT04-6P AIR ACTUATOR X108
PIN WIRE CODE COLOR TERMINATION
1 50 BLACK 16564/0462-202-16141
2
3 800 TAN 16564/0462-202-16141
4 100 WHITE 16564/0462-202-16141
5 1 RED 16564/0462-202-16141
6
ACCESSORIES
16583/W6P PIN LOCK
1' 11.5"
16434/DT06-02S COMBINE SPEED SENSOR X109
PIN WIRE CODE COLOR TERMINATION
1 600 DARK GRN 16436/0462-201-16141
2 652 BLUE 16436/0462-201-16141
ACCESSORIES
16435/W2S PIN LOCK
1' 4.5"
16560/DT06-3S AIR PRESSURE SENSOR X110
PIN WIRE CODE COLOR TERMINATION
A 22 RED 16436/0462-201-16141
B 102 WHITE 16436/0462-201-16141
C 702 PURPLE 16436/0462-201-16141
ACCESSORIES
16563/W3P PIN LOCK
1' 6"
16434/DT06-02S PEANUT DOOR X111
PIN WIRE CODE COLOR TERMINATION
1 900 ORANGE 16436/0462-201-16141
2 51 BLACK 16436/0462-201-16141
ACCESSORIES
16435/W2S PIN LOCK
3'



16630/IFM-EC2013	CONTROLLER			X101
PIN	WIRE CODE	COLOR	TERMINATOR	SEAL
1	4	RED	16631/AMP 144432-1	16669/963293-1
2				16657/12059168
3				16657/12059168
4				16657/12059168
5				16657/12059168
6	901	ORANGE	16631/AMP 144432-1	16669/963293-1
7	902	ORANGE	16631/AMP 144432-1	16669/963293-1
8				16657/12059168
9				16657/12059168
10	2	RED	16631/AMP 144432-1	16669/963293-1
11				16657/12059168
12				16657/12059168
13				16657/12059168
14				16657/12059168
15	751	YELLOW	16631/AMP 144432-1	16669/963293-1
16	750	YELLOW	16631/AMP 144432-1	16669/963293-1
17				16657/12059168
18				16657/12059168
19	5	RED	16631/AMP 144432-1	16669/963293-1
20	55	BLACK	16631/AMP 144432-1	16669/963293-1
21				16657/12059168
22	652	BLUE	16631/AMP 144432-1	16669/963293-1
23				16657/12059168
24				16657/12059168
25				16657/12059168
26				16657/12059168
27				16657/12059168
28	CAN	GREY	16631/AMP 144432-1	16669/963293-1
29				16657/12059168
30				16657/12059168
31				16657/12059168
32				16657/12059168
33				16657/12059168
34				16657/12059168
35				16657/12059168
36				16657/12059168
37	52	BLACK	16631/AMP 144432-1	16669/963293-1
38				16657/12059168
39				16657/12059168
40				16657/12059168
41				16657/12059168
42	54	BLACK	16631/AMP 144432-1	16669/963293-1
43				16657/12059168
44				16657/12059168
45				16657/12059168
46	CAN	BLACK	16631/AMP 144432-1	16669/963293-1
47				16657/12059168
48				16657/12059168
49				16657/12059168
50				16657/12059168
51				16657/12059168
52	51	BLACK	16631/AMP 144432-1	16669/963293-1
53	800	TAN	16631/AMP 144432-1	16669/963293-1
54	702	PURPLE	16631/AMP 144432-1	16669/963293-1
55				16657/12059168

16988/206037-1	RELAY BOX			X103
PIN	WIRE CODE	COLOR	TERMINATION	
1	1	RED	16191/AMP 66360-2	
2	50	BLACK	16191/AMP 66360-2	
3	100	WHITE	16191/AMP 66360-2	
4	22	RED	16191/AMP 66360-2	
5	600	DARK GRN	16191/AMP 66360-2	
6	102	WHITE	16191/AMP 66360-2	
7	900	ORANGE	16191/AMP 66360-2	
8	3	RED	16191/AMP 66360-2	
9	53	BLACK	16191/AMP 66360-2	
10	901	ORANGE	16191/AMP 66360-2	
11	902	ORANGE	16191/AMP 66360-2	
12	56	BLACK	16191/AMP 66360-2	
13				
14				
15				
16				

X103

18"

BACKSHELL 16205/ AMP 206322-1

BACKSHELL 16205/ AMP 206322-1

16988/206037-1	TRACTOR CONNECTOR			X106
PIN	WIRE CODE	COLOR	TERMINATION	
1	CAN	YELLOW	16191/AMP 66360-2	
2	CAN	GREEN	16191/AMP 66360-2	
3				
4				
5				
6	56	BLACK	16191/AMP 66360-2	
7	2	RED	16191/AMP 66360-2	
8	4	RED	16191/AMP 66360-2	
9	5	RED	16191/AMP 66360-2	
10	52	BLACK	16191/AMP 66360-2	
11	54	BLACK	16191/AMP 66360-2	
12	55	BLACK	16191/AMP 66360-2	
13	3	RED	16191/AMP 66360-2	
14	53	BLACK	16191/AMP 66360-2	
15	751	YELLOW	16191/AMP 66360-2	
16	750	YELLOW	16191/AMP 66360-2	

Section 2

Connector Terminals

16662 Connector.....S-2.2
16664 Connector.....S-2.3
16668 Connector..... S-2.4a – S-2.4c

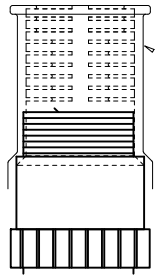
Assembly 16662

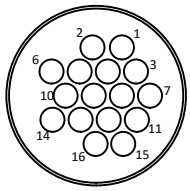
CONNECTOR TERMINALS

(1)

16988/206037-1	RELAY BOX		X103
PIN	WIRE CODE	COLOR	TERMINATION
1	1	RED	16191/AMP 66360-2
2	50	BLACK	16191/AMP 66360-2
3	100	WHITE	16191/AMP 66360-2
4	22	YELLOW	16191/AMP 66360-2
5	600	DARK GRN	16191/AMP 66360-2
6	102	WHITE	16191/AMP 66360-2
7	900	ORANGE	16191/AMP 66360-2
8	3	RED	16191/AMP 66360-2
9	53	BLACK	16191/AMP 66360-2
10	901	ORANGE	16191/AMP 66360-2
11	902	ORANGE	16191/AMP 66360-2
12	56	BLACK	16191/AMP 66360-2
13			
14			
15			
16			
ACCESSORIES			
	BACKSHELL	16205/ AMP 206322-1	

X103



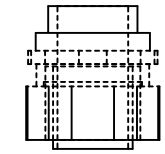


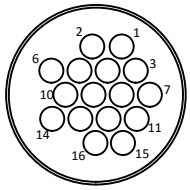
CONNECTOR TERMINALS

(1)

16988/206037-1	TRACTOR CONNECTOR		X106
PIN	WIRE CODE	COLOR	TERMINATION
1	CAN	YELLOW	16191/AMP 66360-2
2	CAN	GREEN	16191/AMP 66360-2
3			
4			
5			
6	56	BLACK	16191/AMP 66360-2
7	2	RED	16191/AMP 66360-2
8	4	RED	16191/AMP 66360-2
9	5	RED	16191/AMP 66360-2
10	52	BLACK	16191/AMP 66360-2
11	54	BLACK	16191/AMP 66360-2
12	55	BLACK	16191/AMP 66360-2
13	3	RED	16191/AMP 66360-2
14	53	BLACK	16191/AMP 66360-2
15	751	YELLOW	16191/AMP 66360-2
16	750	YELLOW	16191/AMP 66360-2
ACCESSORIES			
	BACKSHELL	16205/ AMP 206322-1	

X106

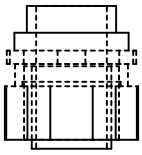


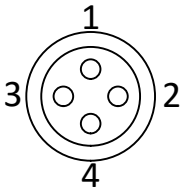


(2)

16985/AMP 206061-1	DISPLAY CONNECTOR		X107
PIN	WIRE CODE	COLOR	TERMINATION
1	CAN	YELLOW	16191/AMP 66360-2
2	CAN	GREEN	16191/AMP 66360-2
3	6	RED	16191/AMP 66360-2
4	57	BLACK	16191/AMP 66360-2

X107





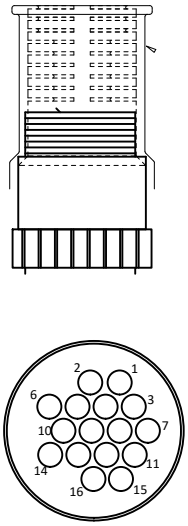
Harness 16668

CONNECTOR TERMINALS

(1)

16988/206037-1	TRACTOR CONNECTOR		X106
PIN	WIRE CODE	COLOR	TERMINATION
1	CAN	YELLOW	16191/AMP 66360-2
2	CAN	GREEN	16191/AMP 66360-2
3			
4			
5			
6	56	BLACK	16191/AMP 66360-2
7	2	RED	16191/AMP 66360-2
8	4	RED	16191/AMP 66360-2
9	5	RED	16191/AMP 66360-2
10	52	BLACK	16191/AMP 66360-2
11	54	BLACK	16191/AMP 66360-2
12	55	BLACK	16191/AMP 66360-2
13	3	RED	16191/AMP 66360-2
14	53	BLACK	16191/AMP 66360-2
15	751	YELLOW	16191/AMP 66360-2
16	750	YELLOW	16191/AMP 66360-2
ACCESSORIES			
	BACKSHELL	16205/ AMP 206322-1	

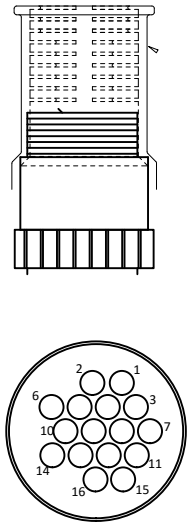
X106



(2)

16988/206037-1	RELAY BOX		X103
PIN	WIRE CODE	COLOR	TERMINATION
1	1	RED	16191/AMP 66360-2
2	50	BLACK	16191/AMP 66360-2
3	100	WHITE	16191/AMP 66360-2
4	22	RED	16191/AMP 66360-2
5	600	DARK GRN	16191/AMP 66360-2
6	102	WHITE	16191/AMP 66360-2
7	900	ORANGE	16191/AMP 66360-2
8	3	RED	16191/AMP 66360-2
9	53	BLACK	16191/AMP 66360-2
10	901	ORANGE	16191/AMP 66360-2
11	902	ORANGE	16191/AMP 66360-2
12	56	BLACK	16191/AMP 66360-2
13			
14			
15			
16			
ACCESSORIES			
	BACKSHELL	16205/ AMP 206322-1	

X103

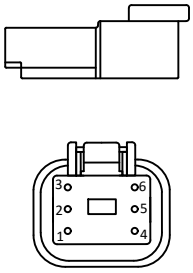


CONNECTOR TERMINALS

(3)

16581/DT04-6P	AIR ACTUATOR		X108
PIN	WIRE CODE	COLOR	TERMINATION
1	50	BLACK	16564/0462-202-16141
2			
3	800	TAN	16564/0462-202-16141
4	100	WHITE	16564/0462-202-16141
5	1	RED	16564/0462-202-16141
6			
ACCESSORIES			
16583/W6P	PIN LOCK		

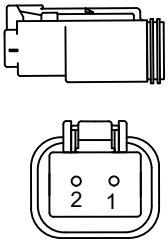
X108



(4)

16434/DT06-02S	COMBINE SPEED SENSOR		X109
PIN	WIRE CODE	COLOR	TERMINATION
1	600	DARK GRN	16436/0462-201-16141
2	652	BLUE	16436/0462-201-16141
ACCESSORIES			
16435/W2S	PIN LOCK		

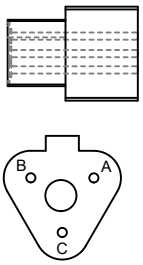
X109



(5)

16560/DT06-3S	AIR PRESSURE SENSOR		X110
PIN	WIRE CODE	COLOR	TERMINATION
A	22	RED	16436/0462-201-16141
B	102	WHITE	16436/0462-201-16141
C	702	PURPLE	16436/0462-201-16141
ACCESSORIES			
16563/W3P	PIN LOCK		

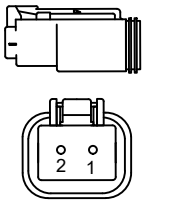
X110



(6)

16434/DT06-02S	PEANUT DOOR		X111
PIN	WIRE CODE	COLOR	TERMINATION
1	900	ORANGE	16436/0462-201-16141
2	51	BLACK	16436/0462-201-16141
ACCESSORIES			
16435/W2S	PIN LOCK		

X111



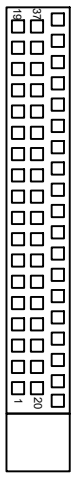
Harness 16668

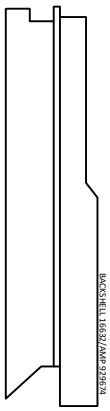
CONNECTOR TERMINALS

(8)

16630/IFM-EC2013		CONTROLLER		X101
PIN	WIRE CODE	COLOR	TERMINATOR	SEAL
1	4	RED	16631/AMP 144432-1	16669/963293-1
2				16657/12059168
3				16657/12059168
4				16657/12059168
5				16657/12059168
6	901	ORANGE	16631/AMP 144432-1	16669/963293-1
7	902	ORANGE	16631/AMP 144432-1	16669/963293-1
8				16657/12059168
9				16657/12059168
10	2	RED	16631/AMP 144432-1	16669/963293-1
11				16657/12059168
12				16657/12059168
13				16657/12059168
14				16657/12059168
15	751	YELLOW	16631/AMP 144432-1	16669/963293-1
16	750	YELLOW	16631/AMP 144432-1	16669/963293-1
17				16657/12059168
18				16657/12059168
19	5	RED	16631/AMP 144432-1	16669/963293-1
20	55	BLACK	16631/AMP 144432-1	16669/963293-1
21				16657/12059168
22	652	BLUE	16631/AMP 144432-1	16669/963293-1
23				16657/12059168
24				16657/12059168
25				16657/12059168
26				16657/12059168
27				16657/12059168
28	CAN	GREY	16631/AMP 144432-1	16669/963293-1
29				16657/12059168
30				16657/12059168
31				16657/12059168
32				16657/12059168
33				16657/12059168
34				16657/12059168
35				16657/12059168
36				16657/12059168
37	52	BLACK	16631/AMP 144432-1	16669/963293-1
38				16657/12059168
39				16657/12059168
40				16657/12059168
41				16657/12059168
42	54	BLACK	16631/AMP 144432-1	16669/963293-1
43				16657/12059168
44				16657/12059168
45				16657/12059168
46	CAN	BLACK	16631/AMP 144432-1	16669/963293-1
47				16657/12059168
48				16657/12059168
49				16657/12059168
50				16657/12059168
51				16657/12059168
52	51	BLACK	16631/AMP 144432-1	16669/963293-1
53	800	TAN	16631/AMP 144432-1	16669/963293-1
54	702	PURPLE	16631/AMP 144432-1	16669/963293-1
55				16657/12059168

X101





Section 3

Circuit Codes

S16664 Display Box ..... S-3.2a – S-3.2b
S16662 Relay Box..... S-3.3a – S-3.3b
16668 Main Harness ..... S-3.4a – S-3.4b
Wire Lengths S-3.5

Circuit Codes for Display Box #S16664	
Circuit Code # and Function	
CC# 1-102	
2 Controller Power Supply	Red
(X106, PIN 7), (Fuse Block, PIN 2)	
3 Relay Box Power	Red
(X106, PIN 13), (Terminal, PORT 17)	
4 Controller Input Supply 1	Red
(X106, PIN 8), (Terminal, PORT 15)	
5 Controller Input Supply 2	Red
(X106, PIN 9), (Terminal, PORT 16)	
6 Display Power Supply	Red
(X107, PIN 3), (Fuse Block, PIN 3)	
32 Main Power Supply	Red
(JR78053, PIN A), (Fuse Block, PIN 1)	
33 Terminal Fused Power Supply	Red
(Fuse Block, PIN 4), (Terminal, PORT 6)	
34 Controller Fuse Supply	Red
(Fuse Block, PIN 5), (Terminal, PORT 7)	
35 Display Fuse Supply	Red
(Fuse Block, PIN 6), (Terminal, PORT 8)	
52 Controller Ground	Black
(X106, PIN 10), (Terminal, PORT 4)	
53 Relay Box Ground	Black
(X106, PIN 14), (Terminal, PORT 2)	
54 Controller Input Ground 1	Black
(X106, PIN 11), (Terminal, PORT 12)	
55 Controller Input Ground 2	Black
(X106, PIN 12), (Terminal, PORT 3)	
56 Relay Ground	Black
(X106, PIN 6), (Terminal, PORT 1)	
57 Display Ground	Black
(X107, PIN 4), (Terminal, PORT 13)	

Circuit Code # and Function	
CC# 600-900 and CAN	
61 Main Ground	Black
(JR78053, PIN B), (Terminal, PORT 11)	
62 Alarm Ground	Black
(Alarm, PIN -), (Terminal, PORT 14), (Terminal, PORT 13)	
751 Alarm Output	Yellow
(X106, PIN 15), (Alarm, PIN +), (Terminal, PORT 18)	
CAN Can Low	Yellow
(X106, PIN 1), (X107, PIN 1)	
CAN Can High	Green
(X106, PIN 2), (X107, PIN 2)	
120 OHM Resistor	
(Terminal, PORT 5), (Terminal, PORT 9)	

Circuit Codes for Relay Box #S16662	
Circuit Code # and Function	
CC# 1-102	
1 Actuator Up Output	Red
(X103, PIN 1), (Relay 2, PIN 87), (Relay 3, PIN 87A)	
3 Relay Box Power	Red
(X103, PIN 8), (Terminal, PORT 2)	
22 Air Pressure Supply	Yellow
(X103, PIN 4), (5V Supply)	
30 5v Power Supply	Red
(5v Supply), (Terminal, PORT 1)	
31 Relay Power Supply	Red
(Terminal, PORT 7), (Relay 1, PIN 30)	
50 Actuator Down Output	Black
(X103, PIN 2), (Relay 1, PIN 87), (Relay 3, PIN 87)	
53 Relay Box Ground	Black
(X103, PIN 9), (Terminal, PORT 5)	
56 Relay Ground	Black
(X103, PIN 12), (Relay 1, PIN 86), (Relay 2, PIN 86), (Relay 3, PIN 86), (Relay 3, PIN 30)	
60 5V Power Supply Ground	Black
(Terminal, PORT 10), (5V Converter)	
100 Actuator Potentiometer Ground	White
(X103, PIN 3), (Terminal, PORT 4)	
102 Air Pressure Ground	White
(X103, PIN 6), (Terminal, PORT 9)	
600 Speed Sensor Ground	Green
(X103, PIN 5), (Terminal, PORT 6)	
601 Relay Jumper	Green
(Relay 1, PIN 87A), (Relay 2, PIN 30)	
900 Peanut Door Ground	Orange
(X103, PIN 7), (Terminal, PORT 3)	
901 Actuator Down Command	Orange
(X103, PIN 10), (Relay 2, PIN 85), (Relay 3, PIN 85)	

Circuit Code # and Function		
CC# 600-900 and CAN		
902 Actuator Up Command		Orange
(X103, PIN 11), (Relay 1, PIN 85)		

Circuit Codes for Main Harness #16668	
Circuit Code # and Function	
CC# 1-102	
1 Actuator Up Output	Red
(x108, PIN 5), (X103, PIN 1)	
2 Controller Power Supply	Red
(X106, PIN 7), (X101, PIN 10)	
3 Relay Box Power	Red
(X103, PIN 8), (X106, PIN 13)	
4 Controller Input Supply 1	Red
(X101, PIN 1), (X106, PIN 8)	
5 Controller Input Supply 2	Red
(X106, PIN 9), (X101, PIN 19)	
22 Air Pressure Supply	Red
(X110, PIN A), (X103, PIN 4)	
50 Actuator Down Output	Black
(X108, PIN 1), (X103, PIN 2)	
51 Peanut Door Signal	Black
(X101, PIN 52), (X111, PIN 2)	
52 Controller Ground	Black
(X101, PIN 37), (X106, PIN 10)	
53 Relay Box Ground	Black
(X106, PIN 14), (X103, PIN 9)	
54 Controller Input Ground 1	Black
(X101, PIN 42), (X106, PIN 11)	
55 Controller Input Ground 2	Black
(X106, PIN 12), (X101, PIN 20)	
56 Relay Ground	Black
(X103, PIN 12), (X106, PIN 6)	
100 Actuator Potentiometer Ground	White
(X108, PIN 4), (X103, PIN 3)	
102 Air Pressure Ground	White
(X103, PIN 6), (X110, PIN B)	

Circuit Code # and Function	
CC# 600-900 and CAN	
600 Speed Sensor Ground	Green
(X109, PIN 1), (X103, PIN 5)	
652 Speed Sensor Signal	Blue
(X101, PIN 22), (X109, PIN 2)	
702 Air Pressure Signal	Purple
(X110, Pin C), (X101, PIN 54)	
750 Spare	Yellow
(X106, PIN 16), (X101, PIN 16)	
751 Alarm Output	Yellow
(X106, PIN 15), (X101, PIN 15)	
800 Actuator Potentiometer Signal	Tan
(X108, PIN 3), (X101, PIN 53)	
900 Peanut Door Ground	Orange
(X111, PIN 1), (X103 PIN 7)	
901 Actuator Down Command	Orange
(X103, PIN 10), (X101, PIN 6)	
902 Actuator Up Command	Orange
(X103, PIN 11), (X101, PIN 7)	
CAN Can Low	Yellow
(X106, PIN 1), (Terminator, Pin 5)	
CAN Can High	Green
(X106, PIN 2), (Terminator, Pin 4)	
CAN Controller High	Black
(X101, PIN 46), (Terminator)	
CAN Controller Low	Grey
(X101, PIN 28), (Terminator)	

DISPLAY BOX

Quantity	Color	Length (in)
1	RED	20
1	RED	8
3	RED	4
1	RED	3.5
2	RED	2.5
1	RED	2
1	GREEN	4.75
1	YELLOW	4.75
1	YELLOW	4
1	YELLOW	3
1	BLACK	15
1	BLACK	9.5
3	BLACK	9
1	BLACK	6.5
2	BLACK	4.5

RELAY BOX

1	RED	12
1	RED	6
2	RED	3
1	WHITE	5
1	WHITE	2.5
1	ORANGE	9
1	ORANGE	7
2	ORANGE	3
1	GREEN	6
1	GREEN	3
1	BLACK	6
2	BLACK	5
2	BLACK	3
2	BLACK	2

Section 4

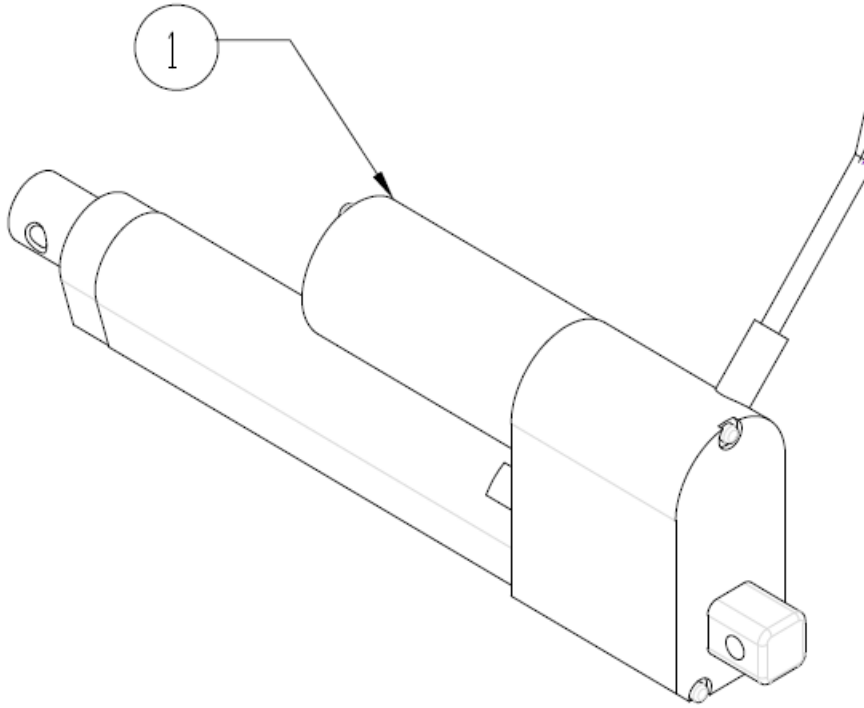
Drawings

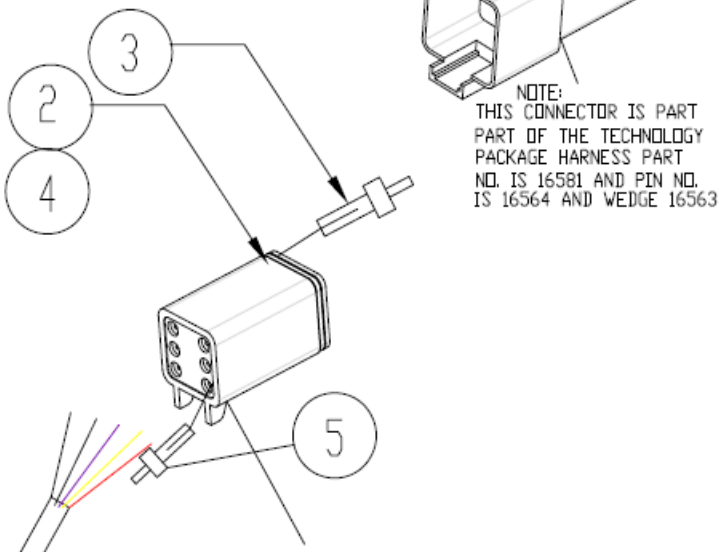
S16567 Actuator Feedback Assembly S-4.2
16632 Speed Sensor Adapter S-4.3
16670 Limit Switch w/Turning Lever Assembly S-4.4
16671 Tech Package Power Supply Harness S-4.5
S16566 Air Pressure Sensor Assembly S-4.6

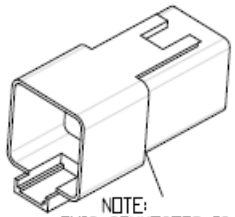
S16567

BILL OF MATERIAL

ITEM	PART NUMBER	DISCRIPTION	VENDOR NUMBER	QTY.	UOM
1	16567	FEED BACK ACTUATOR	MI D012 0100 A 04 LP	1	EA.
2	16580	PLUG 6 WAY	DT 06-6 S	1	EA.
3	16565	SOCKET	0460-202-16141	5	EA.
4	16582	WEDGE	W 3 S	1	EA.
5	16690	PLUG, SEALING	C05-07-C-C	1	EA.

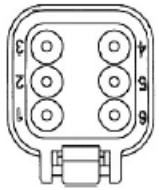






NOTE:
THIS CONNECTOR IS PART PART OF THE TECHNOLOGY PACKAGE HARNESS PART NO. IS 16581 AND PIN NO. IS 16564 AND WEDGE 16563

X166	GLM HARNESS			PE_12146045
PIN	WIRE CODE	COLOR	SEAL	TERM/PLUG
1		DIN-BLK	16582	16565
2		DIN-WHT		16565
3		DIN-PUR		16565
4		DIN-YEL		16565
5		DIN-RED		16565
6			16690	
ACCESSORIES				
TPA				



S-4.2

SCALE none		REVISIONS	BY	DATE
DATE 4-21-15				
DR'N BY WAS				
SK'D BY WW				

AMADAS INDUSTRIES

TITLE ASSEMBLY, ACTUATOR FEEDBACK

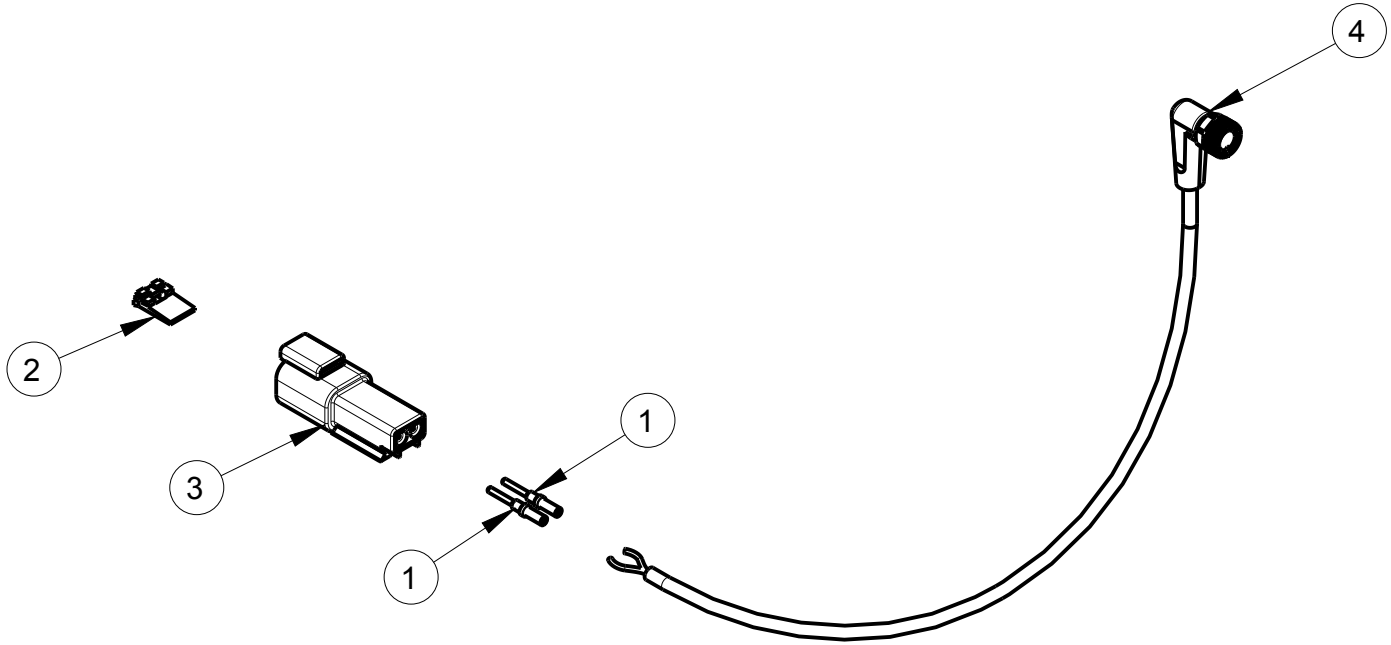
NO. S16567

16632

BILL OF MATERIALS

ITEM	PART NUMBER	QTY
1	16564	2
2	16613	1
3	16621	1
4	16623	1

CUT WIRE ON 16623 TO 12" LONG.
BROWN WIRE TO PIN 1,
BLACK WIRE TO PIN 2.
CUT BLUE WIRE EVEN WITH INSULATION.



Q+2,1

SCALE	0.500		REVISIONS	BY	DATE
DATE	Nov-17-15				
DRAWN BY	CHB				
DESIGN BY	BAS	1	ECN #4356	LMH/BAS	1/7/16

AMADAS INDUSTRIES

TOLERANCE: ± .5° OR .031" UNLESS OTHERWISE NOTED

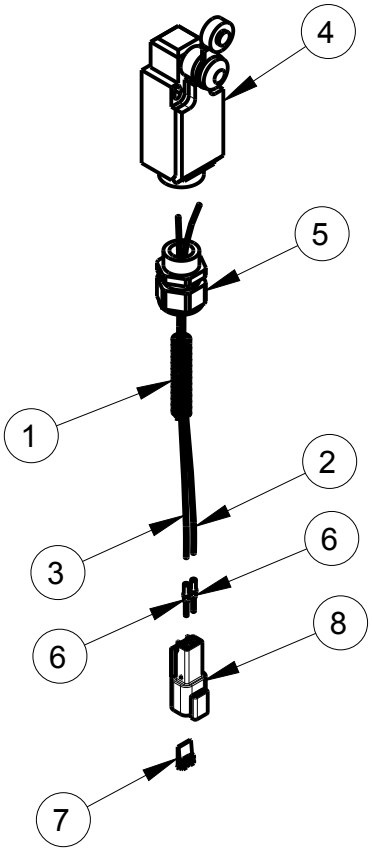
TITLE: ADAPTER, SPEED SENSOR

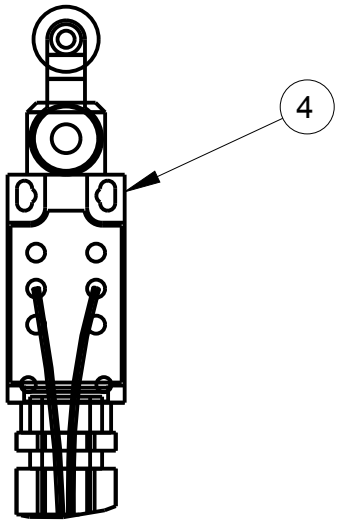
NO. 16632

16670

BILL OF MATERIALS

ITEM	PART NUMBER	QTY SHOWN	QTY REQ'D
1	16196	1	A/R
2	16519	1	7"
3	16519	1	7"
4	16550	1	
5	16551	1	
6	16564	2	
7	16613	1	
8	16621	1	





SCALE 0.500

ATTACH WIRES TO THE
N.C. CONTACTS SHOWN.

S-4.4

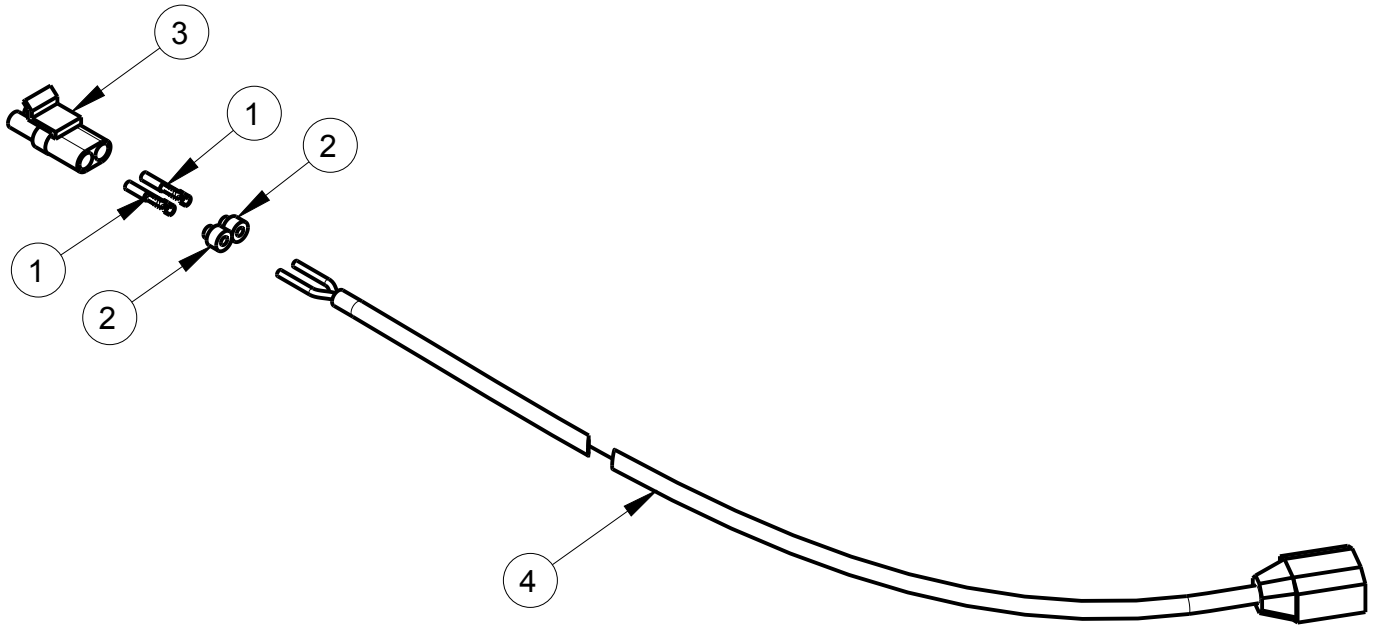
SCALE 0.250		REVISIONS	BY	DATE	AMADAS INDUSTRIES
DATE Nov-23-15					TOLERANCE: ± .5° OR .031" UNLESS OTHERWISE NOTED
DRAWN BY CHB					TITLE: ASSEMBLY, LIMIT SWITCH W/TURNING LEVER — NO. 16670
DESIGN BY WAS					

16671

BILL OF MATERIALS

ITEM	PART NUMBER	QTY
1	16210	2
2	16211	2
3	JRE12363	1
4	JRE67013	1

ORANGE WIRE TO PIN A.
BLACK WIRE TO PIN B .
CUT RED WIRE EVEN WITH INSULATION.



S-4.5

SCALE	0.375		REVISIONS	BY	DATE
DATE	Dec-03-15				
DRAWN BY	CHB				
DESIGN BY	BAS				

AMADAS INDUSTRIES

TOLERANCE: ± .5° OR .031" UNLESS OTHERWISE NOTED

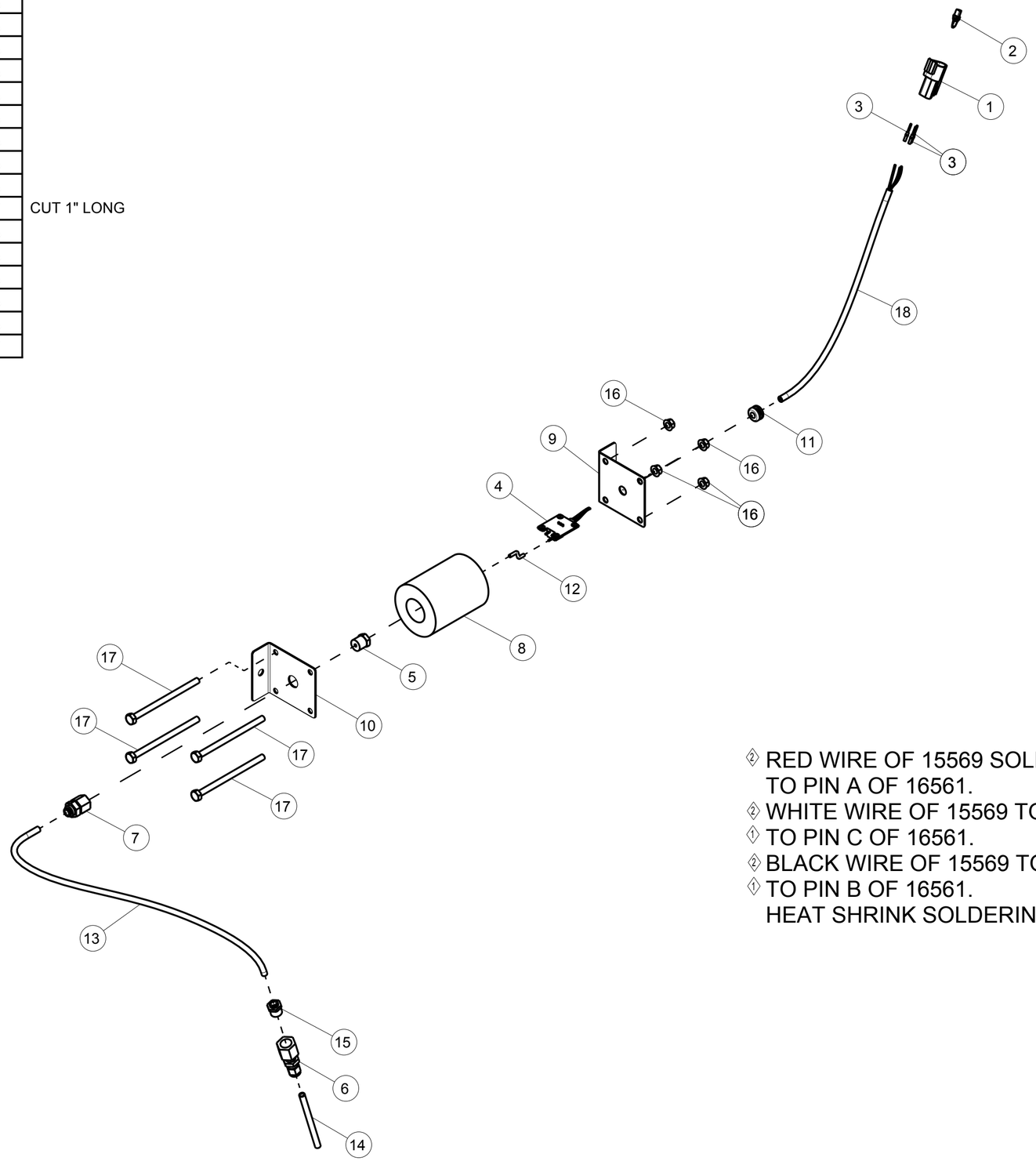
TITLE: HARNESS, TECH. PACKAGE POWER SUPPLY

NO. 16671

S16566

BILL OF MATERIALS

ITEM	PART NUMBER	QTY SHOWN	QTY REQ'D	UOM	
1	16561	1		EA	
2	16563	1		EA	
3	16564	3		EA	
4	16566	1		EA	
5	16568	1		EA	
6	16569	1		EA	
7	16570	1		EA	
8	16574	1		EA	
9	16575	1		EA	
10	16576	1		EA	
11	16579	1		EA	
12	16571	1	.083	FT	CUT 1" LONG
13	16585	1		EA	
14	16586	1		EA	
15	16608	1		EA	
16	G126178	4		EA	
17	G180056	4		EA	
18	15569	1	1.0	FT	



② RED WIRE OF 15569 SOLDERED TO RED WIRE OF 16566, TO PIN A OF 16561.
② WHITE WIRE OF 15569 TO WHITE WIRE OF 16566, ① TO PIN C OF 16561.
② BLACK WIRE OF 15569 TO BLACK WIRE OF 16566, ① TO PIN B OF 16561.
HEAT SHRINK SOLDERING JOINTS.

S-4.6

AMADAS INDUSTRIES

TOLERANCE: ± .50° OR .031" UNLESS OTHERWISE NOTED

		REVISIONS	BY	DATE
SCALE 0.250				
DATE Dec-01-15				
DRAWN CHB	②	ECN #4439	JSP/LMH	1/10/17
DESIGN BY WAS	①	ECN #4356	BAS/LMH	1/6/16

TITLE: ASSEMBLY, AIR PRESSURE

NO. S16566

Section 5

"Peanut Tech" Monitoring and Control

Key Features.....S-5.2
Home Screen Functions and Controls.....S-5.3
Help/Basic Instruction Screens S-5.4
All Information Screen and Function and Controls S-5.5
Custom Air Pressure Settings S-5.6
Calibrate Actuator.....S-5.9

Key Features

As part of Amadas' commitment to continuous product improvement, we are pleased to introduce the ***"Peanut Tech"*** package with the following innovations:

• **Combine Speed** is monitored and displayed to the operator. If the speed drops below 85% or goes beyond 110% of the design speed, both a visual and audible alarm activates.

• **In-cab control and position display of the Elevator Air Control actuator** meters the volume of air in the peanut elevator duct (shown as Duct Air).

• **Duct Air** can be controlled in two different ways:

Manual - Manual mode allows the operator to adjust the air as needed based on observed peanut flow to the basket.

Automatic - In Auto Mode, the controller monitors duct air pressure, combine speed, and elevator air actuator position to determine the optimum damper setting.

As air pressure increases, the damper is opened; when pressure decreases, the damper closes. The goal is to apply as much air as needed but not so much as to create LSKs.

Important Note: *For* **Automatic** *mode to function correctly, the air pressure low and high set points may need adjusting* ***IF*** *any component from the elevator, air, or monitoring system [air pressure sensor, duct work, elevator fan, etc.] is changed or replaced. See* ***Custom Air Pressure Settings.***

• **Display and alarm of Peanut Duct Load:**

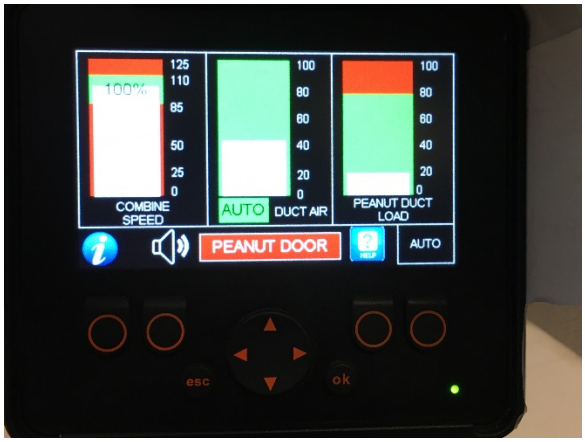
The controller monitors duct air pressure, combine speed, and elevator air actuator position to determine the amount of load placed on the Peanut Elevator system.

This aids in determining harvest speed and helps prevent overloading the combine. When the load reaches 80% of design load, a visual and audible alarm will activate to warn the operator the system is reaching capacity and therefore prevent "plugging the duct."

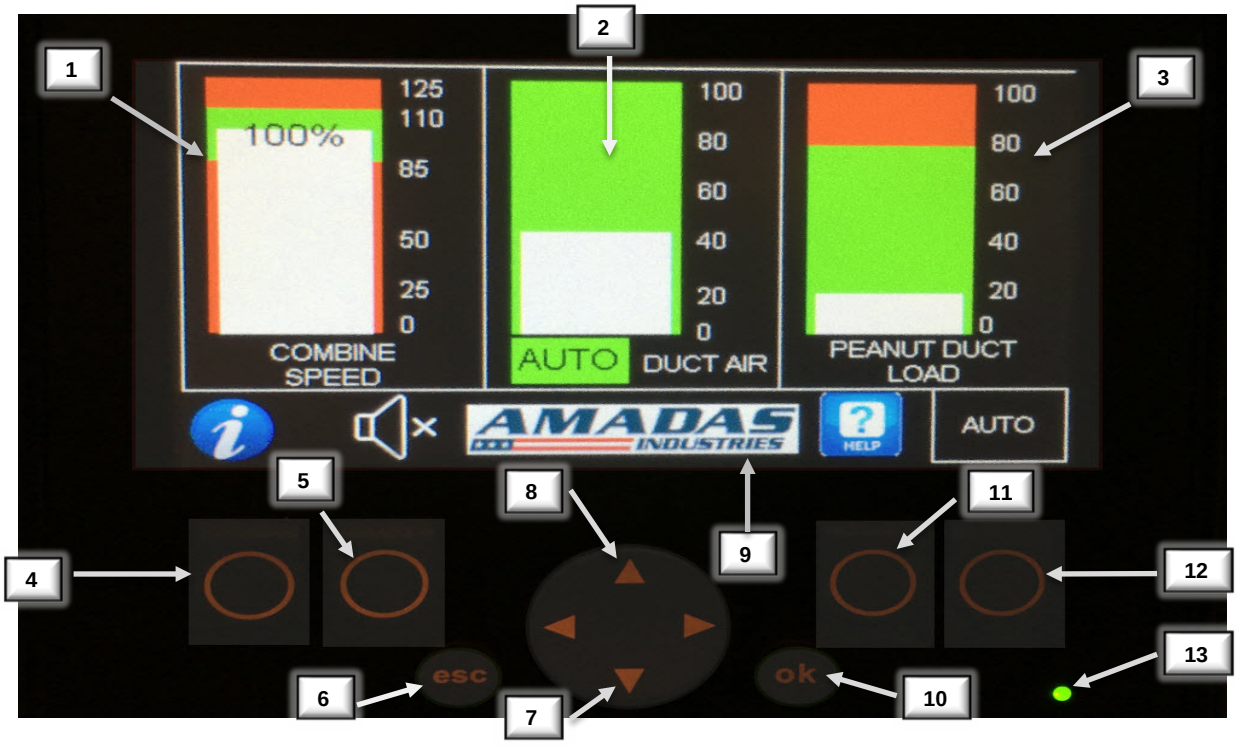
• **Peanut Door Alarm:**

The Peanut Door is located on the left side of the combine above the collection auger. It will open to release peanuts that continue to be harvested when the elevator duct "plugs" due to overloading or the introduction of foreign objects.

It does so to reduce machine damage but peanut loss will continue until the combine is stopped. When this happens, the Amadas Logo will be replaced with a flashing "Peanut Door" display along with an audible alarm.



• **Resettable Service Hours** function keeps track of combine run time since last service was performed.



"Peanut Tech" Home Screen Functions and Controls

1. Displays **combine speed** and background flashes if combine speed is below 85% or above 110% **design speed.**

2. Displays **position of the actuator** that controls the **elevator air**.

3. Displays **peanut duct load** and will flash a visual and sound an audible alarm once it reaches 80% of **design load.**

4. Accesses the **all information screen** from the **home screen**. Provides more detailed sensor and settings readings.

5. **Mutes** the audible portion of an **alarm** for **5 minutes.**
Unmutes the audible portion of an **alarm** during the **5 minutes.**

6. Returns to the **home screen** from the **help screen**. [Button 10 also]

7. **Decreases elevator air** in the manual mode.

8. **Increases elevator air** in the manual mode.

9. Displays **"Peanut Door"** if peanut door opens.

10. Returns to the **home screen** from the **help screen.** [Button 6 also]

11. Accesses the **help** (basic instructions) from the **home screen.**

12. Toggles the **elevator control** from **manual** to **auto**. The current mode is displayed above the button.

13. Indicates **power** is being supplied to the controller.

"Peanut Tech" Help/Basic Instruction Screens

View 1
This screen displays basic instructions for the *"Peanut Tech"* System

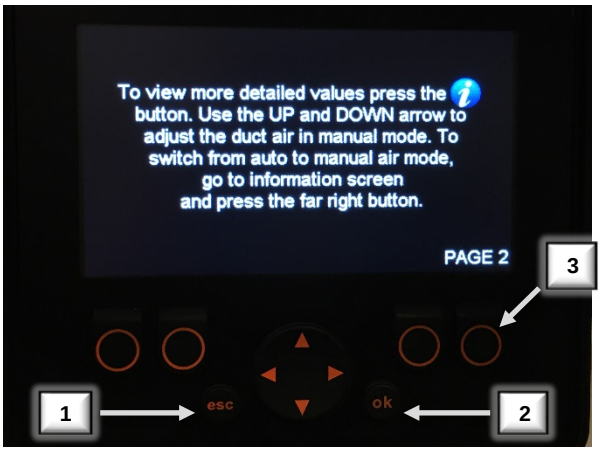
1 & 2 – Use to return to the **home screen**

3 – Use to go to **Page 2** of instructions

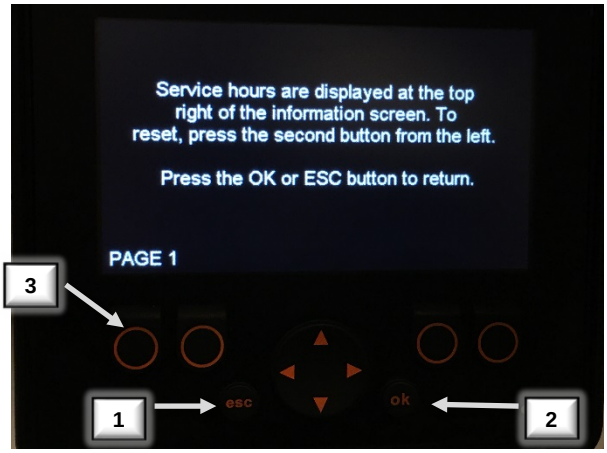
View 2
This screen displays more basic instructions for the *"Peanut Tech"* System

1 & 2 – Use to return to the **home screen**

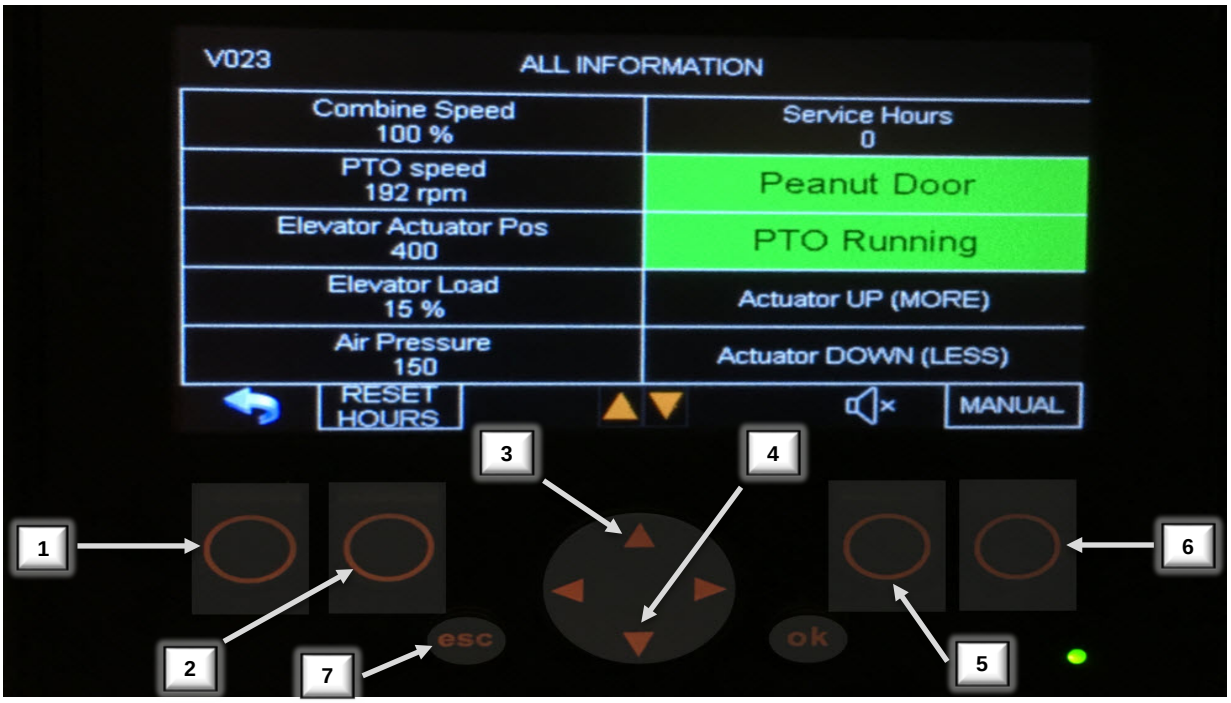
3 – Use to return to **Page 1** of instructions



View 1



View 2



"Peanut Tech" All Information Screen Function and Controls

1. Use to return to the **home screen**

2. Use to reset the **service hours** displayed in the upper right corner of the screen

3. Use to **increase elevator air** when in manual mode

4. Use to **decrease elevator air** when in manual mode

5.Use to **mute** an audible alarm for **5 minutes**
Use to **unmute** an audible alarm during the **5 minutes**

6. Use to **toggle** between **manual** and **auto elevator control.** The current state is displayed on the screen above the button.

7. Use to return to **home screen**

Left column display: the actual sensor information the controller is receiving

Right column display:

• **Service hours** since last reset

• **State of peanut door**
- Backlit in green -- door is closed
- Backlit in red; audible alarm – door is open

• **State of PTO**
- Backlit in green – above 85%
- Backlit in red; audible alarm – below 85%
- Backlit in red; audible alarm – above 110%

• **State of Actuator UP** [more air]
- Backlit in green – actuator is **increasing** air at that time

• **State of Actuator DOWN** [less air]
- Backlit in green – actuator is **decreasing** air at that time

Custom Air Pressure Settings

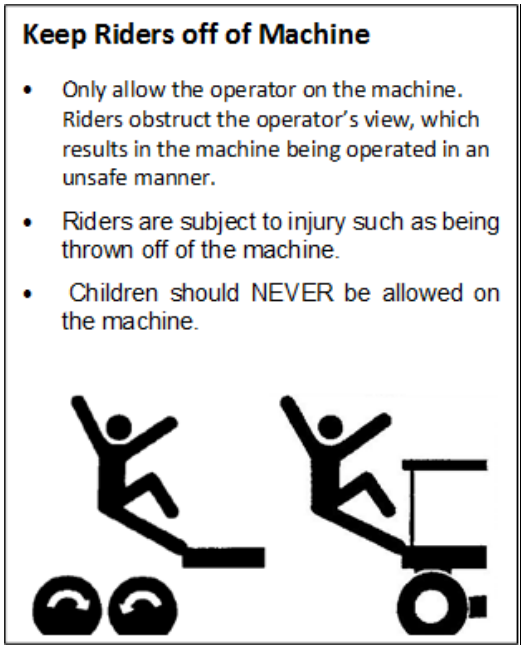
If the initial **Automatic Air** settings are found to be too low to properly fill the basket, or too high therefore causing shelling, the automatic airlift control feature may be set to suit individual operator preference.

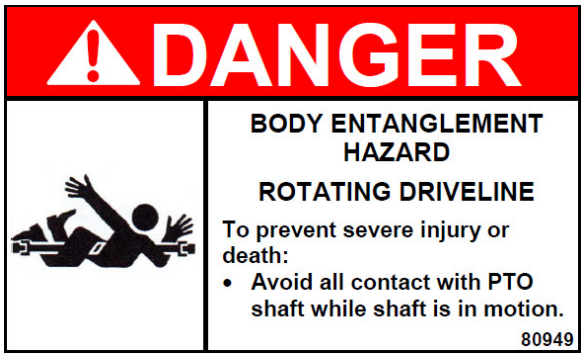
Important Note: If any component from the elevator air or monitoring system [air pressure sensor, duct work, elevator fan, etc.] is changed or replaced, **these procedures must be followed.**

Safety at All Times!

You, the operator, can help avoid accidents or injury by observing the precautions in this section and insisting that others working for or with you also follow them.

- Before operating combine, make certain no one is on or near the combine.
- Do NOT attempt to operate this equipment under the influence of drugs or alcohol, or prescription/over-the-counter drugs that may cause impairment.
- This equipment is dangerous to children and persons unfamiliar with its operation. They should never be allowed to operate this machinery or remain in its vicinity while in operation.
- Only a trained operator familiar with this machinery and trained in its operation should be allowed to operate this machine. Do NOT allow any person to operate or perform maintenance on this machine until he or she has read this manual and understands the safety precautions.
- To prevent injury or death, use a tractor equipped with a Rollover Protective System (ROPS).
- NEVER exceed the limits of a piece of machinery. If its ability to perform a job safely is in question, DO NOT TRY TO DO THAT JOB.





1. Toggle from **Auto** mode to **Manual** mode. [Figure 1; Button **4**]
2. Engage PTO and adjust the combine speed to 100%.
3. Operate the combine in **Manual** mode and adjust the air to 30 to 35% open.
4. Press Button **1** [Figure 1] to view the **All Information Screen** and **record** the Air Pressure displayed in the lower left. [Figure 2]

   Important note: This number will fluctuate; select an average reading.

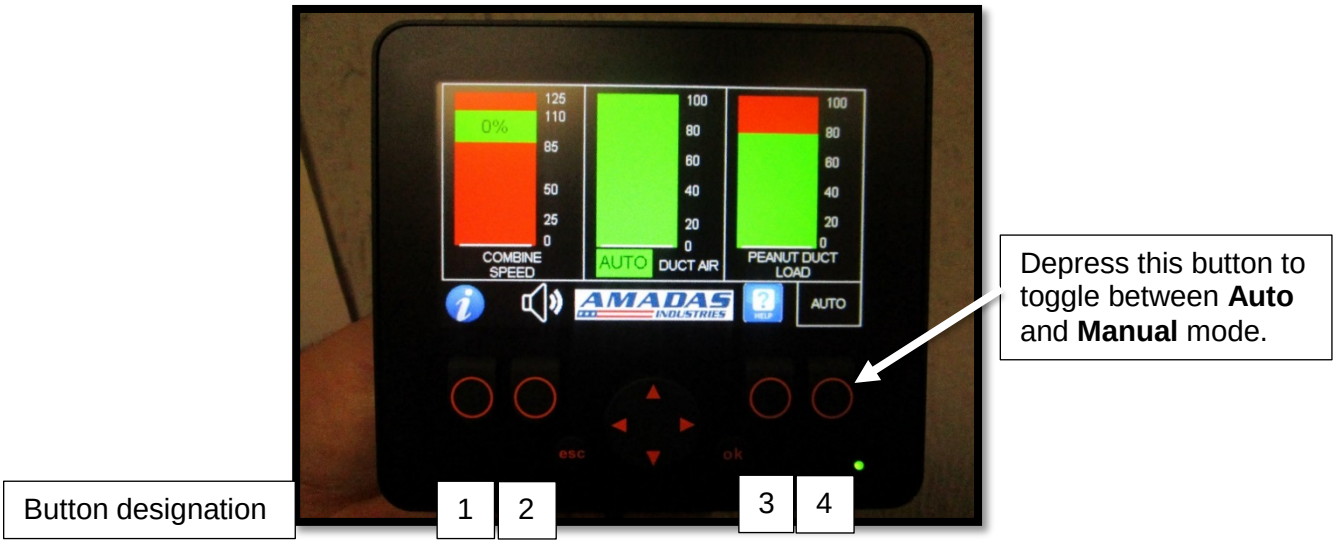


Figure 1

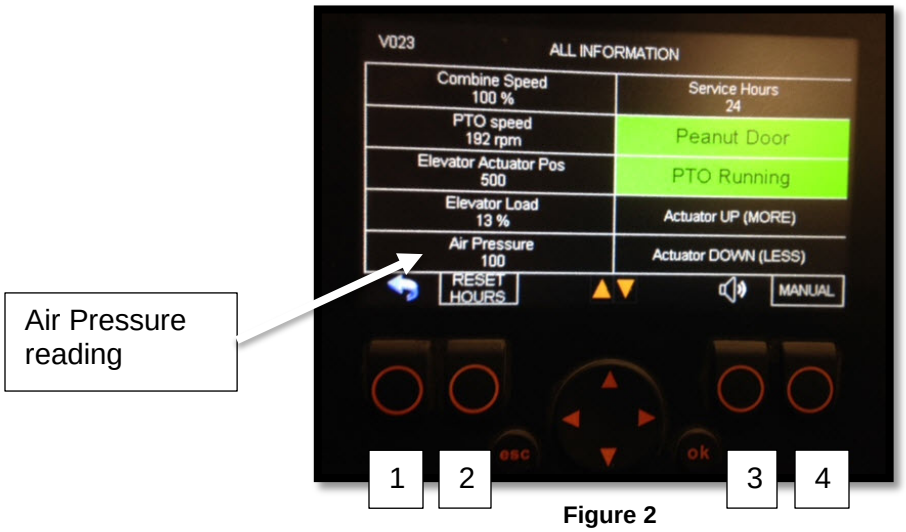


Figure 2

5. Press Button **1** [Figure 1] to return to the **Home Screen.**
6. Press buttons **3** and **4** – pressing **4** first – for 5 seconds to access the **Setup Page**. [Figure 3]

7. Navigate to the **High Air Press to Close** box by using the **left** and **right** arrow keys. [Figure 3]

    - **Only left and right arrow keys can be used to navigate. Using up and down keys will result in value changes.**

8. Adding **25** to the previously recorded Air Pressure number in Step 4, use the **up** or **down** arrow keys to change the set point to this new number. [Figure 3]

9. Navigate to the **Low Air Press to Open** box by using the **left** or **right** arrow keys. [Figure 3]

    - **Only left and right arrow keys can be used to navigate. Using up and down keys will result in value changes.**

10. Subtracting **25** from the previously recorded Air Pressure number in Step 4, use the **up** or **down** arrow keys to change the set point to this new number. [Figure 3]

11. Press **esc** to return to the **Home Screen.** [Figure 3]

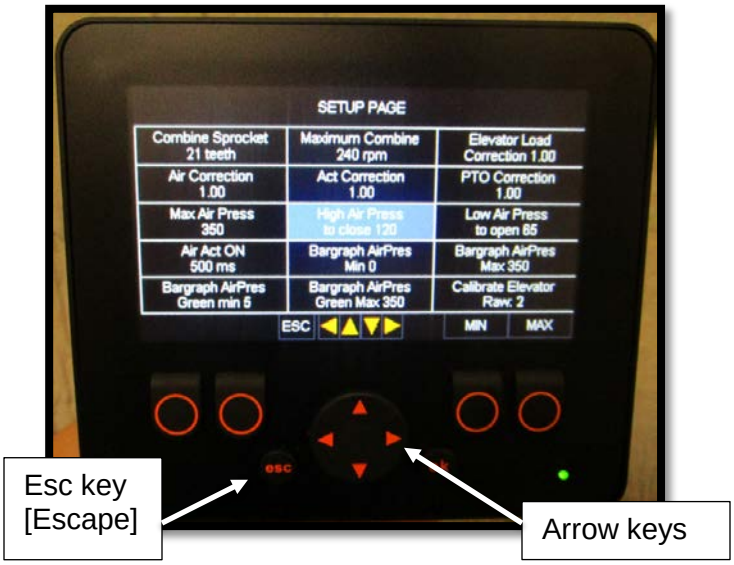
12. Return to **Auto** mode. [Figure 1]

The base point for the fan damper should adjust to the same point when the combine was in **Manual** mode.

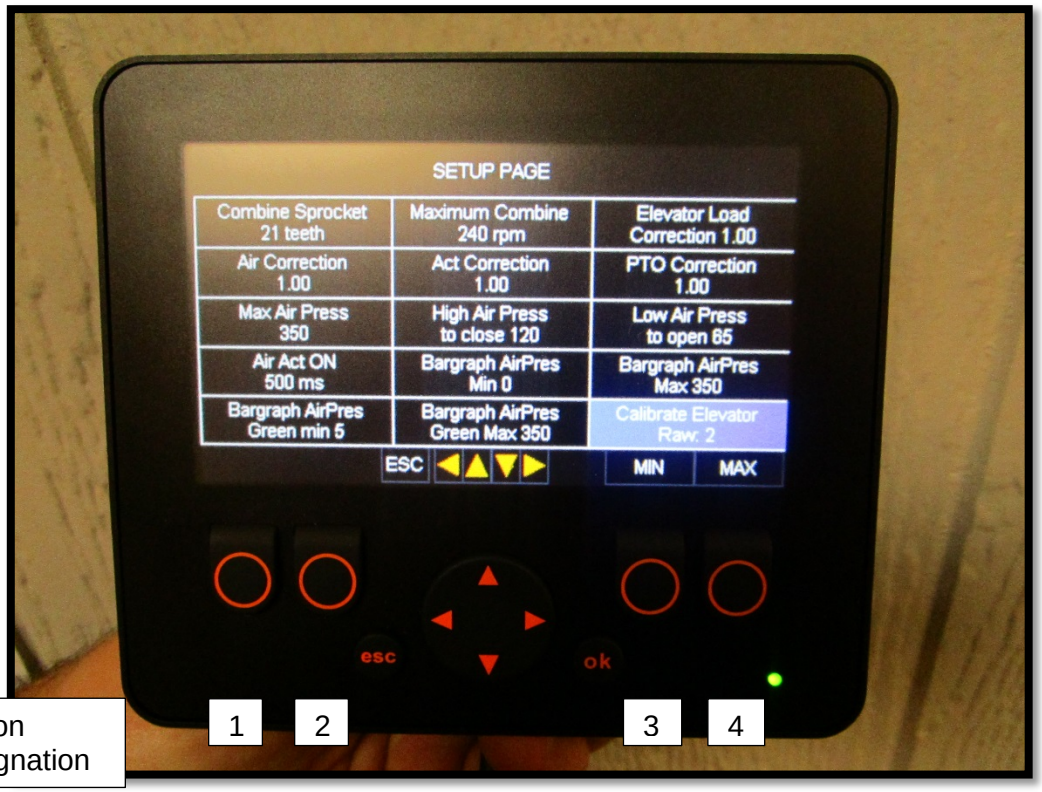
If more basket fill is needed, increase both the High Air Press to close and Low Air Press to open by 10.

To decrease shelling issues, decrease both the High Air Press to close and Low Air Press to open by 10.

Figure 3



Calibrate Actuator



If a new Elevator Actuator has been installed, it will be necessary to calibrate the actuator.

- In the home screen, set the air control to **Auto**.
- Press and hold buttons **3** and **4 –** pressing **4** first – for 5 seconds. The screen will change to the **Setup** page.
- Use the **left** arrow button to navigate to the **"Calibrate Elevator Raw"** block.
- Depress the **UP** arrow until actuator is completely closed.
- With actuator closed, press and hold the button **4 [MAX]** for approximately 3 seconds.
- Depress the **DOWN** arrow until actuator is completely extended.
- With actuator extended or opened, press and hold the button **3 [MIN]** for approximately 3 seconds.
- To exit, depress **OK** and then **ESC**.

This page intentionally left blank.

Section 6

"Peanut Tech" Production Programming

[For AMADAS internal use only; please contact AMADAS Industries if re-programming is required – Form 0400]

This page intentionally left blank.

Section 7

"Peanut Tech" Run-in Procedure

"Peanut Tech" Run-in Procedure S-7.2

"Peanut Tech" Run-in Procedure

1. Make sure all harness connections and power supply are properly connected.
2. Power the system on.
3. Check the gap on the speed sensor.
    a. The LED on the sensor should light up yellow when it detects the sprocket.
    b. Make sure the sensor is not offset from the sprocket.
    c. Place the sensor about a 1/16" thickness away from the sprocket teeth.
4. Put the controller in manual air actuator mode.
    a. Cycle the actuator between fully open and fully closed.
    b. Make certain the actuator is moving in the correct direction.
    c. Ensure the duct air graph is moving with the actuator and in the correct direction.
    d. If the bar graph scale does not correlate – top for fully open, bottom for fully closed, see **Calibrate Actuator Procedure** to reset the actuator.
    e. If the actuator binds up when fully extended, the slot in the duct may need to be die ground to allow the actuator to extend all the way.

Safety at All Times!

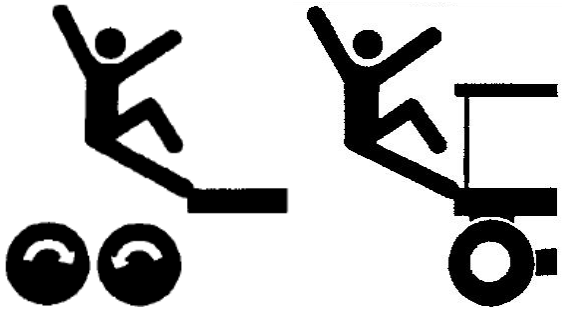
You, the operator, can help avoid accidents or injury by observing the precautions in this section and insisting that others working for or with you also follow them.

- Do NOT attempt to operate this equipment under the influence of drugs or alcohol, or prescription/over-the-counter drugs that may cause impairment.
- This equipment is dangerous to children and persons unfamiliar with its operation. They should never be allowed to operate this machinery or remain in its vicinity while in operation.
- Only a trained operator familiar with this machinery and trained in its operation should be allowed to operate this machine. Do NOT allow any person to operate or perform maintenance on this machine until he or she has read this manual and understands the safety precautions.
- To prevent injury or death, use a tractor equipped with a Rollover Protective System (ROPS).
- NEVER exceed the limits of a piece of machinery. If its ability to perform a job safely is in question, DO NOT TRY TO DO THAT JOB.

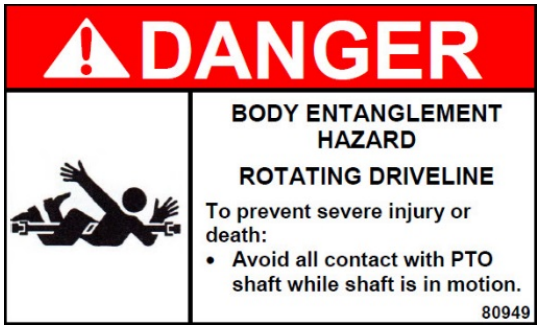
Important Safety Note: Before operating combine, make certain no one is on or near the combine.

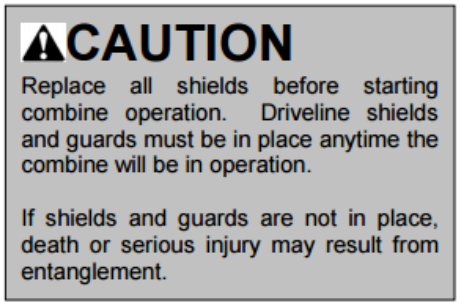
Keep Riders off of Machine

- Only allow the operator on the machine. Riders obstruct the operator's view, which results in the machine being operated in an unsafe manner.
- Riders are subject to injury such as being thrown off of the machine.
- Children should NEVER be allowed on the machine.



5. Engage PTO to start combine.

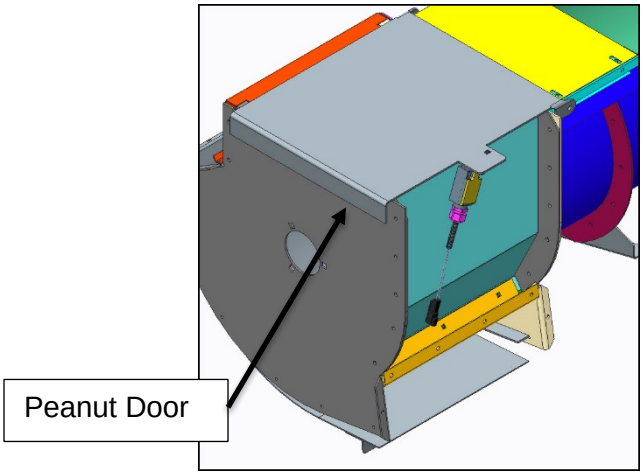




6. Adjust combine speed so that the display shows approximately 100% and is steady. If it is fluctuating, the speed sensor may need to be adjusted.

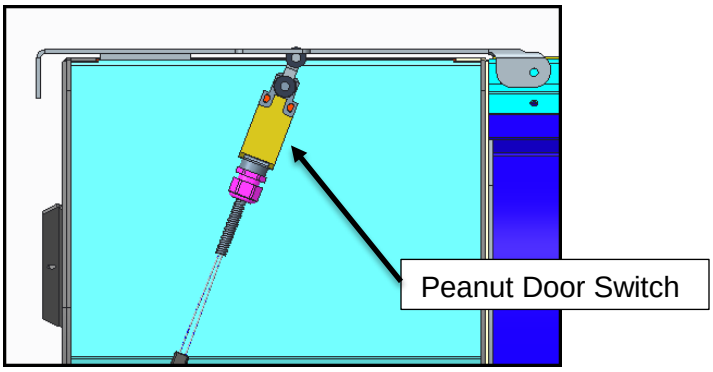
7. Extend and retract the actuator a few times and make sure the Air Pressure reading on the All Information Screen fluctuates.

8. Open the peanut door and make sure the peanut door alarm sounds.



9. Shut off combine and power off the system.

Note: If replacing peanut door switch, ensure it is mounted at an angle as shown to avoid damage to switch arm.



Section 8

Troubleshooting

Troubleshooting S-8.2

Troubleshooting

Display does not function/power

- Check power cord connections.
- Check fuses in the Power Display Box.
- Check the fuses for the 12-volt power in the tractor.

Display powers but shows "Communication Error." [The display is not communicating with the Tech Package Controller on the Combine.]

- Check the Tech Display Adapter Harness connections.
- Check the main connector at the Peanut Tech Controller [**16628** ***Figure 1***] for proper fit and check if pins are loose or backed out.

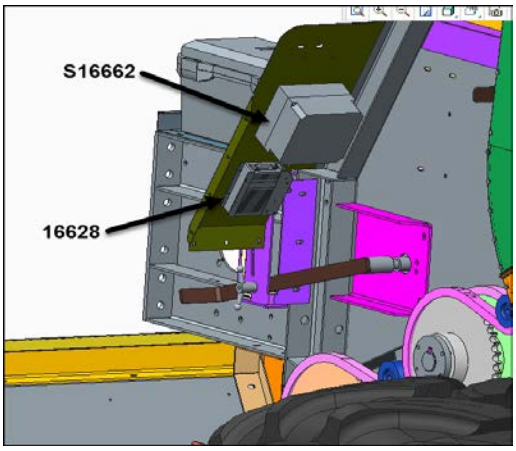


Figure 1

- Check to see if the Terminator [**16615** ***Figure 2***] is still in the harness, and if the connection has become corroded.
  - o Clean or replace as necessary.

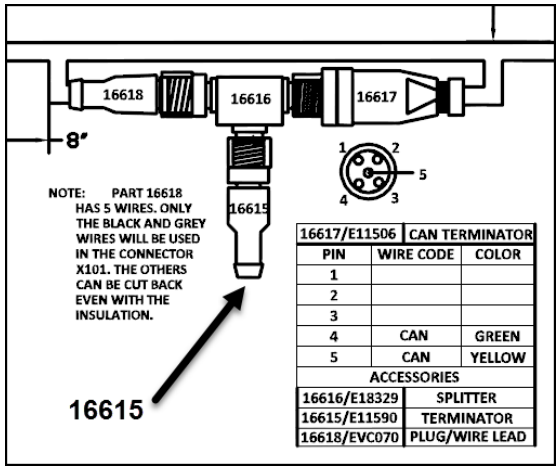


Figure 2

- If the steps above do not correct the problem, there may be a wiring harness issue: **[See Harness Diagnosis for Communication Error.]**

No Combine Speed

- Check if the LED on the speed sensor [**16626** ***Figure 3***] comes on when in proximity to metal. If so, readjust the sensor closer to the sprocket [**50B21-1** ***Figure 3.***]

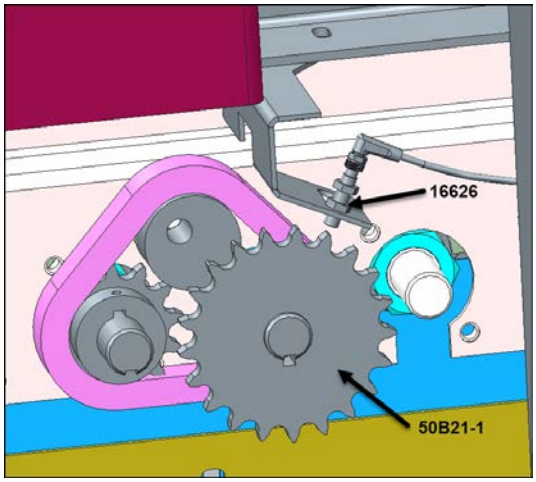


Figure 3

  - If the LED does not come on, try a new sensor.
  - If the LED on the new sensor does not light, the problem is in the speed sensor, the harness connection, or the main harness.
  - Check connections, wire continuity, pins, and/or for wire damage.

No peanut door alarm

  - Unplug the peanut door switch [**16670** ***Figure 4***] and jump the wires on the harness with a paper clip or short piece of wire. If alarm sounds, the switch is the problem. If alarm does not sound, there is a problem in the harness.
  - Check connections, wire continuity, pins, and/or for wire damage.

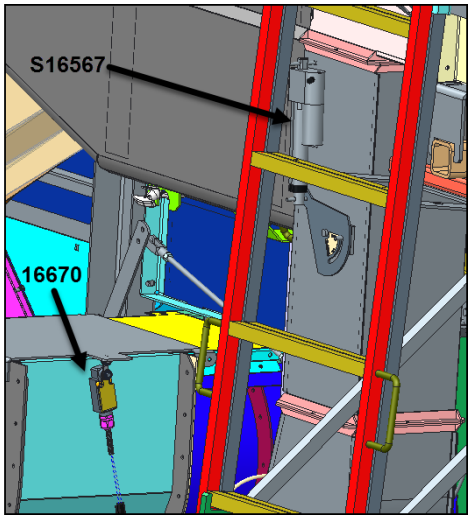


Figure 4

Actuator not moving

- If the actuator [**S16567** ***Figure 4***] is not moving at all when the **up** or **down** arrows are pressed in manual mode, the problem is in the actuator, the harness or the relay box [**S16662** ***Figure 1.***]

    - If the relays in the relay box are clicking when trying to move the actuator, the relay box is working.

    - If the relays are not clicking, the relays may be bad, a wire may be crossed or there could be a problem in the harness.

    - Connect a different actuator.
        - If the new actuator moves, the old actuator is either wired incorrectly or bad.
        - If the new actuator does not move, there is likely a harness problem.
        - Check connections, wire continuity, pins, and/or for wire damage.

Actuator moving in the wrong direction

- If the actuator is moving in the wrong direction, the wires in the plug have been crossed. Swap pins 1 and 5 in the plug.

Manual Air Control works; Automatic Air Control and Duct Load do not work

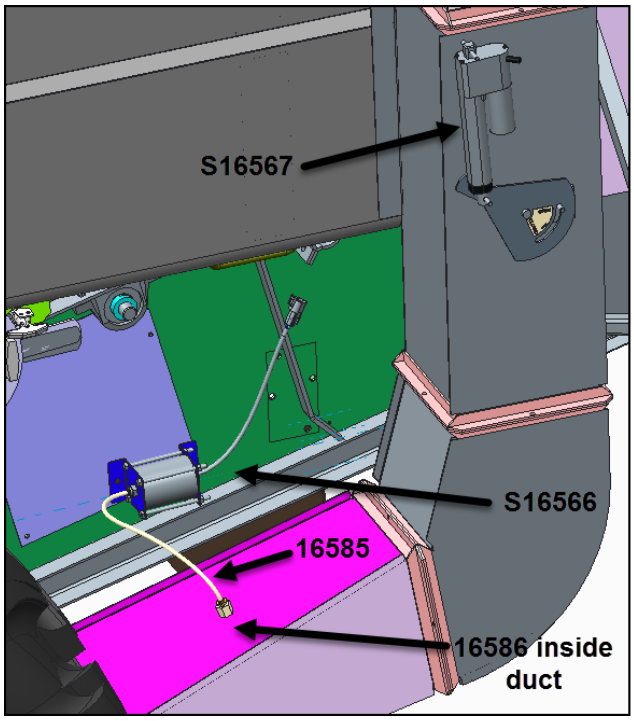


Figure 5

- These components rely on the Tech Package Air Pressure Sensor [**S16566** ***Figure 5***] to function. To determine if the Air Pressure Sensor is functioning, operate the

combine and navigate to the All Information Screen to see if value is displayed in the Air Pressure block [***Figure 6***].

Figure 6

If no value is shown, check the following:

- Inspect the clear tubing [**16585** ***Figure 5***] from the ductwork to the Air Pressure Sensor. Make certain it is fully inserted on both ends and that the tube is not cracked or kinked. If damaged, replace the tubing.

- If the tubing is okay, unplug the wiring to the sensor and check the incoming harness for 5 volts DC at Pin A. Less or more than 5 volts indicate the 5-volt power converter [**16663** ***Figure 7***] is not functioning correctly and will need replacing. The sensor will not work correctly with too high or low input voltage. **16663** is located inside the Tech Package Relay Box [**S16662** ***Figure 1***] on the combine.

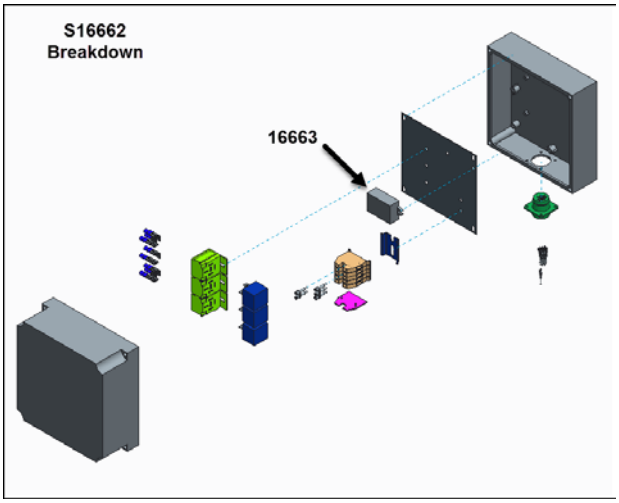


Figure 7

  - If the tubing is intact and there is a steady 5 volts traveling to the sensor, but still no reading, the Air Pressure Sensor [**16566**] may be bad. **16566** is located inside the pressure sensor canister on the side of the machine.

- If an abnormal air pressure value is displayed, open the duct clean out door and look up toward the elevator fan to determine if a short piece of stainless steel tubing [**16586** ***Figure 5***] is inside the duct work. [This is the supply for the clear tubing going to the Air Pressure Sensor.] Replace if missing.

Harness Diagnosis for Communication Error [*Figure 2*]

- Start by looking inside the Tech Display Box. A green and yellow wire should loop from connector X106 to X107 in positions 1 and 2. Make certain the pins are secure and that there is continuity from one end to the other.

- If there is continuity, unplug the main harness from the Display Box and pull the end to the Tech Package Controller [**16628** ***Figure 1***]. Disconnect **16617** from CAN splitter **16616**. Check continuity between Pin 6 in **16617** and Pin 1 in X106. Check continuity between Pin 4 in **16617** and Pin 2 in X106.

- If wires and pins are connected on both sides of the tee, the Terminator [**16615**] may be bad. If installing a new Terminator does not initiate communication, the Tech Package Controller may be bad. Install a new, properly programmed controller to restore communication.

Notes