NYC PT 1100

HIGH-PERFORMANCE REAR LOADER

SERVICE MANUAL

ISSUED MARCH 2023

TP1NYCPT11-SM-0323

Environmental Solutions Group
201 W. Main Street, Ste 300
Chattanooga, TN 37408
Heil Customer Care: 866.275.4345

WARNING

IF INCORRECTLY USED, THIS EQUIPMENT CAN CAUSE SEVERE INJURY. THOSE WHO USE AND MAINTAIN THE EQUIPMENT SHOULD BE TRAINED IN ITS PROPER USE, WARNED OF ITS DANGERS, AND SHOULD READ AND FULLY UNDERSTAND THIS ENTIRE MANUAL BEFORE ATTEMPTING TO SET UP, OPERATE, ADJUST OR SERVICE THE EQUIPMENT. KEEP THIS MANUAL FOR FUTURE REFERENCE

IMPORTANT SAFETY NOTICE

Proper service and repair are important to the safe, reliable operation of Heil Co.'s products. Service procedures recommended by Heil are described in this service manual and are effective for performing service operations. Some of these service operations may require the use of tools or blocking devices specially designed for the purpose. Special tools should be used when and as recommended. It is important to note that some warnings against the use of specific methods that can damage the product or render it unsafe are stated in the service manual. It is also important to understand these warnings are not exhaustive. Heil could not possibly know, evaluate and advise the service trade of all conceivable ways in which service might be done or of the possible hazardous consequences of each method. Consequently, Heil has not undertaken any such broad evaluations. Accordingly, anyone who uses service procedures or tools which are not recommended by Heil must first satisfy himself thoroughly that neither his safety nor the product safety will be jeopardized by the method he selects.

"Heil Environmental, as manufacturer of the equipment that is covered by this manual, is providing a product to the user who has acknowledged to have superior knowledge of the conditions of the use to which the product will be put. Heil Environmental relies upon the user's superior knowledge in specifying any changes or modifications including, but not limited to, the inclusion or non inclusion of options that are required by the user and the Heil product, and for the particular application of the user relative to the Heil product."

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SECTION 1
GENERAL INFORMATION

NYC PT 1100
General Information

INTRODUCTION

The following sections are a guide for maintenance and service of the Heil unit. The sections cover preventive maintenance, adjustment, and troubleshooting hints. Before performing maintenance, check the work area carefully to find all the hazards present and make sure all necessary safeguards or safety devices are used to protect all persons and equipment involved. In order to diagnose a problem quickly and effectively, a service person must be thoroughly familiar with the machine.

This section explains the system and its major components. Diagrams and schematics of the electrical and hydraulic systems are in the Service Manual Schematics section.

IMPORTANT!

- Before starting any maintenance, study this section of the manual.
- Read all hazard warnings and decals on the unit.
- Clear the area of other persons before performing any maintenance.
- Know and understand safe use of all controls.
- It is your responsibility to understand and follow manufacturer’s instructions on equipment and care.

SERVICE/PARTS ASSISTANCE

Assistance in troubleshooting repair and service is available by contacting the authorized Heil Dealer in your area. Parts are available at your Heil Dealer or through Heil. Heil personnel are trained to give prompt, professional assistance.

ALWAYS give the unit serial number in all correspondence relating to the equipment.

See the back cover of this manual for Heil contact information.

PRECAUTIONARY STATEMENTS

Listed below are the definitions for the various levels of hazards. It is important that the operators of this equipment and people who service units read and understand all warnings as they relate to this equipment operation.

- **DANGER** – indicates a hazardous situation, which if not avoided WILL result in DEATH or SERIOUS INJURY if you do not follow proper instructions.
- **WARNING** – indicates a hazardous situation, which if not avoided COULD result in DEATH OR SERIOUS INJURY if you do not follow proper instructions.
- **CAUTION** – indicates a hazardous situation, which if not avoided COULD result in MINOR to MODERATE INJURY if you do not follow proper instructions.
- **NOTICE** – addresses practices not related to personal injury, such as property damage or damage to the equipment.

The following warnings are generally in the Operator's Manual for each specific unit or are generic safety messages if an Operator's Manual does not have these safety messages. Other safety alert messages may be in other sections of the Parts and Service Manual or in an Operator's Manual. You must read and obey all safety alert messages in any manual produced by Heil to support your unit.

⚠ WARNING

Failure to follow all instructions and safety precautions in this manual, in the Service Manual, in other manufacturer's manuals and on the safety decals attached to the product could result in serious injury or death to operators or bystanders and/or damage to property. Do not operate this vehicle before you read and understand the Operation Manual, the Parts Service Manual for this unit, other applicable manufacturer's manuals and the safety decals on the product. Each operator of this unit must read and understand all directions in this manual before they first operate this vehicle. Keep this manual in the cab for new operators and to remind all operators about safe use.

⚠ DANGER

Do not operate the unit or perform repair or maintenance procedures on the unit until you read and understand all of the instructions in this manual. Failure to do so can result in death or serious injury to operators or bystanders.

⚠ DANGER

Do not walk under or go between the body and the tailgate when the tailgate is in motion, while you prop the tailgate or while the tailgate is propped. Always prop the tailgate when you leave it raised for maintenance, service or cleaning procedures. Serious injury or death may occur if any part of your body is between the tailgate and the body if the tailgate suddenly closes.

⚠ DANGER

A tailgate in motion is dangerous. Serious injury or death can occur if a person is struck by a moving tailgate or becomes trapped between the tailgate and the body. Clear the area near the tailgate of all unnecessary people before you lower the tailgate.

⚠ DANGER

The packer and crusher panels are dangerous. They can cause death or serious injury if a person is inside the hopper. Make sure no one is inside the hopper before you begin a packer or crusher function. Put the unit in the Lock-Out/Tag-Out mode if it is necessary to enter the hopper area.

⚠ DANGER

Lifting equipment that does not have sufficient lifting capability is dangerous. Equipment can fail and cause death or serious injury to the operator or bystanders. Make sure the lifting equipment has sufficient lifting capability and clear ALL persons not involved with the procedure away from the area.

⚠ DANGER

Contact of the unit with overhead electric lines is dangerous. Death or serious injury can occur. Make sure there is adequate overhead clearance before you raise the container. If the unit does make contact with overhead electric lines do not touch any metal in the cab. Stay in the unit until help arrives..

⚠ WARNING

Make sure the unit is in the Lock-Out/Tag-Out mode when you do maintenance or service procedures, or when you go in the hopper, climb in or on the body or on equipment. Equipment can be operated when the unit is not in the Lock-Out/Tag-Out mode. When the unit is not in the Lock-Out/Tag-Out mode, equipment operated while you do maintenance or service procedures, go in the hopper or climb in or on the body or on equipment can cause death or serious injury.

⚠ WARNING

Moving equipment can be dangerous to bystanders. Death or serious injury can occur if a person is in the wrong area or is not attentive to the operations. Clear the area of all unnecessary people before you operate the controls.

⚠ WARNING

Clear all people of the area before you lift a refuse container. Make sure the refuse is secure in the refuse container before you lift the container. Loose refuse can fall and cause death or serious injury.

⚠ WARNING

The hydraulic fluid can be under pressure and can spray while you open the connection. Hydraulic fluid can cause damage to your eyes, hands or skin. Wear protective eye glasses, gloves and other clothing as necessary to protect you from the hydraulic fluid.

⚠ WARNING

A unit that needs service or repair can malfunction and create a dangerous condition. A part failure during operation can cause death or serious injury to a person or damage to the unit. Repair or replace any failed or defective part immediately

⚠ WARNING

Isopropyl alcohol is flammable and is harmful to eyes and skin. Keep isopropyl alcohol away from heat or open sources of ignition. Flush eyes and skin with water for 15 minutes after contact. Seek immediate medical help.

NOTICE

Always use your employer’s Lock-Out/Tag-Out procedures. If your employer does not have Lock-Out/Tag-Out procedures, use the procedures that follow. Contact your supervisor or Heil Technical Service if you have any questions about Lock-Out/Tag-Out procedures.

NOTICE

You can order Lock-Out/Tag-Out Tags through your Heil Dealer or through Heil.

LOCK-OUT/TAG-OUT PROCEDURES

NOTICE

Always use your employer's Lock-Out/Tag-Out procedures. If your employer does not have Lock-Out/Tag-Out procedures, use the procedures that follow. Contact your supervisor or Heil Technical Service if you have any questions about Lock-Out/Tag-Out procedures.

Put the unit in a Lock-Out/Tag-Out mode:

- BEFORE you enter the unit's body
- BEFORE you do maintenance, repair or cleaning procedures on the unit.

Figure 1. Lock-Out/Tag-Out (Do Not Operate) Tag

Follow These Steps:

1. APPLY the brakes. MAKE SURE the brakes do not let the unit move and they work properly.
2. Chock all wheels.
3. SET the tailgate props when you raise the tailgate for service, maintenance or cleaning.
4. When there are in-cab controls, turn the ignition switch to ON then:
   a. Move the switches of the hydraulic controls. This relieves the pressure in the cylinders.
   b. Turn the ignition switch to OFF.
5. When there are no in-cab controls, move the outside control levers to relieve the pressure in the cylinders.
6. Put a LOCK-OUT/TAG-OUT Tag onto the steering wheel.
7. Remove the ignition key from the cab, lock the vehicle, and put the key in a secure location.
8. You can order Lock-Out/Tag-Out Tags (Part Number 212-1586) through your Heil Dealer or through Heil.

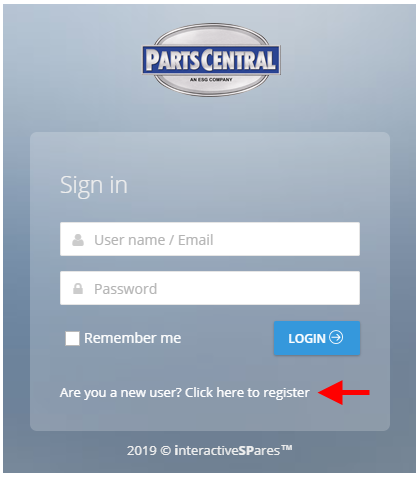
ELECTRONIC PARTS CATALOG (EPC)

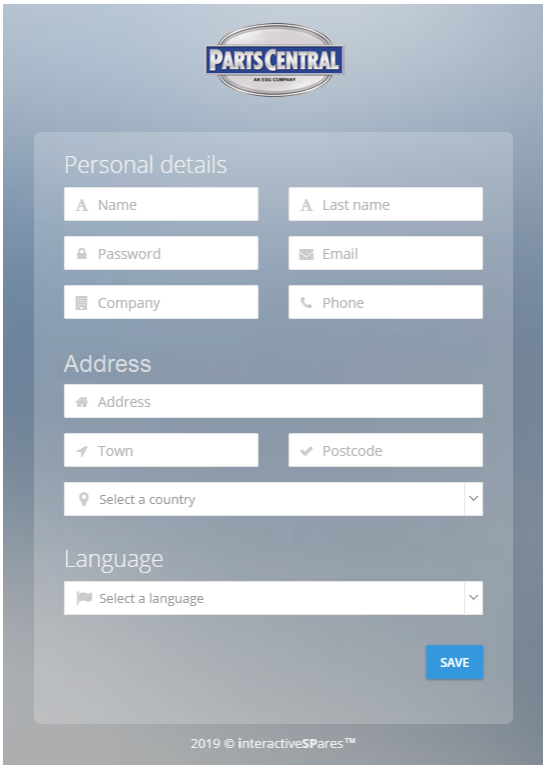
The Parts Central EPC includes electronic versions of the Heil Parts Manuals, specific to a Customer's truck configuration and options. After registering and logging in, the user can search by **Keyword(s) or Part Number** and/or **Heil Body Serial Number** to quickly identify a spare part or browse a custom parts catalog.

Note: This tool is currently for reference use only and the cart functionality is disabled. Please contact your local Heil Dealer for parts quoting and ordering.

Registration and Login

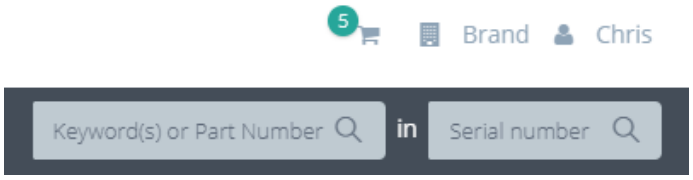
Register online to gain access: **https://epc.partscentral.com**. Upon registration, you will receive an email notification confirming registration. Within 24 hours, your registration will be approved and you can log in using the **login page**.





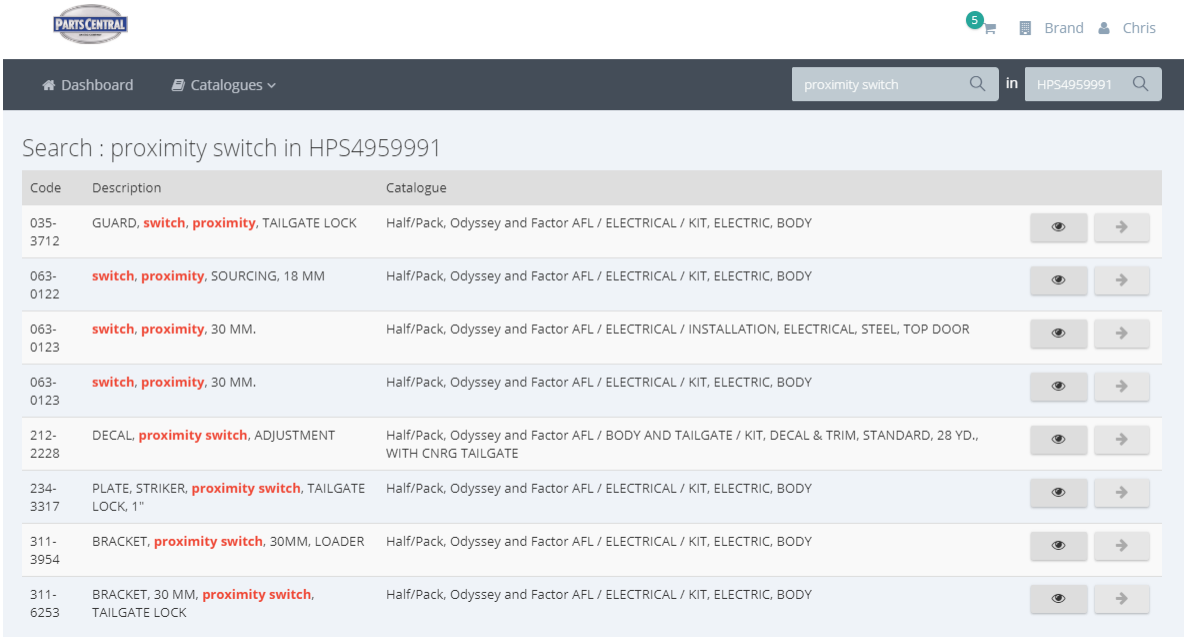
Search by Part Keyword(s) or Part Number in Body Serial Number

After login, you will land on the User Dashboard. At the top right of the Dashboard, there will be two search fields, as shown in the image below.



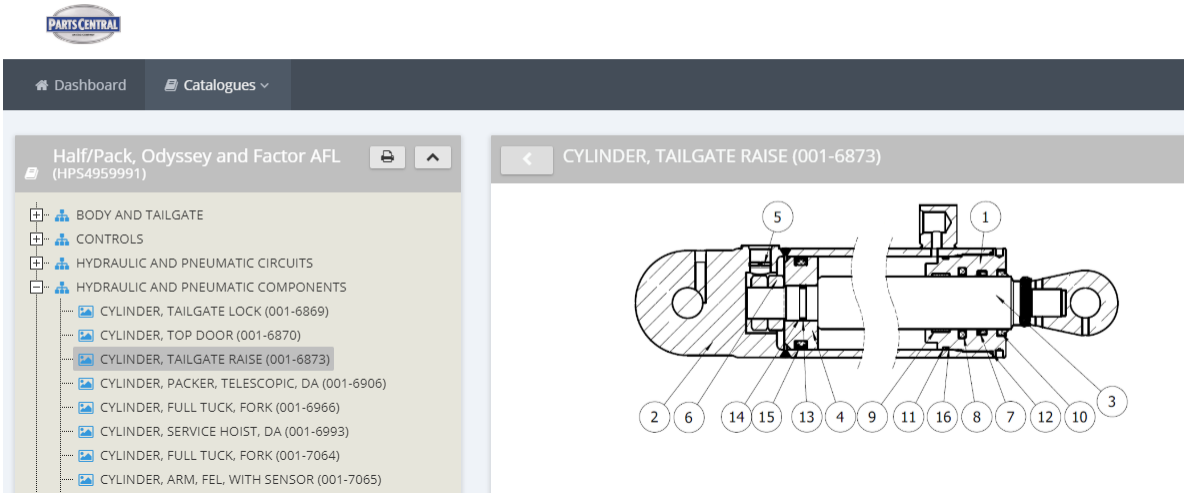
You can search by **Keyword(s) or Part Number** within a specific Heil Body **Serial Number**. For example, if you are looking for a **proximity switch** for Body Serial Number **HPS4959991**, you can enter this information into these two fields and the search results will include all parts within the **HPS4959991** body that contain the keywords **proximity** and **switch** within their part descriptions. See the image below.

From the search results list, you can select the right arrow icon to view the part within its associated assembly/kit, helping you identify the needed part. Alternatively, you can select the eye icon on the right to see part specifics (including any notes) and quickly add to cart (although this functionality is not yet turned on in the Parts Central EPC).

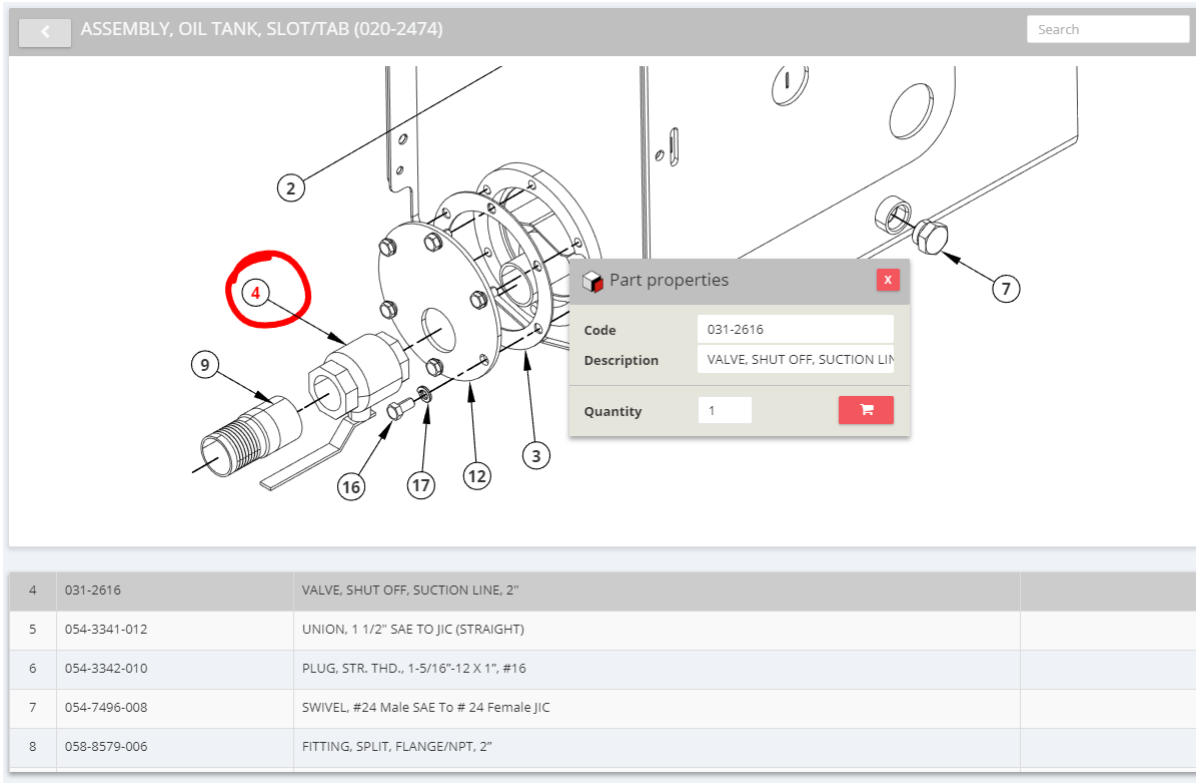


Search by Body Serial Number

If you want to view an entire parts catalog for a particular Heil unit, you can search by only the Heil Body **Serial Number**, leaving the **Keyword(s) / Part Number** field blank. The search result will then be the Body Serial Number-specific parts catalog with familiar catalog sections that you can browse. You can navigate through the catalog using the section/topic menu in the left panel and then adjust an assembly/kit illustration size in the right panel with the mouse center scroll wheel. Additionally in the right panel, you can drag the image when holding down the left mouse button. See the image below.



For each assembly/kit, you can click on the interactive part callout reference numbers to highlight the corresponding part in the parts list, or you can click on a parts list line item to highlight its position on the illustration. See the image below.



4	031-2616	VALVE, SHUT OFF, SUCTION LINE, 2"	
5	054-3341-012	UNION, 1 1/2" SAE TO JIC (STRAIGHT)	
6	054-3342-010	PLUG, STR. THD., 1-5/16"-12 X 1", #16	
7	054-7496-008	SWIVEL, #24 Male SAE To # 24 Female JIC	
8	058-8579-006	FITTING, SPLIT, FLANGE/NPT, 2"	

STORING REFUSE IN THE BODY

Heil does not recommend storing refuse in the body overnight. The different types of debris and corrosive elements usually collected can cause severe corrosion inside the body decreasing the life of your body. This corrosion can affect unloading and decrease the structural life of the body. In addition, storing refuse in the body overnight can increase the risk of fire.

MAINTENANCE/LUBRICATION INFORMATION

Before performing maintenance, check the work area carefully to find all the hazards present and make sure all safe guards or safety devices are in place to protect all persons and equipment involved.

GREASE LUBRICANT RECOMMENDATION

Use a grease gun. Before engaging grease gun, clean the fitting. Always pump enough grease to purge the joint of contaminated grease and wipe off the excess. Lubricate a unit as given on the lubrication decal on the unit and in the **Body Lubrication Guide** paragraph of this section.

Use grade NLG1000 grease or equivalent.

OIL LUBRICANT RECOMMENDATION

Use only non-detergent engine oil to lubricate all moveable mechanical parts not furnished with grease fittings. Apply sufficient oil to give good lubrication, but do not bathe parts in oil. Always wipe off excess oil.

HYDRAULIC OIL SPECIFICATIONS

Hydraulic fluid is one of the most important component in hydraulic system. It transmits power, provides lubrication and cooling function and has following features:

- High viscosity index
- Long service life
- Outstanding cold temperature flow properties
- Fast water separation
- Excellent anti-wear performance
- Long term oxidation stability
- Superior rust and corrosion protection
- Exceptional shear stability / filterability
- Excellent thermal and hydrolytic stability
- Anti-foam characteristics
- High performance of air release characteristics

Current Heil standard hydraulic oil is Shell Tellus S2 VX 32. Please see product TDS and MSDS for more detail information about it. We strongly recommend to use it on Heil products to get best system performance and oil service life.

The following oils can be used on Heil products if Heil standard hydraulic oil (Shell Tellus S2 VX 32) is not available. But system performance and/or oil service life may be compromised.

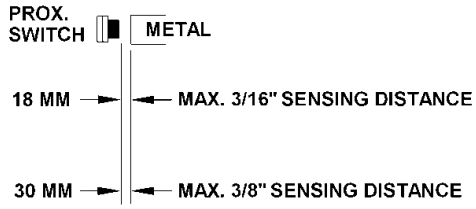
- Castrol Dual Range HV 32
- Chevron Rando HDZ 32
- Mobil DTE 10 Excel 32

PROXIMITY SWITCH TROUBLESHOOTING

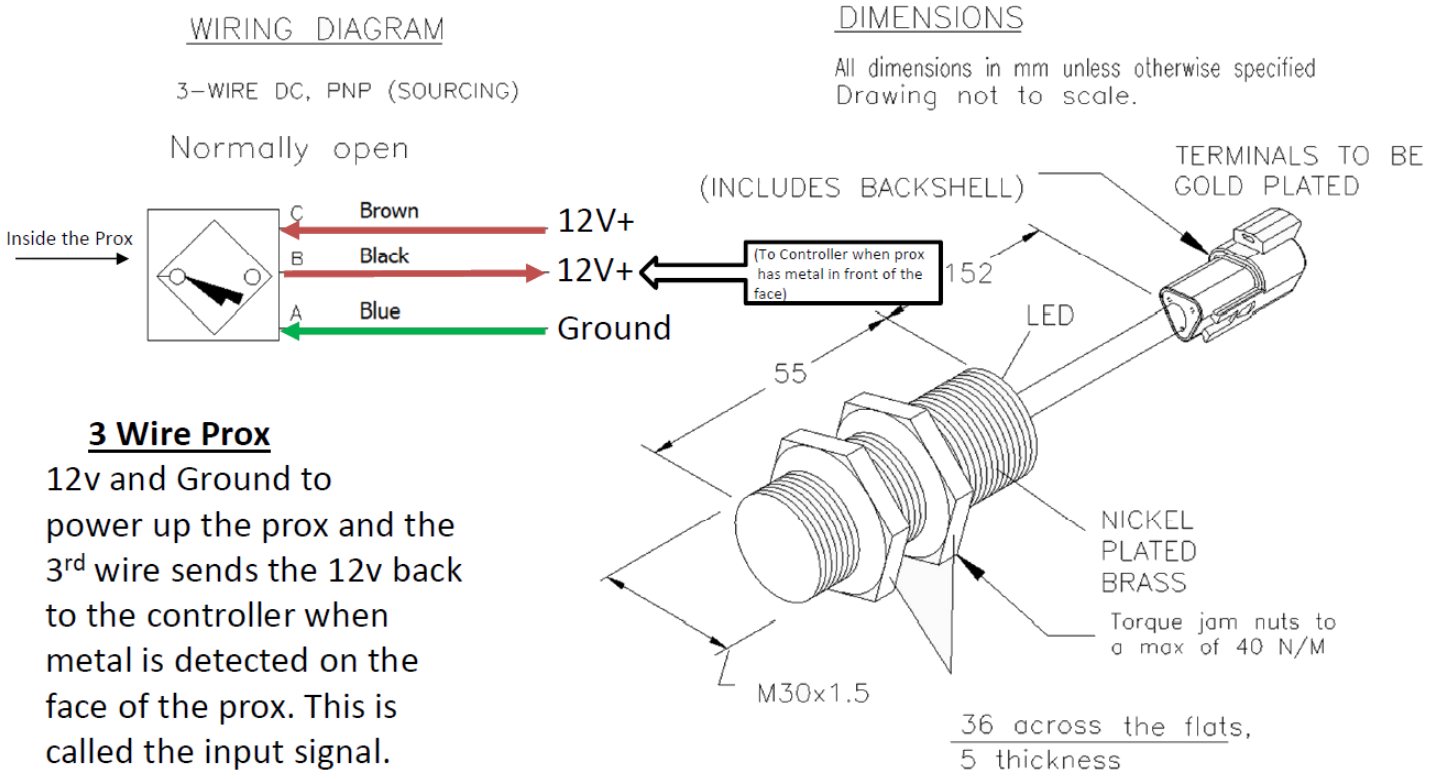
When one or more of a unit's functions do not operate properly and there are proximity switches in the circuits of the unit for these functions, refer to the following table as a guide to find the problem(s).

NOTICE

Heil proximity switches have a Light Emitting Diode (LED) on the switch to indicate that the switch is sensing metal. The light changes color when the switch senses metal. Green indicates the switch is ON. Yellow indicates the switch senses metal. Some proximity switches only have the yellow light.

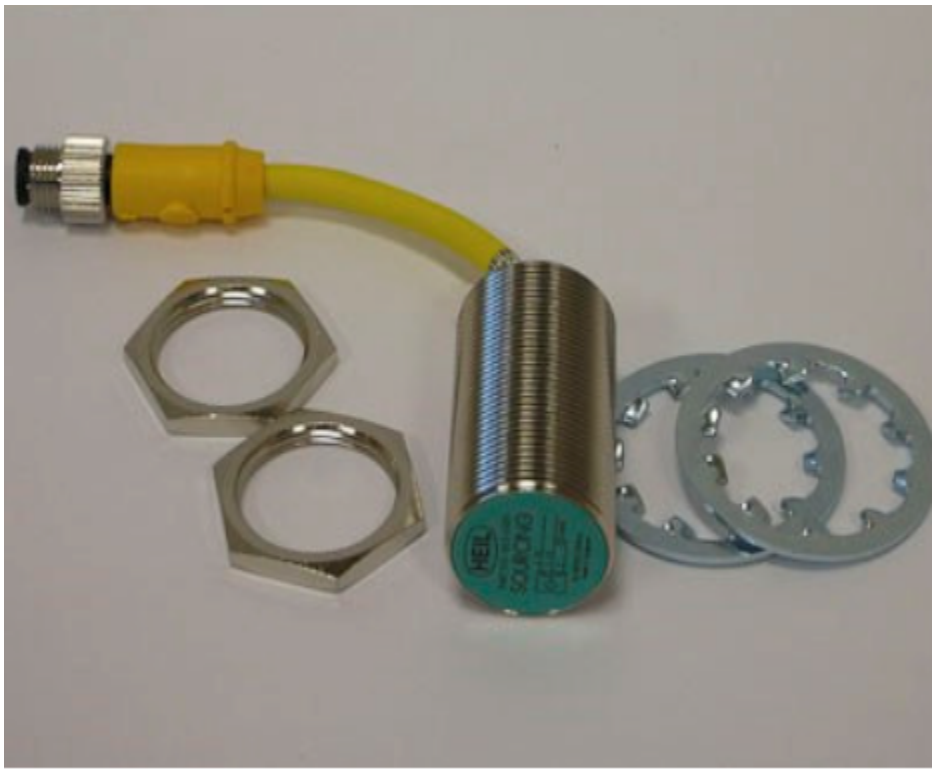
Proximity Switch Troubleshooting Table	
Probable Cause	Remedy
Loose or corroded electrical connections.	Replace the electrical connections.
Damaged Switch A. Cracked Ferrite core causing the fine internal wire to break. B. Cracked Ferrite core – but wire is not broken – the sensitivity of switch will increase which causes sensing distance to increase or switch work intermittently as the temperature changes.	• DO NOT strike switch to make it work. • DO NOT damage the switch when you adjust it. • DO NOT adjust switch too close to the metal it is sensing.
Voltage spikes from truck chassis electrical system will break down the internal electronics of the proximity switch.	1. Make sure the power source from the chassis manufacturer is clean. 2. The body electrical system is protected from voltage spikes.
Improper Sensing Range	Adjust proximity switches to sense metal as follows: 
If the controller input light stays on when a switch is unplugged (the signal wire is carrying +12V DC)	Check the proximity switch electrical circuits for the source of the problem.
If proximity switch LED light is NOT ON.	1. Check the fuse relay block (Half/Packs with IFM controllers). The fuse/relay box is located in the cab. Or Check the in-line fuses (Side Loaders with IFM controllers). The in-line fuses are located in the cab. 2. Unplug proximity switch. 3. Check the power wire (terminal C) for +12 VDC with a multi-meter. 4. Check ground signal with multi-meter for continuity to chassis ground. 5. Check the signal wire for continuity to appropriate controller input terminal. See Service Manual. 6. If all three (3) wires are good, replace the proximity switch.

PROXIMITY SWITCH TROUBLESHOOTING (CONTINUED)



3 Wire Prox

12v and Ground to power up the prox and the 3rd wire sends the 12v back to the controller when metal is detected on the face of the prox. This is called the input signal.



DECALS ON THE UNIT

Make sure you can read all hazard and instruction decals. Clean decals if you cannot read the words. See for directions on cleaning decals.

Replace any decal that is damaged, missing, or is not readable.

When you replace a part that has a decal, make sure a new decal is installed on the new part. See the Parts and Service manual for a complete decal kit and individual decals. Order the decal kit or individual decals from your Heil Dealer or from Heil.

DECAL CARE

It is important that the decals are properly cleaned to make sure that they are readable and do not come off the unit. Use the following steps to clean the decals.

A. General Instructions

Following these instructions helps the decals adhere longer.

- Wash the decals with a blend of mild car wash detergent and clean water
- Rinse with clean water
- Let the vehicle air-dry or dry with a micro-fiber cloth
- Do not allow fuels to stay in contact with the decal for an extended period of time. Remove the fuel contamination as quickly as possible
- Do not use carnauba-based wax over the decals
- Do not use a mechanical brush while washing the decals.

B. Pressure Washer Precautions

Pressure washing can cause damage to decals. It can cause the edges of the decals to lift and peel the decal away from the unit. Over time, the decal can fade, crack or chip away.

Use pressure washing only when other cleaning methods are not effective. If you use a pressure washer, use the following precautions.

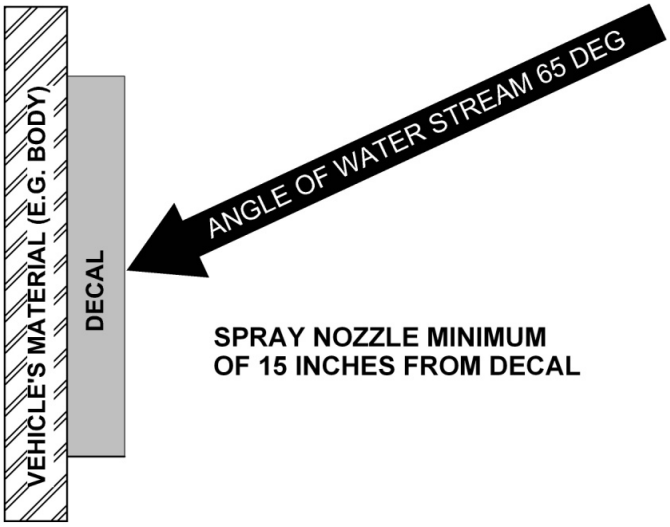
- Spray nozzle opening: 40° wide pattern
- Spray angle: 65° from vehicle’ s body (do not use sharp angles – this can lift the decals from the unit)
- Distance of nozzle to decal: 38 cm minimum
- Water pressure: <= 5.5 MPa
- Length of time: not more than 30 sec.
- NEVER use a “turbo pressure nozzle”.

C. Remove Difficult Debris

When normal cleaning procedures do not remove difficult debris from the decals, try the following:

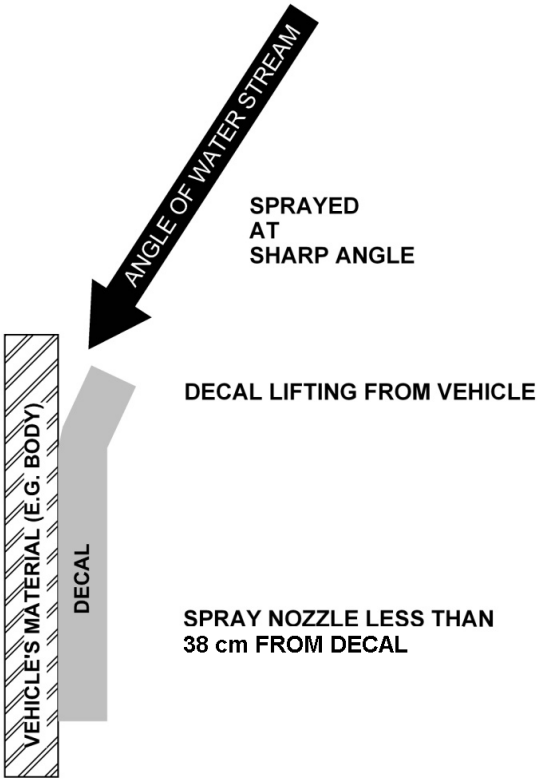
- Spot clean the decal with Isopropyl Alcohol and a micro-fiber cloth (rag)
- If these methods do not work on a problem area, call a Heil Dealer or Heil Customer Support.

DECAL CARE (CONTINUED)



RECOMMENDED TECHNIQUE

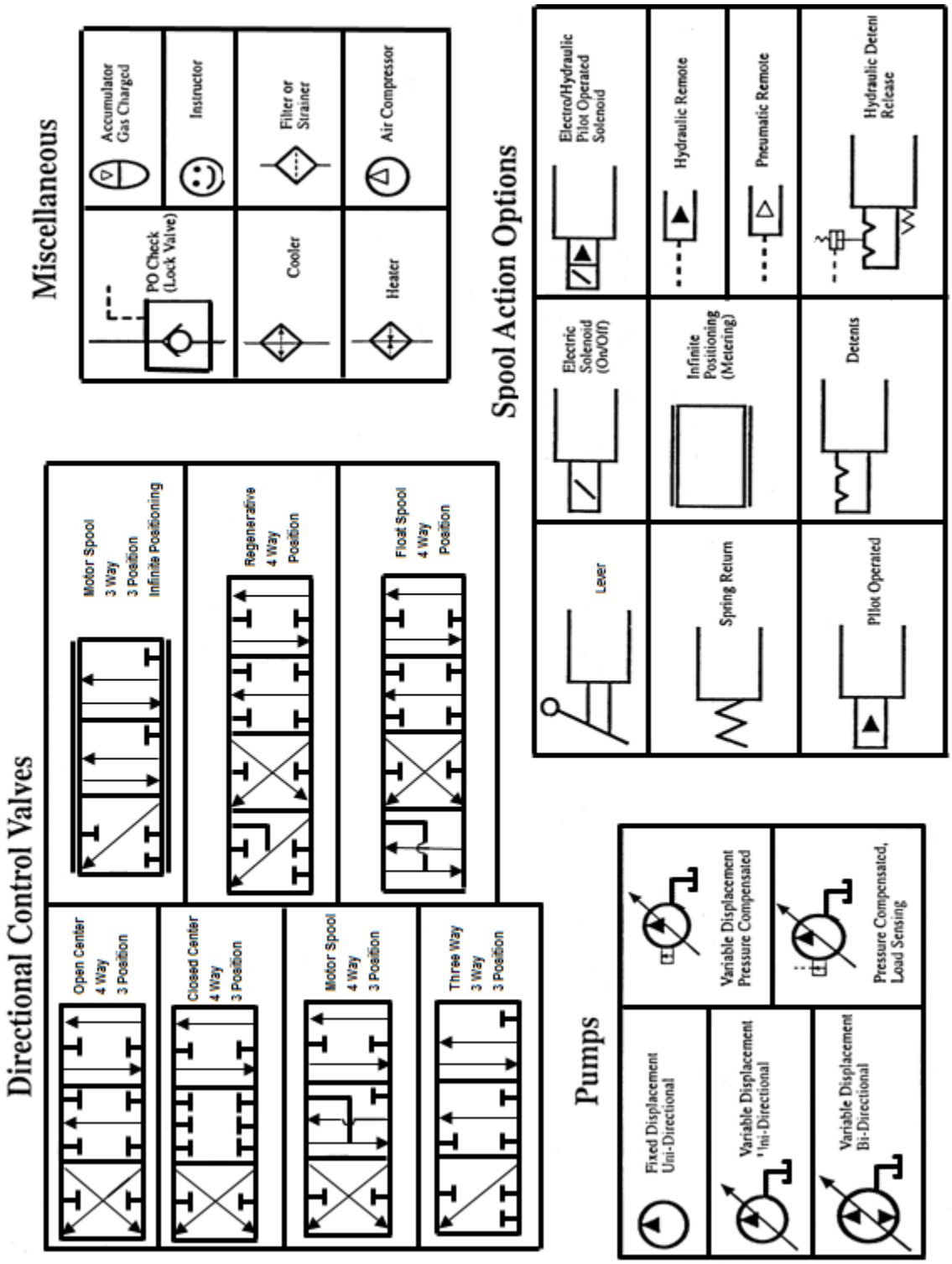
Figure 2. Recommended Technique



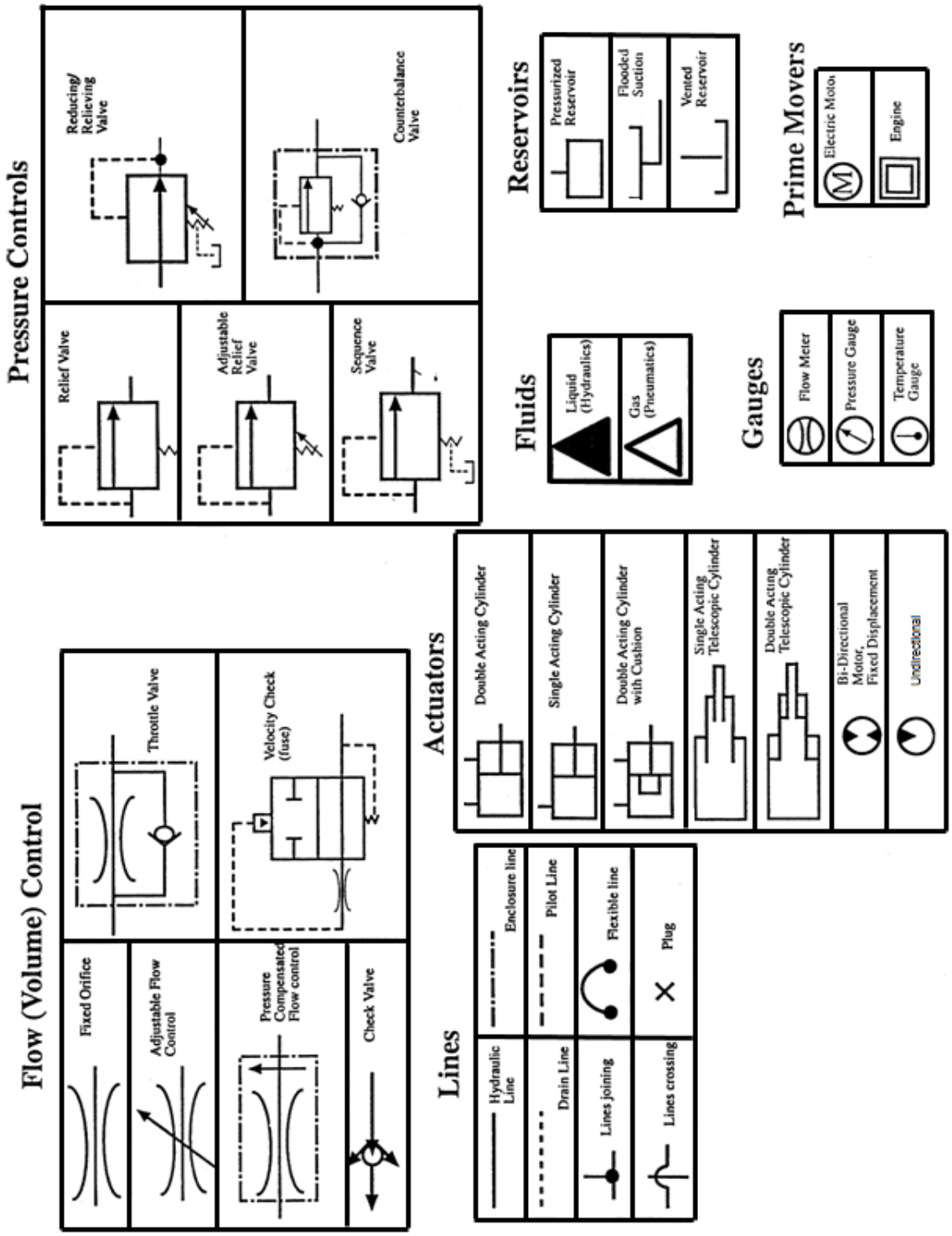
INCORRECT TECHNIQUE

Figure 3. Incorrect Technique

HYDRAULIC SYMBOLS

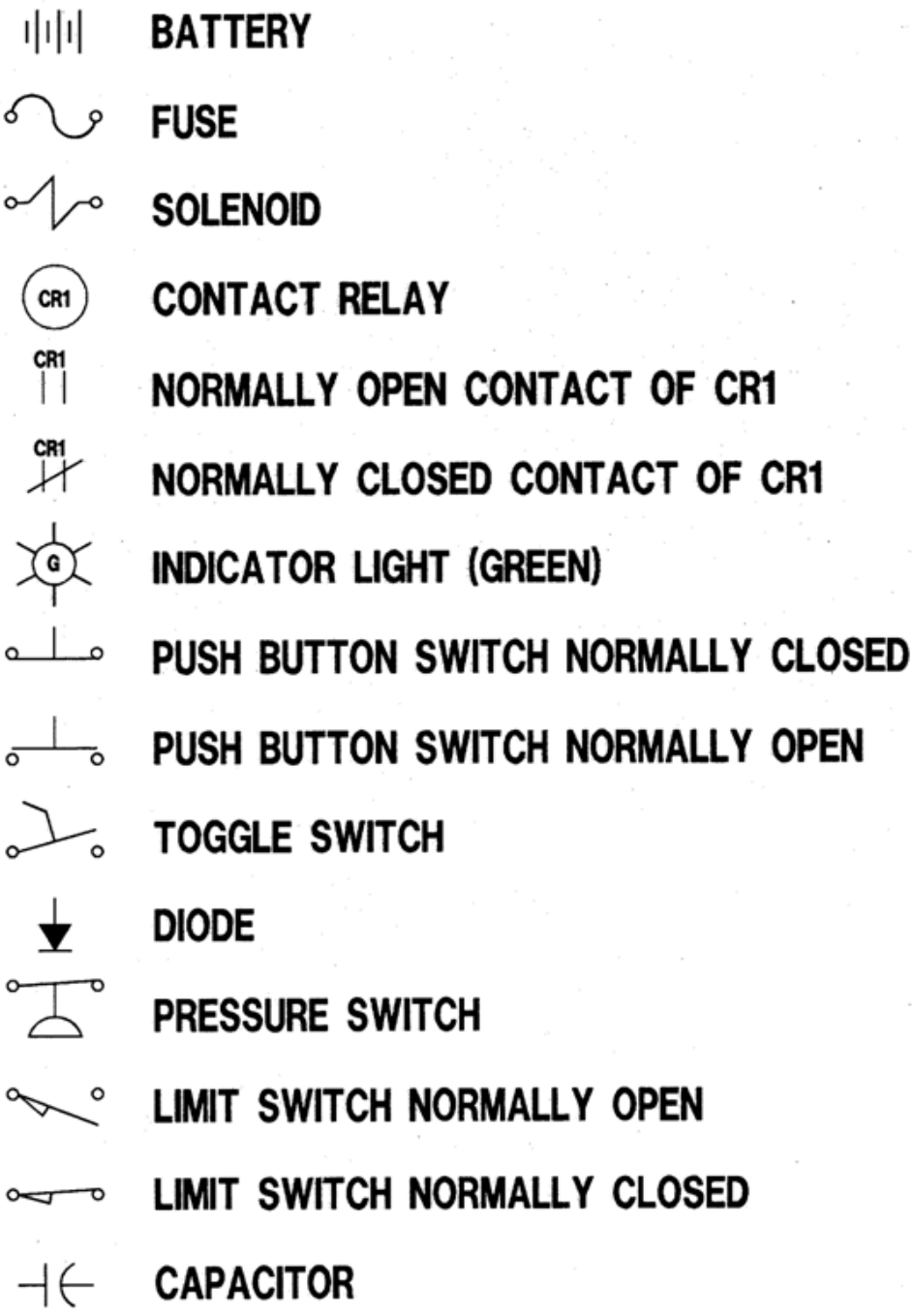


HYDRAULIC SYMBOLS (CONTINUED)



ELECTRICAL SYMBOLS

SYMBOL DEFINITIONS



SECTION 2
BODY AND TAILGATE

NYC PT 1100
Body and Tailgate

SPECIFICATIONS

A. Body

Hydraulic Oil Tank ..... 107 L
Hydraulic Oil System Capacity ..... 137 L
Hydraulic In-Tank Oil Filter 3-Micron
Hydraulic Cylinders:
Ejector;
001-7098 ..... 4-Stage Telescopic x 2522mm Stroke
Main System Relief Valve Pressure 2750 19MPa
Pump Operational Flow ..... 100 LPM

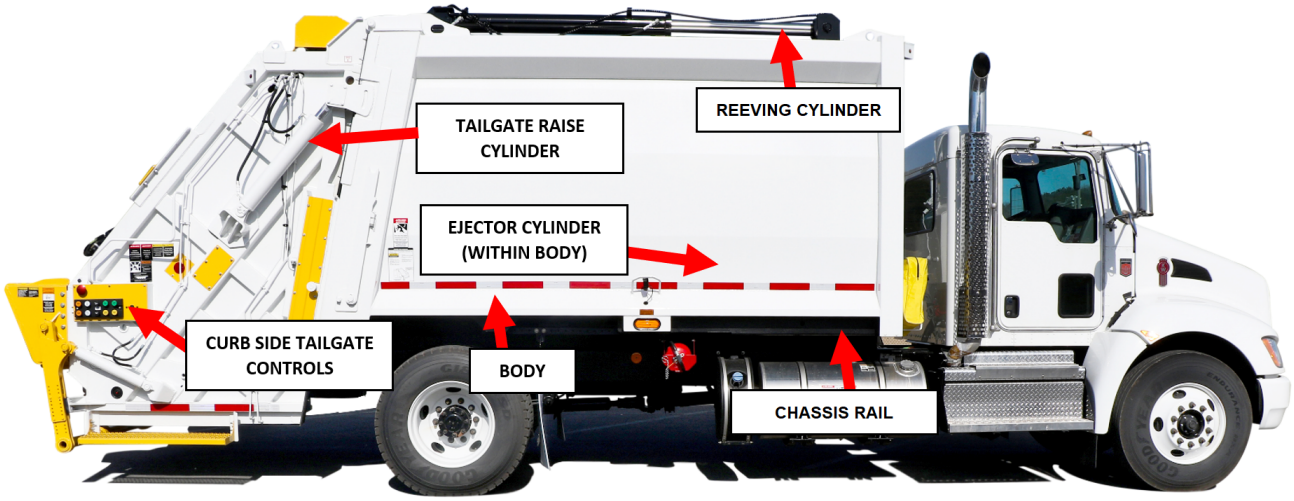
B. Tailgate

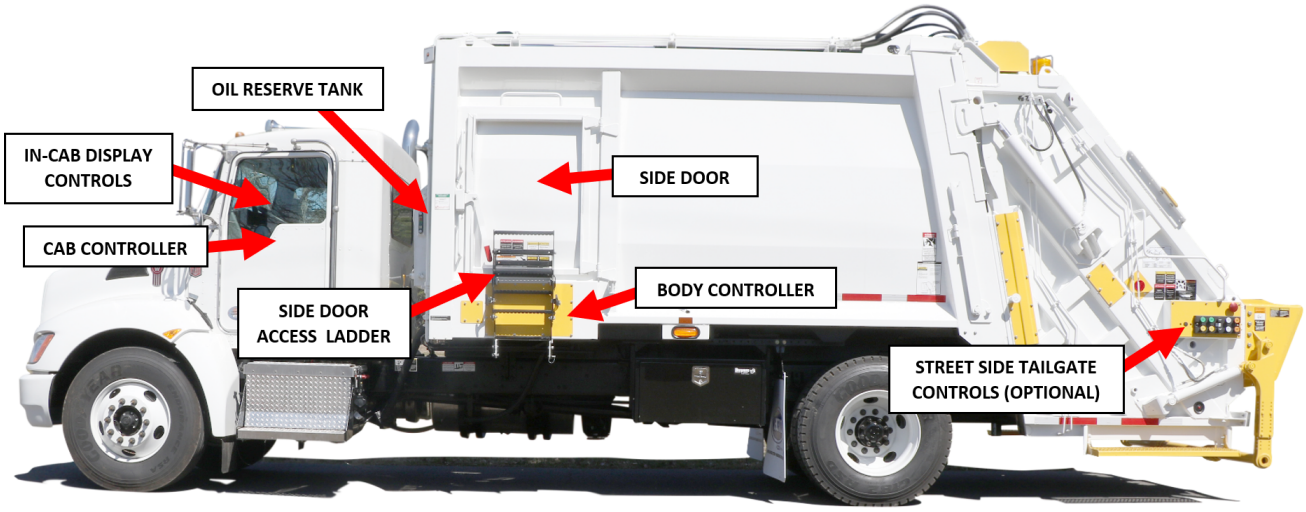
Hydraulic Cylinders:
Blade (lower panel) .....102mm Bore x 549mm Stroke
Slide .....102mm Bore x 673mm Stroke
Tailgate Raise.....76mm Bore x 787 mm Stroke

Tailgate Valve:
Optional Work Port..... 10 MPa
Blade Back-Off Relief ..... 26.9 MPa
Packer Blade Detent..... 14.5 MPa
Slide Detent..... 14.5 MPa
Pressure Switch Settings (Electrical Units)..... 17 MPa
Tailgate Packer Mechanism Cycle Times (Empty Hopper):
Complete Cycle.....23-28 Seconds
Reload ..... 5 to 6 Seconds

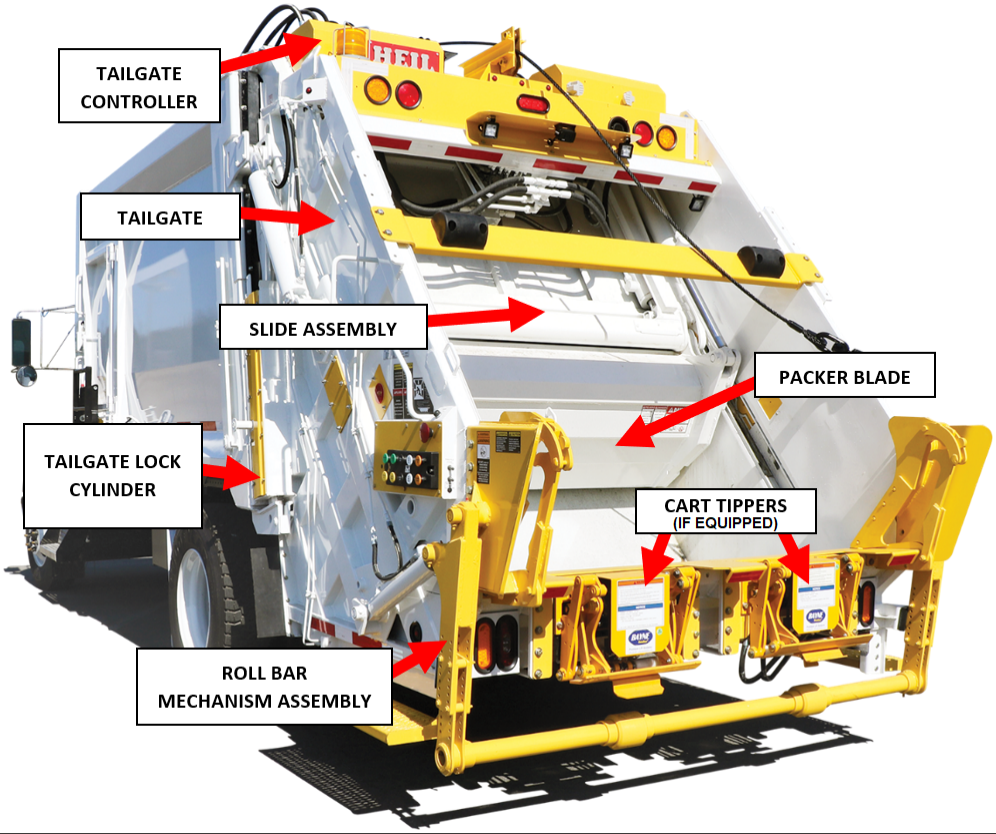
PRODUCT NOMENCLATURE

The figures below show the major body and tailgate components.





PRODUCT NOMENCLATURE (CONTINUED)



SIDE ACCESS DOOR

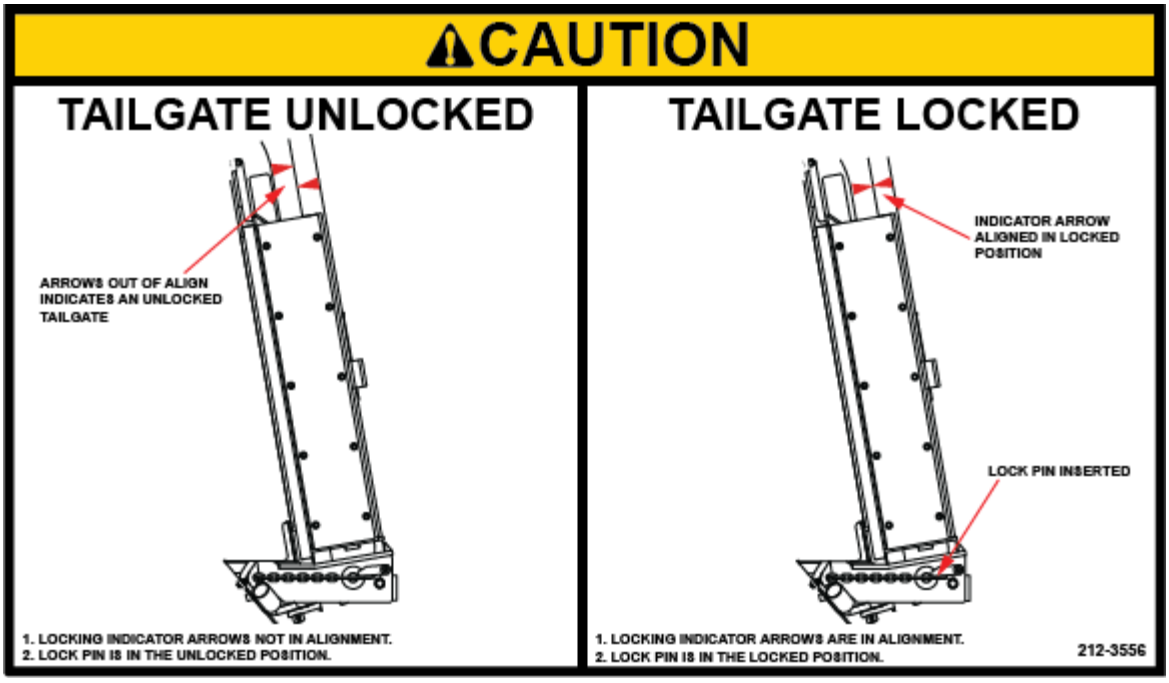
A side access door is installed on the street side of the body. This door will provide access to the hopper area for clean-out purposes. Be sure door is closed and latched properly at all times.

⚠ WARNING

Make sure the unit is in the Lock-Out/Tag-Out mode when you do maintenance or service procedures, when you go in the hopper, enter the side access door, or climb on the body or equipment. Equipment can be operated when the unit is not in the Lock-Out/Tag-Out mode. When the unit is not in the Lock-Out/Tag-Out mode, equipment operated while you do maintenance or service procedures, enter the hopper or climb on the body or equipment can cause serious injury or death.

Figure 4. Optional Street Side Access Door

TAILGATE LOCKS



TAILGATE SUPPORT PROPS

Two support props are on the unit and must be used whenever the tailgate is opened for service or maintenance. Both props must be used.

⚠ DANGER

Do not walk under or go between the body and the tailgate when the tailgate is in motion, while you prop the tailgate or while the tailgate is propped. Always prop the tailgate when you leave it raised for maintenance, service or cleaning procedures. Serious injury or death may occur if any part of your body is between the tailgate and the body if the tailgate suddenly closes.

⚠ CAUTION

Two props are installed on the unit. Both props must be used!

A. How to Use the Tailgate Props

1. Set unit on level surface and apply parking brake.
2. Raise tailgate enough so that props can be rotated out from body crossmember.
3. Without stepping between body and tailgate, use the handle on the prop to fully rotate the prop until it is perpendicular to the rear of the body. Repeat on opposite side of tailgate. See the figures below.

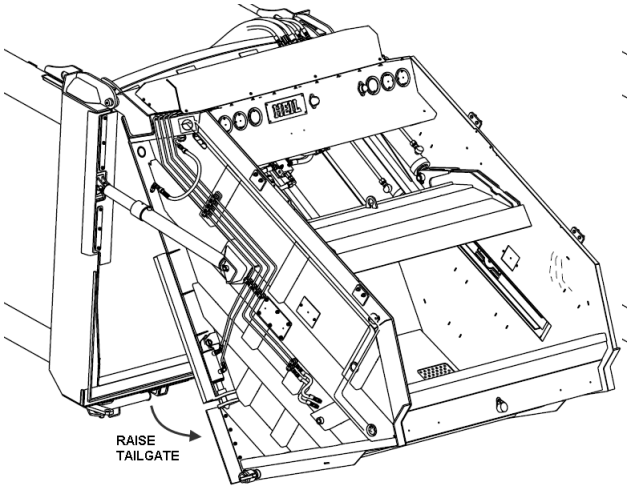


Figure 5. Tailgate Raised Enough to Rotate Out the Props

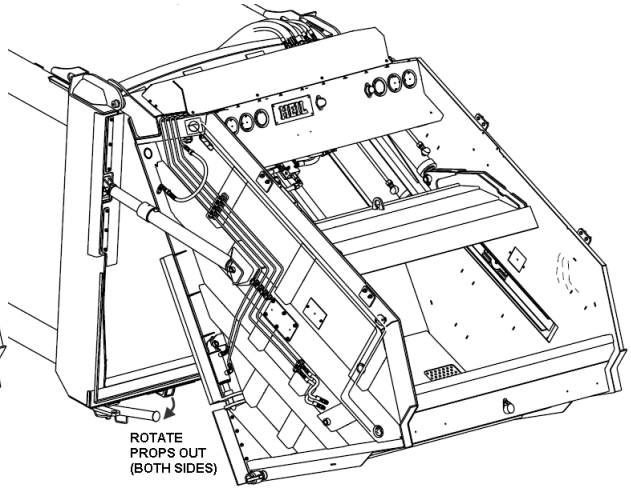


Figure 6. Rotate Tailgate Support Props until Perpendicular to Body

NYC PT 1100
NOTES

SECTION 3
MAINTENANCE AND ADJUSTMENT

BODY DAILY CHECKLIST

Make sure you perform a daily check of the unit. Refer to the Operator's Manual for the Daily Checklist. Many checks in the Daily Checklist are maintenance related, such as checking tire pressures and hoses for wear and damage.

DAILY CHECKLIST MAINTENANCE ITEMS	
ITEM	**REQUIRED ACTION**
Low air pressure in tires	Inflate the tire to the correct air pressure given on the tire.
Worn tire	Replace when the wear is greater than allowed by law or before the tread is no longer visible.
Damaged tire	Replace immediately **BEFORE** going on route.
Hydraulic pump leaks	Determine the cause of the leak and repair immediately.
Damaged hydraulic pump	Repair or replace **IMMEDIATELY.**
Loose or missing hardware for the hydraulic pump	Tighten loose hardware. Replace missing hardware immediately.
Damaged decal or decal not readable	Replace decal immediately.
Low level of hydraulic oil	Fill the hydraulic oil tank immediately.
Worn or damaged hoses	Replace immediately.
Leaks at cylinders, hoses or fittings	Tighten loose connection.
Loose or missing hardware	Tighten loose connections. Replace missing hardware.
Worn fiber guards	Replace hoses/fittings as necessary. Install new fiber guard on new hoses.
Worn or damaged tailgate lock components	Replace worn or damaged components.
Loose or missing tailgate lock hardware	Tighten loose hardware. Replace missing hardware.
Damaged tailgate seal	Replace seal.
Body structure has loose or missing hardware	Tighten loose hardware. Replace missing hardware.
Body structure has cracked weld joints	Repair immediately.
Body mounting brackets have loose hardware, damaged hardware or cracked welds	Tighten loose hardware. Replace missing hardware. Repair cracked welds.
Air regulator	.62 MPa, typically located at front of body.

BODY PREVENTIVE MAINTENANCE CHART

Preventive maintenance must be performed to ensure the safe and reliable operation of your unit. Use the chart below as a guideline for when essential items should checked and serviced. Severe use or adverse conditions may require more frequent maintenance.

BODY PREVENTIVE MAINTENANCE CHART						
	*HOURS OF OPERATION					
COMPONENT/SYSTEM	**8**	**40**	**200**	**1000**	**2000**	**CHECK/SERVICE**
Hydraulic System	☑					Check oil level – add if necessary
		☑				Check cylinders, pump, hoses, tubes, fittings, and adapters for leaks. Check hoses for cracks, crushes, and cover blisters. Repair or replace if necessary with genuine Heil parts. Any replacement hose should be the same size and pressure rating as listed on the original OEM hose.
		☑				Check Control valve seals for leaks. Repair or replace if necessary.
				☑		Replace filter after first 30 days of operation, then every 6 months or 1000 hours of operation OR when filter bypass light is ON.
				☑		Replace tank breather filter every time you replace filter element.
					☑	Drain, flush, and refill. Change filter element. Change oil when oil sample shows to change oil.
Electrical, Battery Cables	☑					Check for proper operation.
		☑				Check battery cables from battery to starter for loose cables, rubbing or damage and abrasions to cables. Replace if necessary.
Operator Controls	☑					
Front Mount Pump or Power Take-Off (PTO)		☑				Check seals for leaks and operation. Replace if necessary
		☑				Check drive line for smooth operation. Replace as necessary.
		☑				Check set screws for tightness. Tighten as necessary.
		☑				Make sure keys are in place. Replace if necessary.
			☑			For greaseable PTOs (non-wet spline), remove the pump's bolt flange about 2 inches from the PTO and apply grease to female pilot of PTO pump flange. Failure to lubricate female pilot of PTO as given may

BODY PREVENTIVE MAINTENANCE CHART						
*HOURS OF OPERATION						
COMPONENT/SYSTEM	**8**	**40**	**200**	**1000**	**2000**	**CHECK/SERVICE**
						cause damage to the pump shaft. Greasing is NOT required on wet spline PTOs such as the Chelsea 890/897 series.
Grease Fittings		☑				Lubricate as shown on Body Lube Chart.
Body Undercoating					☑	Inspect body undercoating and repair as necessary.
Tailgate Seal Integrity	☑					
Packer/Ejector Cylinder Preventive Maintenance	☑	☑				See **Packer/Ejector Cylinder Preventive Maintenance**.
PTO/Transmission Interface Inspection			☑			Check the torque on the PTO mounting screws and tighten to the proper torque specification
Slide assembly	☑					Clean refuse from the slide assembly hydraulic components
* Daily = 8 hrs. Weekly = 40 hrs. Monthly = 200 hrs. 6 Months = 1000 hrs. Yearly = 2000 hrs.						

PTO INSPECTION AND PREVENTIVE MAINTENANCE

Due to normal torsional vibrations of transmission mounted Power Take-Offs (PTOs), it is important that Service Technicians include the PTO/transmission interface in their standard inspection and maintenance schedules. If a PTO Inspection and Preventive Maintenance schedule is not followed, it is possible that the PTO mounting screws can come loose, resulting in transmission fluid leaks between the PTO and transmission and potential damage to the PTO or drive train

Actions

The tools and materials necessary to perform the Inspection/Preventive Maintenance are shown in **Table below**.

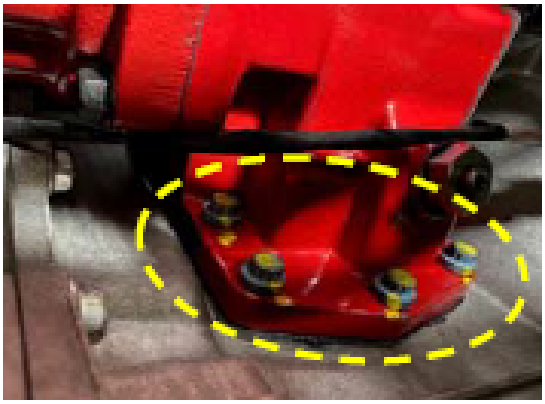
Table . Tools and Materials

Item	Part Number	Application
Personal Protective Equipment	Commercially available	Safety protection as required by employer
Wrench/Socket Set	Commercially available	To tighten PTO mounting 10mm 12 pt. head screws
Torque Wrench	Commercially available	To properly tighten PTO mounting screws
Marker	Commercially available	To make witness marks on the PTO mounting flange

With the unit in Lock-Out/Tag-Out mode with the hydraulic pressure relieved, carefully follow the steps below.

PTO/Transmission Interface Inspection/Preventive Maintenance (MONTHLY/200 HOURS OF OPERATION)

1. Inspect for transmission fluid leaking from the PTO/transmission interface. Thoroughly clean around this area.
2. Using a torque wrench, check the PTO mounting screws. If they are set less than 45 FT-LBS, tighten to 45 FT-LBS.
3. Using an oil-resistant marker, add a witness mark on each screw head and across the PTO mounting flange. For future inspections, this will help identify if the PTO mounting screws loosen over time. See Figure below.



Witness Marks on PTO Mounting Screws and Flange

4. Take the unit out of Lock-Out/Tag-Out mode and operate unit functions.
5. Check for transmission fluid leaks around the PTO/transmission interface. If there are leaks, contact Technical Services.
6. When there are no transmission fluid leaks, place the unit back into service.

PACKER/EJECTOR CYLINDER PREVENTIVE MAINTENANCE

It is critical to follow the guidelines of the **Body Preventive Maintenance Chart** and **Body Lubrication Guide** found in this section of this Service Manual and the Body Lubrication Guide decal on the unit. Failure to follow stated routine preventive maintenance can lead to premature cylinder failure that is not covered by your warranty.

⚠ WARNING

Make sure that the unit is in Lock-Out/Tag-Out mode before you perform maintenance/service procedures, or when you enter or climb on the hopper/body/related assemblies. Equipment is operational when the unit is not in Lock-Out/Tag-Out mode. Equipment operated while you do maintenance or service procedures can cause serious injury or death so also make sure to clear the area around the unit of all bystanders.

⚠ CAUTION

Failure to follow these instructions can result in damage to the Heil body, truck chassis or can cause personal injury!

HEIL PACKER/EJECTOR CYLINDER PREVENTIVE MAINTENANCE CHART

DAILY	WEEKLY
• Using a plastic bladed shovel, clean behind the packer panel and pockets around spherical's. DO NOT damage cylinder rods by striking with any metal object. • Visually inspect that lube lines (if equipped) are connected and not damaged or leaking. • Visually inspect packer tracks and hopper floor for excessive wear or damage. Repair or replace if necessary.	• Grease Packer/Ejector cylinder spherical bearings/pins • Inspect packer/ejector cylinder bearings/pins (both ends) for wear, rust or damage and replace if necessary.

Side Loading and Premature Cylinder Failure can be caused by:

- Inadequate greasing intervals
  - causing increased friction at spherical bearings
  - potentially resulting in seizing of spherical bearings
- Packing into the second stage of a multistage cylinder
- Binding of components caused by debris (see figure to right)

LUBRICATION GUIDE

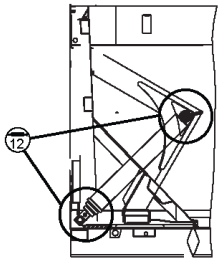
Use No. 1 pressure gun grease. Clean fittings before applying grease and always pump enough grease into joint to remove the old grease. Wipe off excess grease. For slide surfaces, use cloth or brush to coat. Lubricate moveable mechanical parts without fittings every 60 days with non-detergent engine oil. Refer to the image below and the table on the next page.

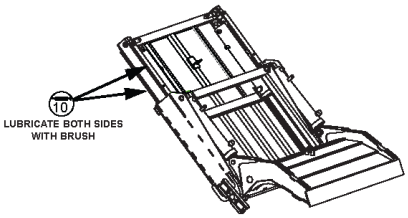
NYC PT1100™ LUBRICATION GUIDE

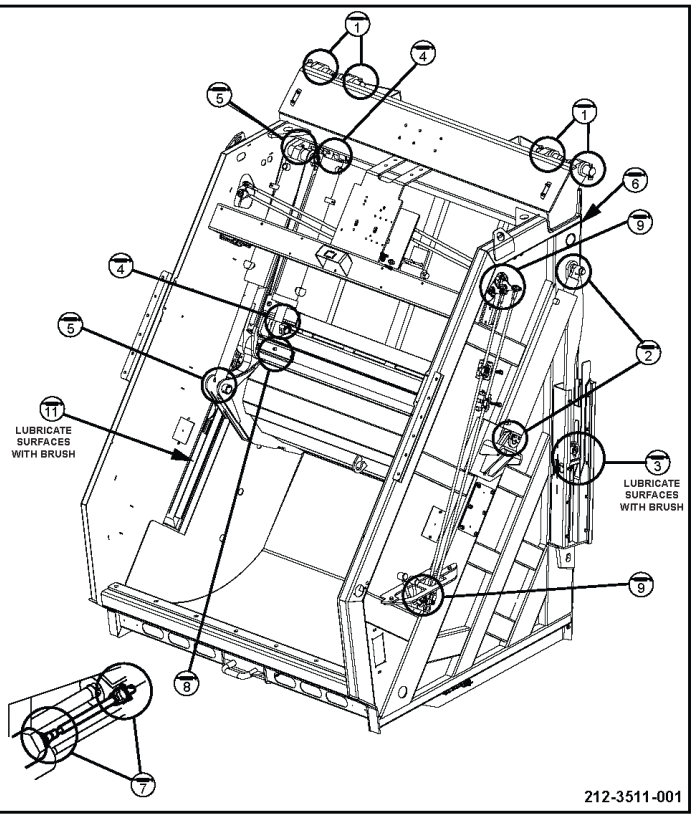
OEM Parts are key to ensuring that units are covered by Heil's Warranty Program.

Note: Use No. 1 pressure gun grease. Clean fittings before applying grease and always pump enough grease into joint to remove the old grease. Wipe off excess.

REF. NO.	LOCATION	QTY.	INTERVAL
1	Tailgate Hinge	4	Weekly/40 Hours
2	Tailgate Raise Cylinders (2/Cyl.)	4	Weekly/40 Hours
3	Tailgate Lock Track	2	Weekly/40 Hours
4	Slide Cylinders (2/Cyl.)	4	Weekly/40 Hours
5	Blade Cylinders (2/Cyl.)	4	Weekly/40 Hours
6	Inner Slide Pivot	2	Weekly/40 Hours
7	PTO Drive Shaft	4	Weekly/40 Hours
8	Blade Pivot Bearing	2	Weekly/40 Hours
9	Tailgate Control Levers	2	Weekly/40 Hours
10	Inner Slide Bearing	4	Weekly/40 Hours
11	Slide Track	4	Weekly/40 Hours
12	Ejector Cylinder	2	Weekly/40 Hours







COLD WEATHER WARMUP PROCEDURE

When ambient air temperature is cold (below 0 degrees F), it is necessary to warm up the unit's hydraulic oil before you start your daily route operation, check the oil level, or adjust hydraulic pressure settings. The hydraulic oil is sufficiently warmed when the temperature is between 120° and 160° F.

⚠ WARNING

Moving parts on the unit are dangerous. Serious injury or death can occur if a person is struck by the equipment. Clear all people from the area before you operate the unit.

Follow the steps below to warm up the hydraulic oil.

1. START the TRUCK and let the engine idle.
2. APPLY the PARKING BRAKE and make sure it holds.
3. ENGAGE the HYDRAULIC PUMP for approximately five minutes.
4. MAKE SURE the AREA IS CLEAR of all unnecessary people BEFORE you operate the controls.
5. OPERATE the EJECTOR EXTEND and EJECTOR RETRACT functions through ten (10) cycles while the engine idles. See the Operator's Manual for operation instructions.
6. Make sure the oil temperature on the site gauge is between 120° and 160° F. If not, repeat step 5.
7. Check for fluid leaks. Repair if necessary.
8. The unit is now ready to go on route.

PREPARING THE UNIT TO CHECK THE OIL LEVEL

Before checking the oil level or adding oil, make sure the unit is in the following position with all cylinders collapsed:

- Truck – on level ground
- Tailgate and Body – fully down and locked
- Ejector Panel – at the front of the body
- Packer Panel – in the in-transit position with all cylinders retracted

The oil tank is mounted on the front head of the body, behind the chassis cab. The oil level in the standard tank must be kept between the low and full marks as indicated on the sight gauge. See the figure below.

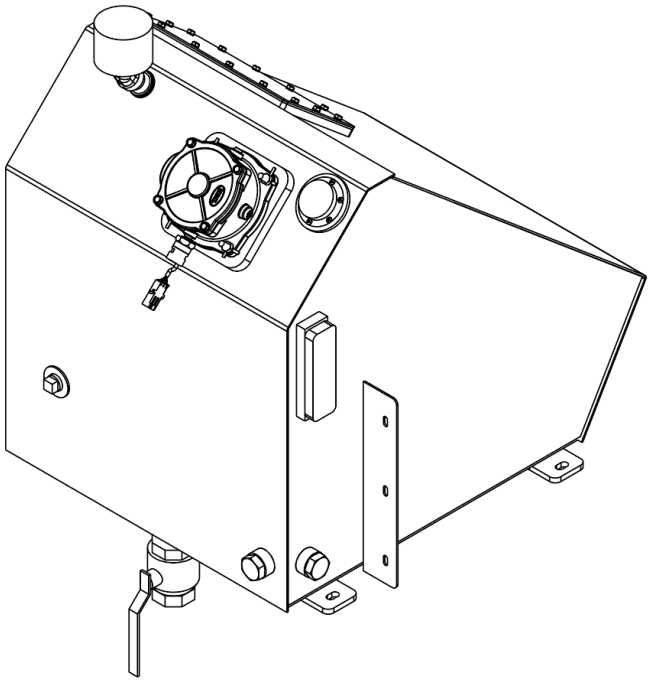


Figure 7. Hydraulic Oil Tank and Sight Gauge

CHECK OIL LEVEL

Check the hydraulic oil level (after warning up the oil) daily or every eight (8) hours, whichever comes first. Fill as necessary.

Important: Contamination is a hydraulic system's worst enemy. Do not let dirt enter the system. Use a clean rag and remove dirt or other contamination around any system component before you disconnect or remove it. While you fill the reservoir, filter the oil through a 200 mesh (or finer) screen. Never use a cloth to filter the oil.

WHEN TO CHANGE OIL FILTER ELEMENT

Change the filter more often under certain conditions such as an extremely dusty atmosphere or area. Use only Heil replacement filters. Purchase the filter element from your local Heil distributor.

Change the filter element every 1000 hours or every six (6) months or when indicated by the filter monitor light located in the cab.

CHANGE HYDRAULIC OIL FILTER ELEMENT

To change the hydraulic oil filter, refer to the figure below and follow these steps:

1. Remove nuts and filter cover.
2. Remove the filter element with the by-pass assembly and discard as required.
3. Clean the housing with a clean, lint-free cloth.
4. Check the o-ring and gasket. Replace them if necessary.
5. Lubricate all o-rings and gaskets.
6. Install new element.
7. Reinstall cover with nuts. Torque nuts to 1.5 N-m.

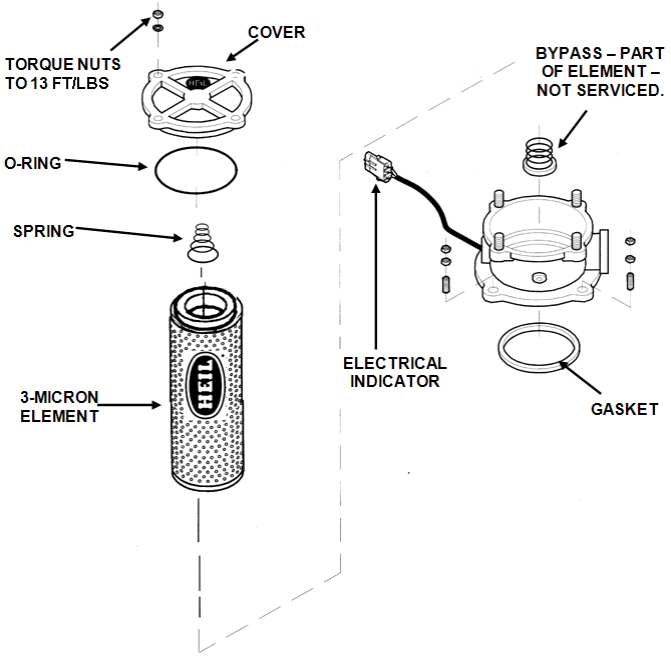


Figure 8. Hydraulic Oil Filter

DRAIN AND CLEAN THE HYDRAULIC OIL TANK

Change the hydraulic oil at least annually or every 2000 hours of operating time, whichever comes first.

Remember that almost all hydraulic system malfunctions can be traced to dirt in the fluid. When working with the hydraulic system, the hands, tools, working area and parts must be as clean as possible.

⚠ CAUTION

Wear proper eye protection when you are working on or around hydraulic lines or components. Wear proper eye protection and avoid contact with hydraulic oil if possible. Never check for oil leaks with your hands.

To drain and clean the hydraulic oil tank, follow these steps:

1. Disengage the pump, shut off the engine and remove the ignition key.

⚠ WARNING

Make sure the unit is in the Lock-Out/Tag-Out mode when you do maintenance or service procedures, or when you go in the hopper, climb in or on the body or on equipment. Equipment can be operated when the unit is not in the Lock-Out/Tag-Out mode. When the unit is not in the Lock-Out/Tag-Out mode, equipment operated while you do maintenance or service procedures, go in the hopper or climb in or on the body or on equipment can cause serious injury or death.

NOTICE

If your employer or company has Lock-Out/Tag-Out procedures that are different from the following procedures, use your employer's or company's procedures. If your employer or company does not have Lock-Out/Tag-Out procedures, use the procedures that follow.

2. Contact your supervisor if you have any questions about Lock-Out/Tag-Out procedures. If your supervisor has any questions, that person can contact Heil Technical Service. Perform the **Lock Out/Tag Out procedures**.
3. Remove the fill cap from the top of the tank.
4. Remove the drain plug from the bottom of the tank so that the oil drains into a container.
5. While fluid is draining from the tank, remove and replace the filter/breather assembly. Change the assembly every time the in-tank filter is replaced.
6. To drain the entire hydraulic system, disconnect all hoses at the adapter and drain the hoses into a container.
7. Remove and replace the in-tank filter as described in **Change the Hydraulic Oil Filter**.
8. Remove the outlet flange and 100 mesh suction strainer to gain access to the tank inside.
9. Remove sediment from the tank bottom.
10. Install the outlet flange with a new gasket and the 100 mesh suction strainer into the tank.
11. Install the drain plug in the tank bottom.
12. Reconnect and tighten all hose connections that were disconnected.

DRAIN AND CLEAN THE HYDRAULIC OIL TANK (CONTINUED)

NOTICE

Before filling the tank be sure the funnel is clean and 200 mesh (or finer) screen is used to strain the hydraulic oil.

13. Fill tank with recommended oil, checking the sight gauge as you fill. Refer to **Hydraulic Oil Specifications**.
14. Check the entire system to make sure all connections are tight and no leaks are found.
15. Start the truck's engine and engage the pump.

⚠ WARNING

Moving equipment can be dangerous to bystanders. Serious injury or death can occur if a person is in the wrong area or is not attentive to the operations. Clear the area of all unnecessary people before you operate the controls.

16. Operate the automated container lift mechanism.
17. Operate tailgate – full up and full down.
18. Operate body raise (dump units) – full up and full down.
19. With the packing panel in the retracted position and lift in the in-transit position, check tank oil level. If necessary, add recommended as described under **Check Oil Level**.

PURGE THE HYDRAULIC SYSTEM

If the hydraulic system becomes contaminated because of component failure or some other reason, you must purge the hydraulic system.

To purge the system, follow these steps:

1. Extend the ejector cylinder to lower the oil level in the tank.
2. Remove and replace the in-tank oil filter element in the tank.
3. Engage the ejector controls and allow the oil to circulate through the new filter, cleaning the oil.

NOTICE

Before filling the tank be sure the funnel is clean and 200 mesh (or finer) screen is used to strain the hydraulic oil.

4. Repeat the procedure as necessary until the system is purged.

NOTICE

If contaminated hydraulic oil reaches the cylinders, the unit may need to be removed from service until the contamination is removed. For more information, contact the Heil Technical Services.

PRESSURE ADJUSTMENT SETTINGS

⚠ DANGER

Stand clear when packing mechanism is in motion. Standing close to the unit when it is in motion or operation may result in injury or death.

⚠ DANGER

Do not stand in the hopper or on the hopper sill while adjustments are being made on the packing mechanism with the unit running. Doing this may result in injury or death.

⚠ CAUTION

Always remove dirt and grease from around the main relief valve. Leaving a build up of dirt or grease may result in damage to the valve.

⚠ CAUTION

Be careful not to force the adjusting screw or it may deform the internal adjusting rod and make the valve inoperative.

NOTICE

The unit must remain in neutral during all pressure setting procedures. Make sure that the work area is clear of uninvolved people and that the parking brake is fully applied and wheels fully chocked.

Install accurate 0-5000 PSI glycerin filled pressure gauge in the gauge port at the underbody valve.

A. Before Starting Adjustments

If hydraulic oil temperature is not a minimum of 100 degrees F, warm oil by:

1. Tailgate must be down and locked.
2. Hold throttle advance switch. Move ejector panel IN and OUT through 5 cycles.
3. Run tailgate packing mechanism through 10 cycles.
4. Repeat steps (2)–(4) until oil temperature reaches 100 degrees F.

B. Required Tools

These are the tools required to make pressure adjustments.

QUANTITY	TOOL
1	Open end wrench
1	Ratchet with screwdriver attachment
1	0-5000 PSI hydraulic pressure gauge

PRESSURE ADJUSTMENT SETTINGS (CONTINUED)

C. Valve Locations

The hydraulic control valves are located on the front head (street side) of the body and on the rear of the body above the hopper.

D. Pressures and Cycle Times

MODEL	MAIN RELIEF	EJECTOR BLADE DRIFT RELIEF (Note 3)	TAILGATE -BLADE BACK OFF RELIEF	TAILGATE VALVE PORT RELIEFS FOR ROLL BAR DUMPER	TAILGATE VALVE PORT RELIEFS FOR CART TIPPERS	TAILGATE VALVE PORT RELIEFS FOR REEVING MECH	TAILGATE VALVE PORT RELIEFS FOR QUICK-TIP	TAILGATE CYCLE TIME @28 GPM
PT 1100	2750 PSI	2000 PSI	3900 PSI	1500 PSI	2000 PSI	RET 2500 PSI EXT 2550 PSI	RET 1850 PSI	23 - 28 sec
EOS Setting		Disengage at 300 RPM above throttle advance RPM						
NOTES:	1: Main Pressure settings have a tolerance range of +/- 50 p.s.i. and are to be set at operating speed - WI594							
	2: Port Relief Pressure settings have a tolerance range of +/- 100 p.s.i. and are to be set at operating speed - WI594							
	3: Set this pressure with engine at idle							

E. Contact Heil Technical Services at **866-310-4345** for help with pressure adjustments.

SLIDE WEAR STRIPS

Slide wear strips on a standard model are bronze and should be greased weekly by applying a line of grease on the exposed portion of the wear bar when extended, both inside and outside. Refer to **Body Lubrication Guide** and Lubrication Guide Decal on the unit. Replacement is necessary before the slide wear strips wear down to the button head cap-screws that secure them. Fully extend the slide and inspect the two outer wear strips from inside the tailgate. Inspect the underside wear strips from inside the body.

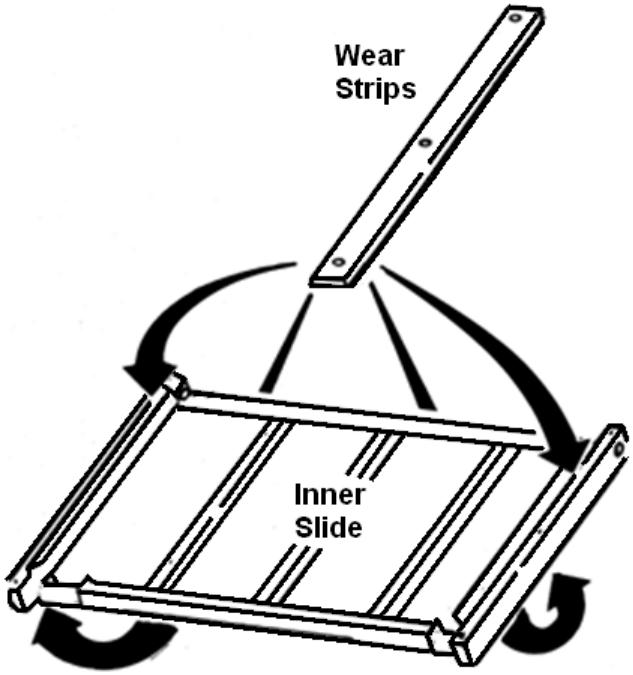


Figure 9. Slide Wear Strips

TROUBLESHOOTING		
TROUBLE	**PROBABLE CAUSE**	**REMEDY**
Load will not hold	1. Cylinder leaking or worn 2. Oil bypassing valve plunger 3. Port relief valve not holding	1. Check cylinders. 2. Replace valve. 3. Remove and clean.
Poor hydraulic system performance or failure	1. Defective pump 2. Dirt in relief valve 3. Relief valve defective 4. Worn cylinders 5. Load too heavy 6. Internal valve crack 7. Plunger not at full stroke 8. Reservoir low on oil 9. System filter clogged 10. Line restricted 11. Ejector cylinder leakage 12. Blade back off relief stuck open	1. Check pressure or replace. 2. Disassemble and clean. 3. Check as per instructions. 4. Repair or replace. 5. Check line pressure. 6. Replace valve. 7. Check movement and linkage. 8. Add oil. 9. Replace filter. 10. Check lines. 11. Check for internal bypassing and external leakage. 12. Replace relief cartridge. 13. Check pressure and adjust as specified.
Outer Slide Drifts down	1. Regenerative spool stuck 2. Slide Cylinder bypassing	1. Free spool or replace valve. 2. Inspect Slide Cylinder for bypass.
Excessive Heat	1. Control Valve spool partially shifted 2. Restriction in line or valve	1. Lubricate and free up linkage. 2. Remove restriction.

DOUBLE ACTING TELESCOPIC HYDRAULIC CYLINDER DISASSEMBLY AND ASSEMBLY

Step 1

The cylinder is best serviced when mounted in the vertical position, for both disassembly and assembly. Also, it is best located where a hoist can be used directly overhead of the cylinder for removing the plungers if complete disassembly is required. A typical stand is shown in Figure 15, made of angle welded to a base anchored to the floor and an adjustable wrap around chain to secure the cylinder to the stand. Because of oil spillage and safety, we recommend draining the cylinder of oil before disassembling. Figure 16 shows a typical sequence of disassembling of the cylinder plungers in steps which are further described in this manual.

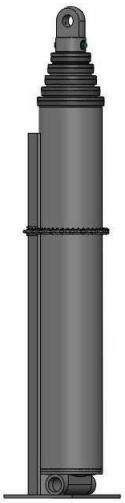


Figure 10.

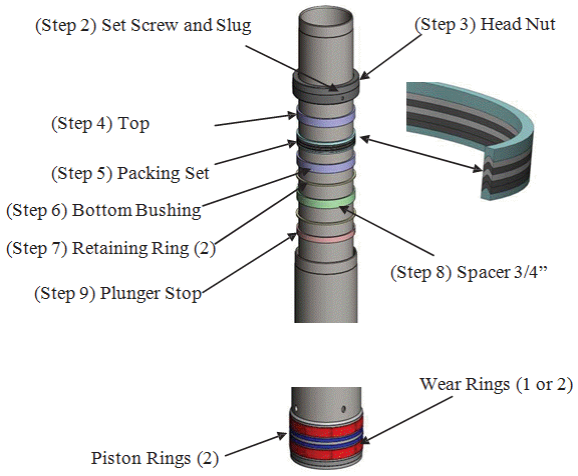


Figure 11.

Step 2 - Set Screws

All head nuts are secured to the plunger by a set screw. Under the set screw is a nylon slug to protect the plunger threads. To remove the head nut, the set screw must be loosened using an allen wrench. (Figure 17).

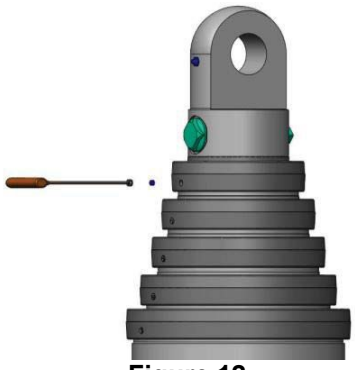


Figure 12.

DOUBLE ACTING TELESCOPIC HYDRAULIC CYLINDER DISASSEMBLY AND ASSEMBLY (CONTINUED)

Step 3 - Head Nuts

After the set screws have been loosened, tap head nut gently around its circumference and unscrew the head nut with a chain wrench, or an equivalent tool. Do not use a chisel, punch or weld any studs to the head nut to remove. (Figure 18).

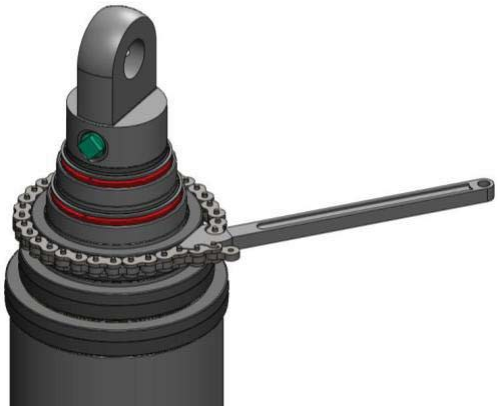


Figure 13.

Step 4 – Top Bushings

Using a bushing removal tool (Figure 19), Thread the ends into holes on top of bushings and lift the bushing upward.

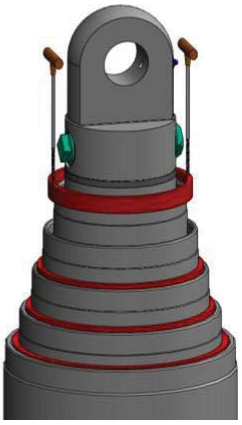


Figure 14.

DOUBLE ACTING TELESCOPIC HYDRAULIC CYLINDER DISASSEMBLY AND ASSEMBLY (CONTINUED)

Step 5 – Packing

To remove packing, pull the plunger up about one foot. Add tape to a clean area as shown in Figure 20. Push the plunger down past the packing then pull the plunger up. The packing will stick to the tape and be pulled out with the plunger. Repeat as needed.

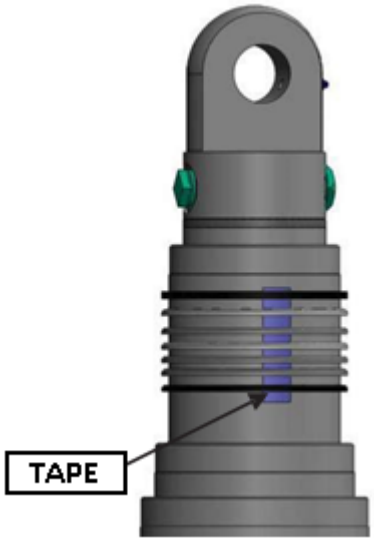


Figure 15.

Step 6 – Bottom Bushings

To remove the bottom bushing use tape applied in step 21. Push the plunger down past the bushing then pull the plunger up. The bushing will stick to the tape and be pulled out with the plunger. Repeat as needed.

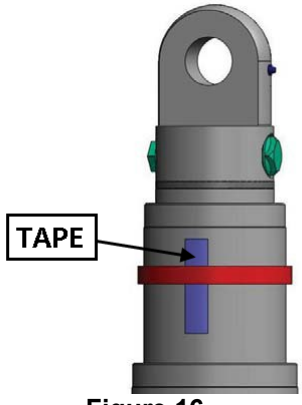


Figure 16.

DOUBLE ACTING TELESCOPIC HYDRAULIC CYLINDER DISASSEMBLY AND ASSEMBLY (CONTINUED)

Step 7 - Retainer Rings

Using a tool shown in Figure 22, insert the hooked end into the retaining ring slot. Force the retaining ring out of the groove and lift ring out of plunger.

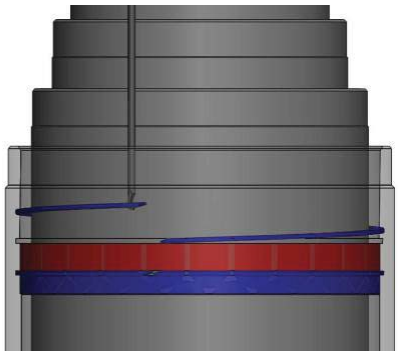


Figure 17.

Step 8 – Spacers

To remove spacer, pull the plunger up about one foot. Add a minimum of two layers of duct tape, to a clean area as shown in Figure 23. Push the plunger down past the spacer then pull the plunger up. The spacer will stick to the duct tape and be pulled out with the plunger. Repeat as needed.

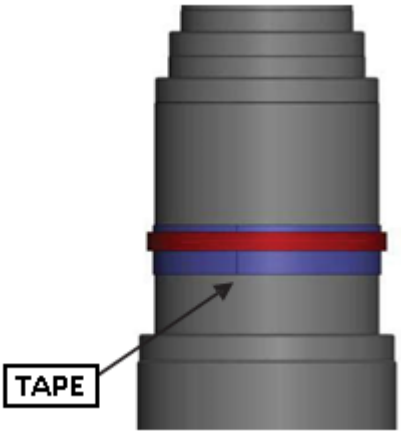


Figure 18.

DOUBLE ACTING TELESCOPIC HYDRAULIC CYLINDER DISASSEMBLY AND ASSEMBLY (CONTINUED)

Step 9 – Second Retaining Ring and Plunger Stop

Repeat Step 6 to remove second retaining ring. The plunger is now free to lift out. The plunger stop will come out with the plunger.

Figure 19.

Reassembly of Cylinder

All bores in the packing area and plunger outside diameters must be free of tool marks and scratches. Polish with a fine paper, crocus cloth or a Scotch Brite pad. All parts should be clean and free of any contamination. A complete Major Repair Kit is recommended. Install the piston rings. The guide ring may require a slight grind on the end for proper fit. The end gap should not exceed 1/8". Drop all plungers into the body in the vertical position. Assemble the remaining parts in the reverse sequence. The packing should be pre-soaked in oil (Do not use a detergent oil) before installing. Seat each lip individually, making sure packing is nestled uniformly. After the head nuts are tightened, make sure there is a nylon slug under the set screw. After installing the cylinder in the unit, cycle the cylinder several times to remove any entrapped air. Adjust the head-nuts if required for proper sequencing of all the rams. Make sure the head-nut lock screw is tight when finished.

DOUBLE ACTING TELESCOPIC HYDRAULIC CYLINDER DISASSEMBLY AND ASSEMBLY (CONTINUED)

Step 10 - Setting Head Nuts

Remove the small slug located opposite the set screw. Using an allen wrench (Figure 17), tighten the head-nut down until the hex wrench bottoms out on the top of the plunger. Remove the hex wrench and replace the slug. Install the set screw using a nylon slug to protect the threads.

Figure 20.

CLEAN AND INSPECT THE TAILGATE SEAL

Periodically check the tailgate seal to make sure it mates properly with the body and inspect for possible wear, damage or leaking. Replace the seal as necessary. See the figure below.

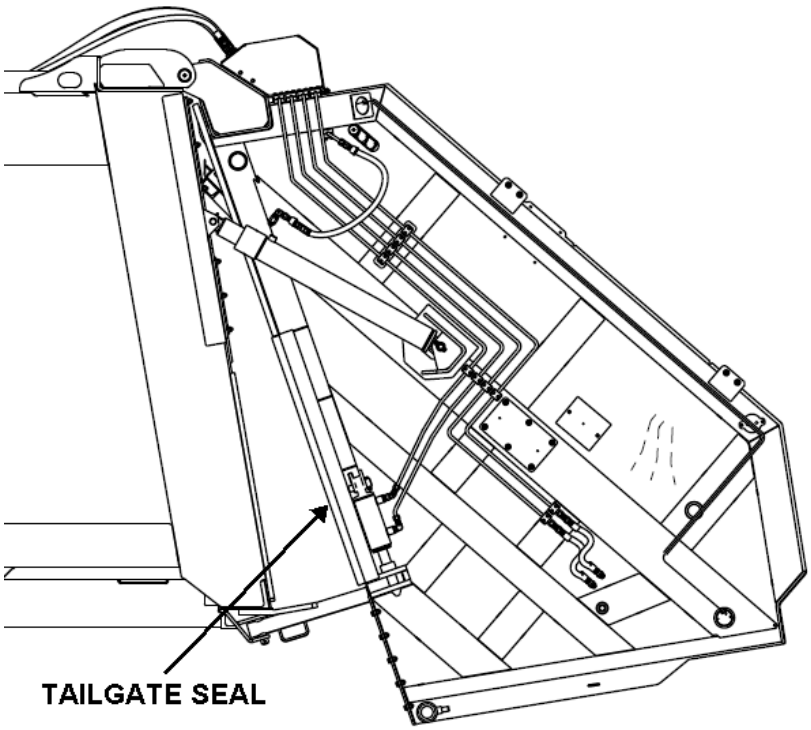


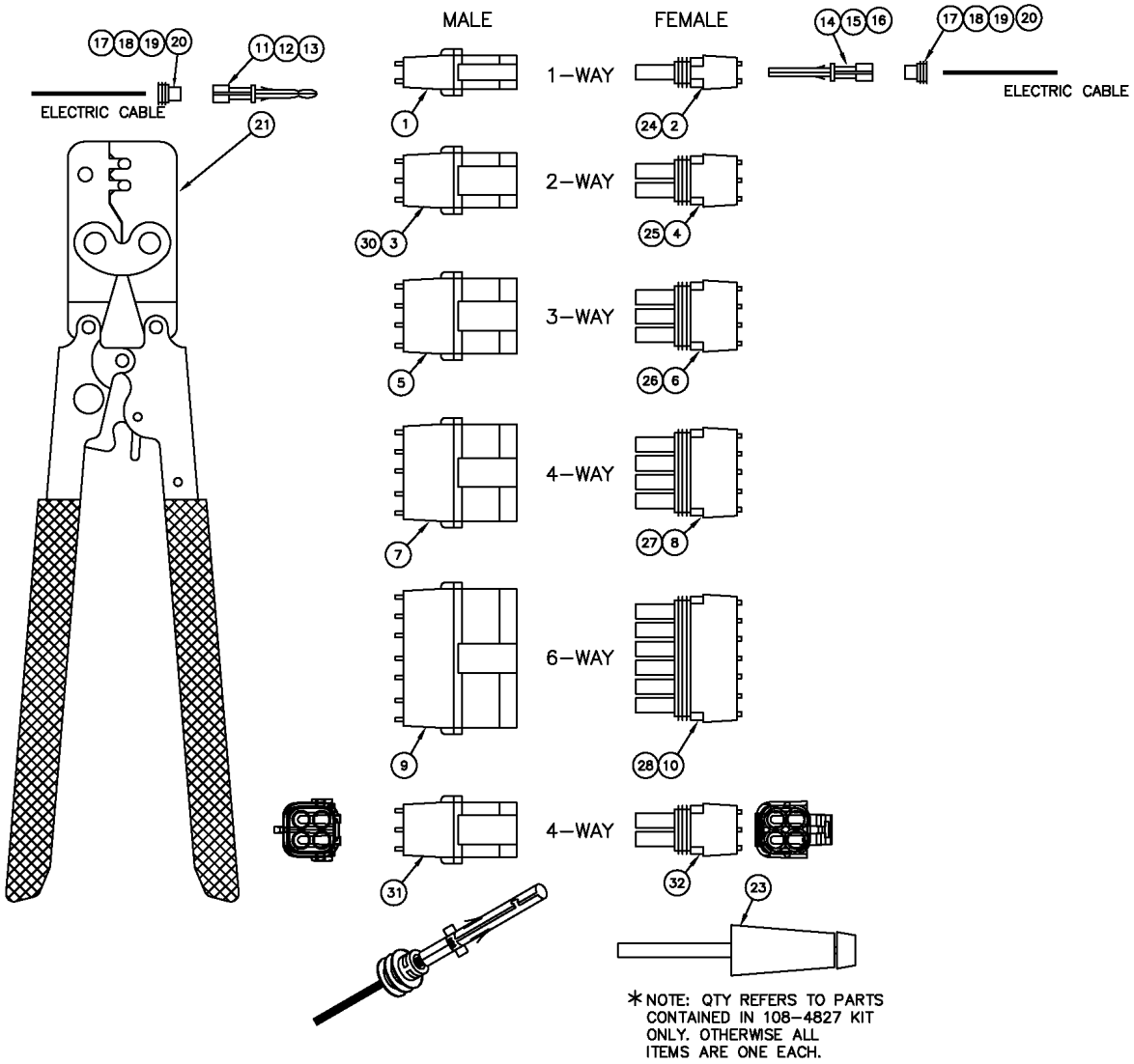
Figure 21. Tailgate Seal

NYC PT 1100
NOTES

SECTION 4
SCHEMATICS

NYC PT 1100
Schematics

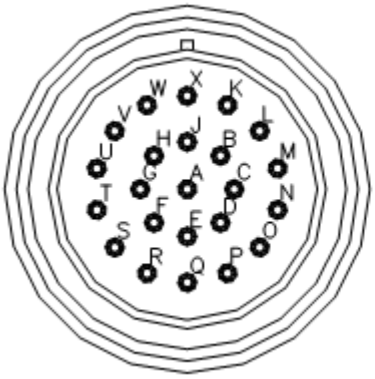
PACKARD CONNECTION KIT, 108-4827

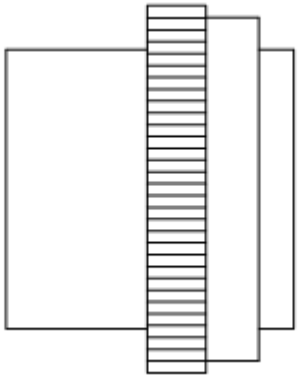


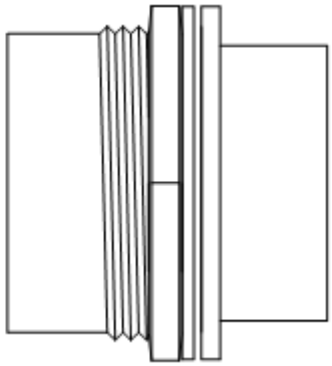
PACKARD CONNECTION KIT, 108-4827

ITEM	PART NO.	DESCRIPTION	EFF	QTY
-	108-4827	KIT, Packard connection	-	REF
1	108-4827-001	CONNECTION, 1-Way Male	-	20
2	108-4827-002	CONNECTION, 1-Way Female	-	20
3	108-4827-003	CONNECTION, 2-Way Male	-	20
4	108-4827-004	CONNECTION, 2-Way Female	-	20
5	108-4827-005	CONNECTION, 3-Way Male	-	20
6	108-4827-006	CONNECTION, 3-Way Female	-	20
7	108-4827-007	CONNECTION, 4-Way Male	-	20
8	108-4827-008	CONNECTION, 4-Way Female	-	20
9	108-4827-009	CONNECTION, 6-Way Male	-	20
10	108-4827-010	CONNECTION, 6-Way Female	-	20
11	108-4827-110	TERMINAL, Male (18-20 AWG)	-	60
12	108-4827-111	TERMINAL, Male (16-14 AWG)	-	200
13	108-4827-112	TERMINAL, Male (10-12 AWG)	-	60
14	108-4827-120	TERMINAL, Female (18-20 AWG)	-	60
15	108-4827-121	TERMINAL, Female (16-14 AWG)	-	200
16	108-4827-122	TERMINAL, Female (10-12 AWG)	-	60
17	108-4827-130	SEAL, Cable – (20 GA)	-	20
18	108-4827-131	SEAL, Cable – (18 GA)	-	100
19	108-4827-132	SEAL, Cable – (16-14 GA)	-	400
20	108-4827-133	SEAL, Cable – (12 GA)	-	100
21	108-4827-134	PLUG, Cavity	-	20
22	108-4828-001	TOOL, Installation	-	1
23	108-4828-002	TOOL, Removal	-	1
24	108-4827-014	SEAL, 1-Way Female Connection	-	A/R
25	108-4827-015	SEAL, 2-Way Female Connection	-	A/R
26	108-4827-016	SEAL, 3-Way Female Connection	-	A/R
27	108-4827-017	SEAL, 4-Way Female Connection	-	A/R
28	108-4827-018	SEAL, 6-Way Female Connection	-	A/R
29	108-4827-200	GREASE, Trucklite, NYK	-	A/R
30	108-4827-020	CONNECTION, 2-Way Male	-	A/R
31	108-4827-211	CONNECTION, 4 Way Male	-	A/R
32	108-4827-212	CONNECTION, 4 Way Female	-	A/R

CONNECTORS, PLUGS, PINS AND ACCESSORIES FOR DEUTSCH ELECTRICAL PARTS, 108-4815





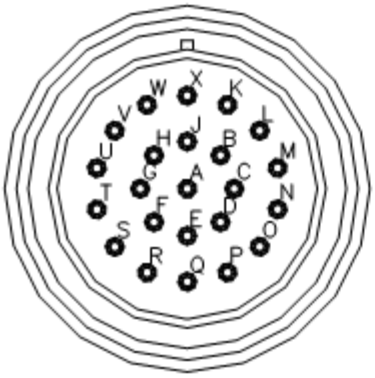


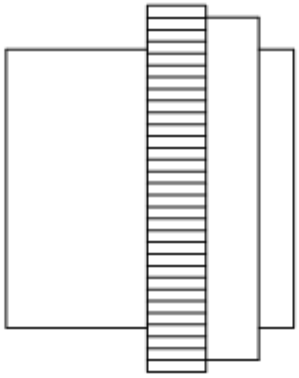
PINS AND SOCKETS

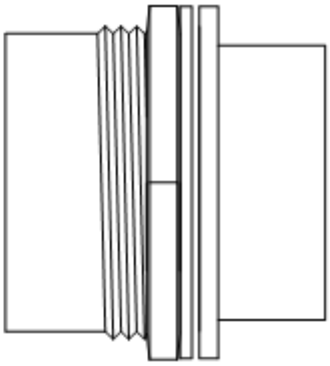
108-4815-101	PIN (6 GA)
108-4815-102	SOCKET (6 GA)
108-4815-103	SEALING PLUG (6 GA)
108-4815-104	PIN (8-10 GA)
108-4815-105	SOCKET (8-10 GA)
108-4815-106	SEALING PLUG (8-10 GA)
108-4815-107	PIN (12-14 GA)
108-4815-108	SOCKET (12-14 GA)
108-6461-100	SEALING PLUG (12-14 GA)
108-4815-110	PIN (16-18 GA)
108-4515-111	SOCKET (16-18 GA)
108-6461-100	SEALING PLUG (16-18 GA)
108-4815-112	PIN (20-24 GA)
108-4815-113	SOCKET (20-24 GA)
108-4815-114	SEALING PLUG (20-24 GA)
108-4815-300	SOCKET (10 GA)
108-4815-301	SOCKET (12-14 GA)
108-4815-302	SOCKET (12-16 GA)
108-4815-303	SOCKET (14-18 GA)
108-4815-304	SOCKET (16-22 GA)
108-4815-400	PIN (10 GA)
108-4815-401	PIN (12-14 GA)
108-4815-402	PIN (12-16 GA)
108-4815-403	PIN (14-18 GA)
108-4815-404	PIN (16-22 GA)
108-4815-405	PIN (16-18 GA)
108-4815-407	SOCKET (16-18 GA)

GOLD PINS & SOCKETS

108-4815-120	PIN (12-14 GA)
108-4815-121	SOCKET (12-14 GA)
108-4815-124	PIN (14-16 GA)
108-4815-125	SOCKET (14-16 GA)
108-4815-122	PIN (16-18 GA)
108-4815-123	SOCKET (16-18 GA)
108-4815-126	PIN (20-24 GA)
108-4815-127	SOCKET (20-24 GA)



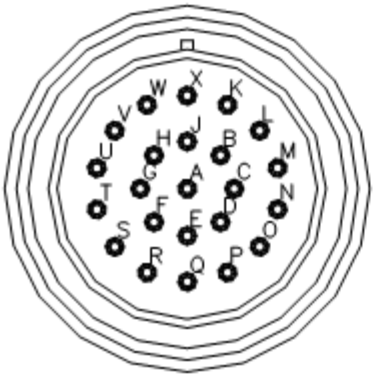


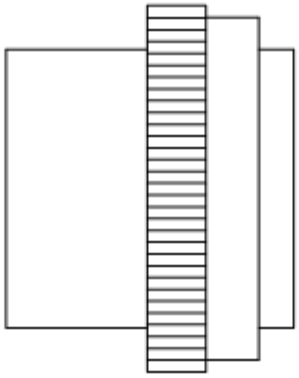


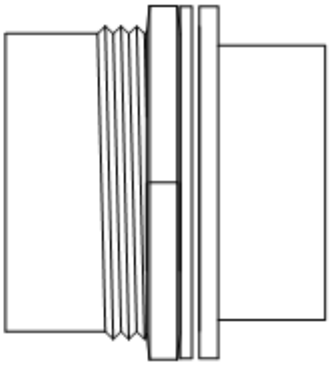
PLASTIC CONNECTOR SHELLS

108-4815-018	8 (Socket) PLUG (12 GA)
108-4815-020	21-PIN RECEPTACLE
108-4815-021	21-PIN SOCKET
108-4815-022	19-PIN RECEPTACLE
108-4815-023	19-PIN SOCKET
108-4815-024	23-PIN RECEPTACLE
108-4815-025	23-PIN SOCKET
108-4815-030	31 PIN RECEPTACLE
108-4815-031	31 SOCKET PLUG
108-4815-032	16 PIN PLUG
108-4815-033	16 SOCKET RECEPTACLE
108-4815-034	16 PIN RECEPTACLE
108-4815-035	16 SOCKET RECEPTACLE
108-4815-036	16 PIN RECEPTACLE
108-4815-037	29 PIN RECEPTACLE
108-4815-038	9 SOCKET RECEPTACLE
108-4815-068	29 SOCKET PLUG WITH RING ADAPTER
108-4815-069	9 SOCKET PLUG WITH RING ADAPTER
108-4815-070	8 PIN RECEPTACLE (12-16)
108-4815-071	8 PIN PLUG (12-16)
108-4815-420	21 PIN RECEPTACLE
108-4815-430	31 PIN RECEPTACLE
108-4815-424	23 PIN RECEPTACLE
108-4815-425	9 PIN PLUG
108-4815-432	9 PIN RECEPTACLE
108-4815-431	21 PIN PLUG
108-4815-019	14 PIN PLUG
108-4815-200	47 PIN PLUG
108-4815-201	47 PIN RECEPTACLE
108-4815-202	47 PIN RECEPTACLE
108-4815-203	21 PIN PLUG
108-4815-204	24 RECEPTACLE
108-4815-205	24 PLUG
108-4815-206	24 RECEPTACLE
108-4815-207	24 PLUG
108-4815-208	18 RECEPTACLE
108-4815-209	18 PLUG

NYC PT 1100
Schematics







ACCESSORIES

108-4815-150	PANEL NUT, 24 SHELL
108-4815-151	LOCKWASHER, 24 SHELL
108-4815-152	STRAIN RELIEF STRAIGHT 24
108-4815-153	STRAIN RELIEF 90° 24
108-4815-154	PANEL NUT, 18 SHELL
108-4815-155	LOCKWASHER, 18 SHELL
108-4815-156	STRAIN RELIEF STRAIGHT 18
108-4815-157	STRAIN RELIEF 90° 18
108-4815-158	REMOVAL TOOL (6 GA)
108-4815-159	REMOVAL TOOL (8-10 GA)
108-4815-160	REMOVAL TOOL (12-14 GA)
108-4815-161	REMOVAL TOOL (16-18 GA)
108-4815-162	REMOVAL TOOL (20-24 GA)
108-4815-163	CRIMP TOOL (12-24 GA)
108-4815-164	CRIMP TOOL (6-10 GA)
108-4815-165	RECEPTACLE CAP. 18 PIN
108-4815-166	RECEPTACLE CAP, 24 PIN
108-4815-167	PLUG CAP, 18 PIN
108-4815-168	PLUG CAP, 24 PIN
108-4815-169	****
108-4815-170	DT SCREWDRIVER TOOL
108-4815-180	PANEL NUT, 18 SHELL
108-4815-181	LOCKWASHER, 18 SHELL
108-4815-186	BACKSHELL, 90º, 24 SHELL
108-4815-187	BACKSHELL, STRAIGHT, 24
108-4815-188	LG COMPRESSION BACKSHELL
108-4815-189	LG COMPRESSION NUT
108-4815-190	SM COMPRESSION BACKSHELL
108-4815-191	SM COMPRESSIONS NUT
108-4815-192	BACKSHELL, 90º, 18 SHELL
108-4815-193	BACKSHELL, STRAIGHT 18

KIT 108-4815 IS COMPRISED OF THE FOLLOWING:
- 108-4815-021
- 108-4815-121
- 108-4815-124
- 108-4815-150
- 108-4815-151

KIT 108-4815-027 IS COMPRISED OF THE FOLLOWING:
- 108-4815-021
- 108-4815-121
- 108-4815-125

DEUTSCH CONNECTION KIT, 108-6461-PC

ITEM	PART NO.	DESCRIPTION	EFF	QTY
-	108-6461-PC	KIT, Deutsch Connection	-	REF
1	108-6461-003P	PLUG, 3-Way	-	15
2	108-6461-003PW	WEDGE, 3-Way Plug	-	15
3	108-6461-003PB	BOOT, 3-Way Plug	-	15
4	108-6461-003R	RECEPTACLE, 3-Way	-	15
5	108-6461-003RW	WEDGE, 3-Way Receptacle	-	15
6	108-6461-003RB	BOOT, 3-Way Receptacle	-	15
7	108-6461-004P	PLUG, 4-Way	-	3
8	108-6461-004PW	WEDGE, 4-Way Plug	-	3
9	108-6461-004PB	BOOT, 4-Way Plug	-	3
10	108-6461-004R	RECEPTACLE, 4-Way	-	3
11	108-6461-004RW	WEDGE, 4-Way Receptacle	-	3
12	108-6461-004RB	BOOT, 4-Way Receptacle	-	3
13	108-6461-006P	PLUG, 6-Way	-	3
14	108-6461-006PW	WEDGE, 6-Way Plug	-	3
15	108-6461-006PB	BOOT, 6-Way Plug	-	3
16	108-6461-006R	RECEPTACLE, 6-Way	-	3
17	108-6461-006RW	WEDGE, 6-Way Receptacle	-	3
18	108-6461-006RB	BOOT, 6-Way Receptacle	-	3
19	108-6461-008P	PLUG, 8-Way	-	9
20	108-6461-008PW	WEDGE, 8-Way Plug	-	9
21	108-6461-008PB	BOOT, 8-Way Plug	-	9
22	108-6461-008R	RECEPTACLE, 8-Way	-	9
23	108-6461-008RW	WEDGE, 8-Way Receptacle	-	9
24	108-6461-008RB	BOOT, 8-Way Receptacle	-	9
25	108-6461-012P	PLUG, 12-Way	-	3
26	108-6461-CPW	WEDGE, 12-Way Plug	-	3
27	108-6461-CPB	BOOT, 12-Way Boot	-	3
28	108-6461-012R	RECEPTACLE, 12-Way	-	3
29	108-6461-CRW	WEDGE, 12-Way Receptacle	-	3
30	108-6461-CRB	BOOT, 12-Way Receptacle	-	3
31	108-6461-100	PLUG, Sealing	-	25
32	108-6461-101	PIN, Gold Plated	-	200
33	108-6461-102	SOCKET, Gold Plated	-	200
34	108-6461-200	CRIMPER, Production	-	1
35	108-6461-201	CRIMPER, Field Kit	-	1
36	108-6461-202	REMOVAL TOOL	-	1

DEUTSCH DT SERIES CONNECTOR KITS, 108-8411

ITEM	PART NO.	DESCRIPTION	EFF	QTY
-	108-8411	KITS, Deutsch Connector, DT Series	-	REF
1	108-8411-001	KIT, Deutsch Connector, DT Series	-	REF
-	108-8411-02R	RECEPTACLE, 2-Way	-	1
-	108-4815-401	PIN, Gold 12 AWG	-	2
-	108-8411-2RW	RECEPTACLE, 2-Way Wedge	-	1
-	108-6461-100	PLUG, Sealing	-	2
-	108-8411-2RB	BOOT, Receptacle	-	1
2	108-8411-002	KIT, Deutsch Connector, DT Series	-	REF
-	108-8411-02P	PLUG, 2-Way	-	1
-	108-4815-301	PIN, Gold 12 AWG	-	2
-	108-8411-2PW	PLUG, 2-Way Wedge	-	1
-	108-6461-100	PLUG, Sealing	-	2
-	108-8411-2RB	BOOT, Plug	-	1
3	108-8411-003	KIT, Deutsch Connector, DT Series	-	REF
-	108-8411-04R	RECEPTACLE, 4-Way	-	1
-	108-4815-401	PIN, Gold 12 AWG	-	4
-	108-8411-4RW	RECEPTACLE, 4-Way Wedge	-	1
-	108-6461-100	PLUG, Sealing	-	2
-	108-8411-4RB	BOOT, Receptacle	-	1
4	108-8411-004	KIT, Deutsch Connector, DT Series	-	REF
-	108-8411-04P	PLUG, 4-Way	-	1
-	108-4815-301	PIN, Gold 12 AWG	-	4
-	108-8411-4PW	PLUG, 4-Way Wedge	-	1
-	108-6461-100	PLUG, Sealing	-	2
-	108-8411-4PB	BOOT, Plug	-	1
5	108-8411-005	KIT, Deutsch Connector, DT Series	-	REF
-	108-8411-22R	RECEPTACLE, 2-Way Mounted	-	1
-	108-4815-401	PIN, Gold 12 AWG	-	2
-	108-8411-2RW	RECEPTACLE, 2-Way Wedge	-	1
-	108-6461-100	PLUG, Sealing	-	2
-	108-8411-2RB	BOOT, Receptacle	-	1
6	108-8411-006	KIT, Deutsch Connector, DT Series	-	REF
-	108-8411-24R	RECEPTACLE, 4-Way Mounted	-	1
-	108-4815-401	PIN, Gold 12-AWG	-	4
-	108-8411-4RW	RECEPTACLE, 4-Way Wedge	-	1
-	108-6461-100	PLUG, Sealing	-	2
-	108-8411-4RB	BOOT, Receptacle	-	1

DEUTSCH DT SERIES CONNECTOR KITS - BOOT, 108-6461

ITEM	PART NO.	DESCRIPTION	EFF	QTY
-	108-6461	KITS, Deutsch Connection, DT Series	-	REF
1	108-6461-3PB	BOOT, 3-Way Plug	-	A/R
2	108-6461-3RB	BOOT, 3-Way Receptacle	-	A/R
3	108-6461-4PB	BOOT, 4-Way Plug	-	A/R
4	108-6461-4RB	BOOT, 4-Way Receptacle	-	A/R
5	108-6461-6PB	BOOT, 6-Way Plug	-	A/R
6	108-6461-6RB	BOOT, 6-Way Receptacle	-	A/R
7	108-6461-8PB	BOOT, 8-Way Plug	-	A/R
8	108-6461-8RB	BOOT, 8-Way Receptacle	-	A/R
9	108-6461-CPB	BOOT, 12-Way Plug	-	A/R
10	108-6461-CRB	BOOT, 12-Way Receptacle	-	A/R
11	108-6461-2PB	BOOT, 2-Way Plug	-	A/R
12	108-6461-2RB	BOOT, 2-Way Receptacle	-	A/R

DEUTSCH DT SERIES CONNECTOR KITS - STRAIGHT, 108-6461

ITEM	PART NO.	DESCRIPTION	EFF	QTY
-	108-6461	KITS, Deutsch Connection, DT Series	-	REF
1	108-6461-001	KIT, Deutsch Connector, DT Series, Straight	-	REF
-	108-6461-311	PLUG, 3-Way	-	1
-	108-6461-319	PLUG, 3-Way Wedge	-	1
-	108-4815-303	SOCKET-NICKEL PLATED, STAMPED	-	REF
-	108-6461-111	PLUG, Sealing	-	REF
2	108-6461-002	KIT, Deutsch Connector, DT Series, Straight	-	REF
-	108-6461-301	RECEPTACLE, 3-Way	-	1
-	108-6461-309	RECEPTACLE, 3-Way Wedge	-	1
-	108-4815-403	SOCKET-NICKEL PLATED, STAMPED	-	REF
-	108-6461-111	PLUG, Sealing	-	REF
3	108-6461-003	KIT, Deutsch Connector, DT Series, Straight	-	REF
-	108-6461-411	PLUG, 4-Way	-	1
-	108-6461-419	PLUG, 4-Way Wedge	-	1
-	108-4815-303	SOCKET-NICKEL PLATED, STAMPED	-	REF
-	108-6461-111	PLUG, Sealing	-	REF
4	108-6461-004	KIT, Deutsch Connector, DT Series, Straight	-	REF
-	108-6461-401	RECEPTACLE, 4-Way	-	1
-	108-6461-409	RECEPTACLE, 4-Way Wedge	-	1
-	108-4815-403	SOCKET-NICKEL PLATED, STAMPED	-	REF
-	108-6461-111	PLUG, Sealing	-	REF
5	108-6461-005	KIT, Deutsch Connector, DT Series, Straight	-	REF
-	108-6461-611	PLUG, 6-Way	-	1
-	108-6461-619	PLUG, 6-Way Wedge	-	1
-	108-4815-403	SOCKET-NICKEL PLATED, STAMPED	-	REF
-	108-6461-111	PLUG, Sealing	-	REF
6	108-6461-006	KIT, Deutsch Connector, DT Series, Straight	-	REF
-	108-6461-601	RECEPTACLE, 6-Way	-	1
-	108-6461-609	RECEPTACLE, 6-Way Wedge	-	1
-	108-4815-403	SOCKET-NICKEL PLATED, STAMPED	-	REF
-	108-6461-111	PLUG, Sealing	-	REF
7	108-6461-007	KIT, Deutsch Connector, DT Series, Straight	-	REF
-	108-6461-811	PLUG, 8-Way	-	1
-	108-6461-819	PLUG, 8-Way Wedge	-	1
-	108-4815-303	SOCKET-NICKEL PLATED, STAMPED	-	REF
-	108-6461-111	PLUG, Sealing	-	REF
-	108-6461-035	PLUG, 8-Way Straight Backshell	-	1

DEUTSCH DT SERIES CONNECTOR KITS - STRAIGHT - 108-6461, CONTINUED

ITEM	PART NO.	DESCRIPTION	EFF	QTY
-	108-6461	KITS, Deutsch Connection, DT Series	-	REF
8	108-6461-008	KIT, Deutsch Connector, DT Series, Straight	-	REF
-	108-6461-801	RECEPTACLE, 8-Way	-	1
-	108-6461-809	RECEPTACLE, 8-Way Wedge	-	1
-	108-4815-403	SOCKET-NICKEL PLATED, STAMPED	-	REF
-	108-6461-111	PLUG, sealing	-	REF
-	108-6461-021	RECEPTACLE, 8-Way Straight Backshell	-	1
9	108-6461-009	KIT, Deutsch Connector, DT Series, Straight	-	REF
-	108-6461-122	PLUG, 12-Way	-	1
-	108-6461-130	PLUG, 12-Way Wedge	-	1
-	108-4815-303	SOCKET-NICKEL PLATED, STAMPED	-	REF
-	108-6461-111	PLUG, Sealing	-	REF
-	108-6461-035	PLUG, 12-Way Straight Backshell	-	1
10	108-6461-010	KIT, Deutsch Connector, DT Series, Straight	-	REF
-	108-6461-121	RECEPTACLE, 12-Way	-	1
-	108-6461-129	RECEPTACLE, 12-Way Wedge	-	1
-	108-4815-403	SOCKET-NICKEL PLATED, STAMPED	-	REF
-	108-6461-111	PLUG, Sealing	-	REF
-	108-6461-023	RECEPTACLE, 12-Way Straight Backshell	-	1
11	108-6461-011	KIT, Deutsch Connector, DT Series, Straight	-	REF
-	108-6461-211	PLUG, 2-Way	-	1
-	108-6461-219	PLUG, 2-Way Wedge	-	1
-	108-4815-303	SOCKET-NICKEL PLATED, STAMPED	-	REF
-	108-6461-111	PLUG, Sealing	-	REF
12	108-6461-012	KIT, Deutsch Connector, DT Series, Straight	-	REF
-	108-6461-201	RECEPTACLE, 2-Way	-	1
-	108-6461-209	RECEPTACLE, 2-Way Wedge	-	1
-	108-4815-403	SOCKET-NICKEL PLATED, STAMPED	-	REF
-	108-6461-111	PLUG, Sealing	-	REF
13	108-7142	KIT, 12-Way Panel Mount Receptacle	-	REF

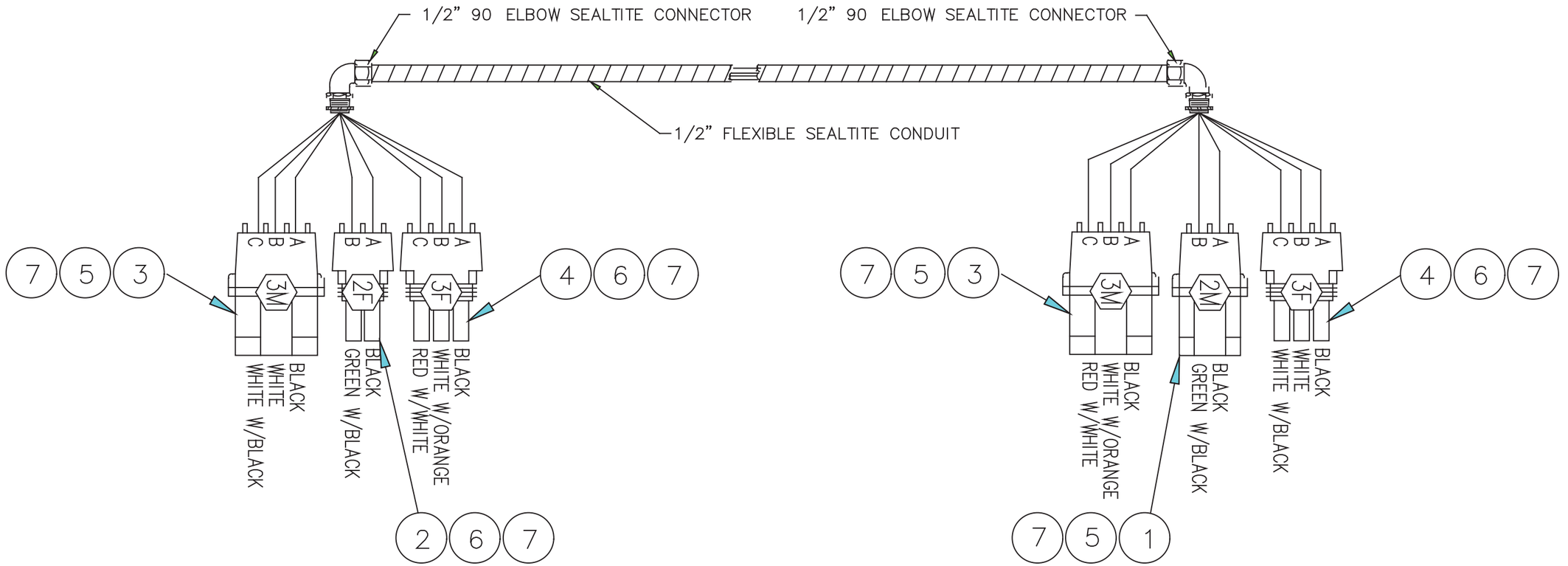
DEUTSCH DT SERIES CONNECTOR KITS - 90° - 108-6461, CONTINUED

ITEM	PART NO.	DESCRIPTION	EFF	QTY
-	108-6461	KITS, Deutsch Connection, DT Series	-	REF
1	108-6461-041	KIT, Deutsch Connector, DT Series, 90º	-	REF
-	108-6461-03P	PLUG, 3-Way	-	1
-	108-6461-3PW	PLUG 3-Way Wedge	-	1
-	108-4815-303	SOCKET-NICKEL PLATED, STAMPED	-	REF
-	108-6461-100	PLUG, Sealing	-	REF
-	108-6461-028	PLUG, 3-Way, 90º Backshell	-	1
2	108-6461-042	KIT, Deutsch Connector, DT Series, 90º	-	REF
-	108-6461-03R	RECEPTACLE, 3-Way	-	1
-	108-6461-3RW	RECEPTACLE, 3-Way Wedge	-	1
-	108-4815-403	SOCKET-NICKEL PLATED, STAMPED	-	REF
-	108-6461-100	PLUG, Sealing	-	REF
-	108-6461-016	RECEPTACLE, 3-Way 90º Backshell	-	1
3	108-6461-043	KIT, Deutsch Connector, DT Series, 90º	-	REF
-	108-6461-04P	PLUG, 4-Way	-	1
-	108-6461-4PW	PLUG, 4-Way Wedge	-	1
-	108-4815-303	SOCKET-NICKEL PLATED, STAMPED	-	REF
-	108-6461-100	PLUG, Sealing	-	REF
-	108-6461-030	PLUG, 4-Way 90º Backshell	-	1
4	108-6461-044	KIT, Deutsch Connector, DT Series, 90º	-	REF
-	108-6461-04R	RECEPTACLE, 4-Way	-	1
-	108-6461-4RW	RECEPTACLE, 4-Way Wedge	-	REF
-	108-4815-403	SOCKET-NICKEL PLATED, STAMPED	-	REF
-	108-6461-100	PLUG, Sealing	-	1
-	108-6461-018	RECEPTACLE, 4-Way 90º Backshell	-	1
5	108-6461-045	KIT, Deutsch Connector, DT Series, 90º	-	REF
-	108-6461-06P	PLUG, 6-Way	-	1
-	108-6461-6PW	PLUG, 6-Way Wedge	-	1
-	108-4815-303	SOCKET-NICKEL PLATED, STAMPED	-	REF
-	108-6461-100	PLUG, Sealing	-	REF
-	108-6461-032	PLUG, 6-Way 90º Backshell	-	1
6	108-6461-046	KIT, Deutsch Connector, DT Series, 90º	-	REF
-	108-6461-06R	RECEPTACLE, 6-Way	-	1
-	108-6461-6RW	RECEPTACLE, 6-Way Wedge	-	1
-	108-4815-403	SOCKET-NICKEL PLATED, STAMPED	-	6
-	108-6461-100	PLUG, Sealing	-	1
-	108-6461-020	RECEPTACLE, 6-way 90º Backshell	-	1
7	108-6461-047	KIT, Deutsch Connector, DT Series, 90º	-	REF
-	108-6461-08P	PLUG, 8-Way	-	1
-	108-6461-8PW	PLUG, 8-Way Wedge	-	1
-	108-4815-303	SOCKET-NICKEL PLATED, STAMPED	-	REF
-	108-6461-100	PLUG, Sealing	-	REF
-	108-6461-034	PLUG, 8-Way 90º Backshell	-	1

DEUTSCH DT SERIES CONNECTOR KITS - 90° - 108-6461, CONTINUED

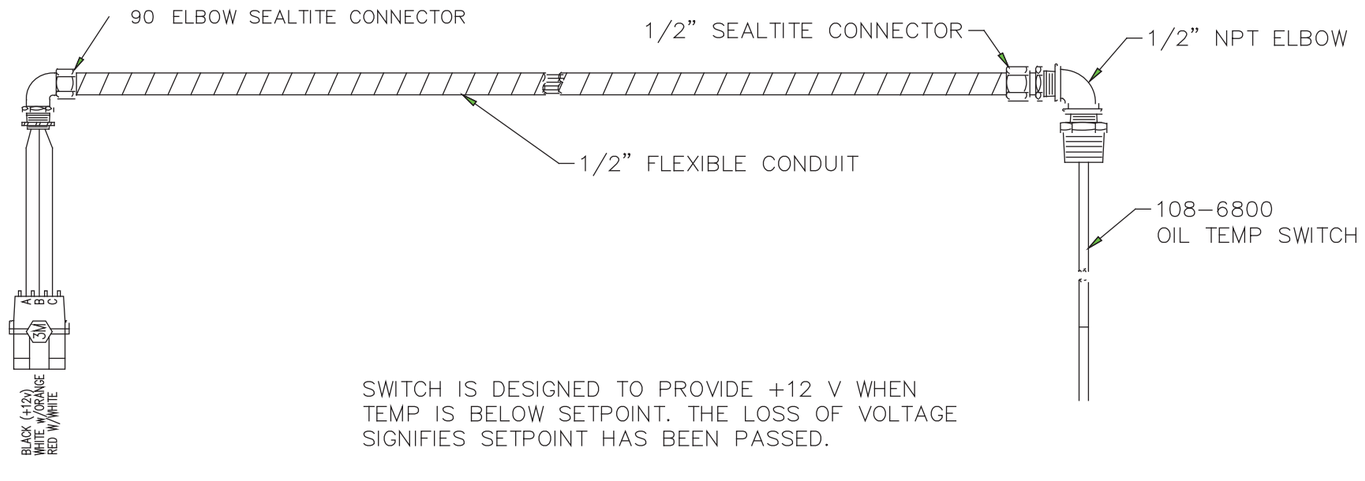
ITEM	PART NO.	DESCRIPTION	EFF	QTY
-	108-6461	KITS, Deutsch Connection, DT Series	-	REF
8	108-6461-048	KIT, Deutsch Connector, DT Series, 90º	-	REF
-	108-6461-08R	RECEPTACLE, 8-Way	-	1
-	108-6461-8RW	RECEPTACLE, 8-Way Wedge	-	1
-	108-4815-403	SOCKET-NICKEL PLATED, STAMPED	-	REF
-	108-6461-100	PLUG, Sealing	-	REF
-	108-6461-022	RECEPTACLE, 8-Way 90º Backshell	-	1
9	108-6461-049	KIT, Deutsch Connector, DT Series, 90º	-	REF
-	108-6461-12P	PLUG, 12-Way	-	1
-	108-6461-CPW	PLUG, 12-Way Wedge	-	1
-	108-4815-303	SOCKET-NICKEL PLATED, STAMPED	-	REF
-	108-6461-100	PLUG, Sealing	-	REF
-	108-6461-036	PLUG, 12-Way 90º Backshell	-	1
10	108-6461-050	KIT, Deutsch Connector, DT Series, 90º	-	REF
-	108-6461-12R	RECEPTACLE, 12-Way	-	1
-	108-6461-CRW	RECEPTACLE, 12-Way Wedge	-	1
-	108-4815-403	SOCKET-NICKEL PLATED, STAMPED	-	REF
-	108-6461-100	PLUG, Sealing	-	REF
-	108-6461-024	RECEPTACLE, 12-Way 90º Backshell	-	1
11	108-6461-051	KIT, Deutsch Connector, DT Series, 90º	-	REF
-	108-6461-02P	PLUG, 2-Way	-	1
-	108-6461-2PW	PLUG, 2-Way Wedge	-	1
-	108-4815-303	SOCKET, Gold Plated	-	REF
-	108-6461-100	PLUG, Sealing	-	REF
-	108-6461-026	PLUG, 2-Way 90º Backshell	-	1
12	108-6461-052	KIT, Deutsch Connector, DT Series, 90º	-	REF
-	108-6461-02R	RECEPTACLE, 2-Way	-	1
-	108-6461-2RW	RECEPTACLE, 2-Way Wedge	-	1
-	108-4815-403	SOCKET-NICKEL PLATED, STAMPED	-	REF
-	108-6461-100	PLUG, Sealing	-	REF
-	108-6461-014	RECEPTACLE, 2-Way 90º Backshell	-	1

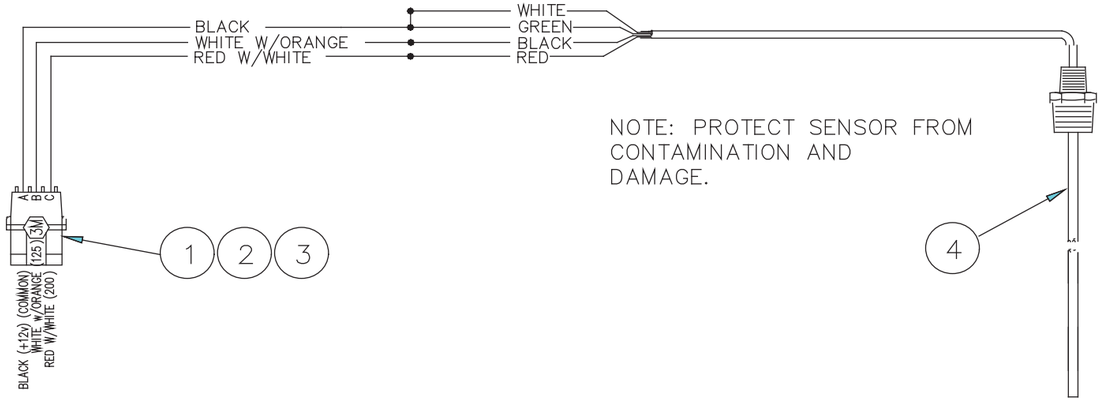
REF.	PART No.	DESCRIPTION	QTY.
1	. 108-4827-003	PACKARD, 2 WAY MALE	1
2	. 108-4827-004	PACKARD, 2 WAY FEMALE	1
3	. 108-4827-005	PACKARD 3 WAY MALE	2
4	. 108-4827-006	PACKARD 3 WAY FEMALE	2
5	. 108-4827-111	PACKARD MALE TERMINAL	8
6	. 108-4827-121	PACKARD FEMALE TERMINAL	8
7	. 108-4827-132	PACKARD CABLE SEAL	16



OIL TANK TO BODY HARNESS
263-1784-010
REV: A
09/05/14

REF.	PART No.	DESCRIPTION	QTY.
1	. 108-4827-005	PACKARD 3 WAY MALE	1
2	. 108-4827-111	PACKARD MALE TERMINAL	3
3	. 108-4827-132	CABLE SEAL	3
4	. 108-6800	OIL TEMP SWITCH	1

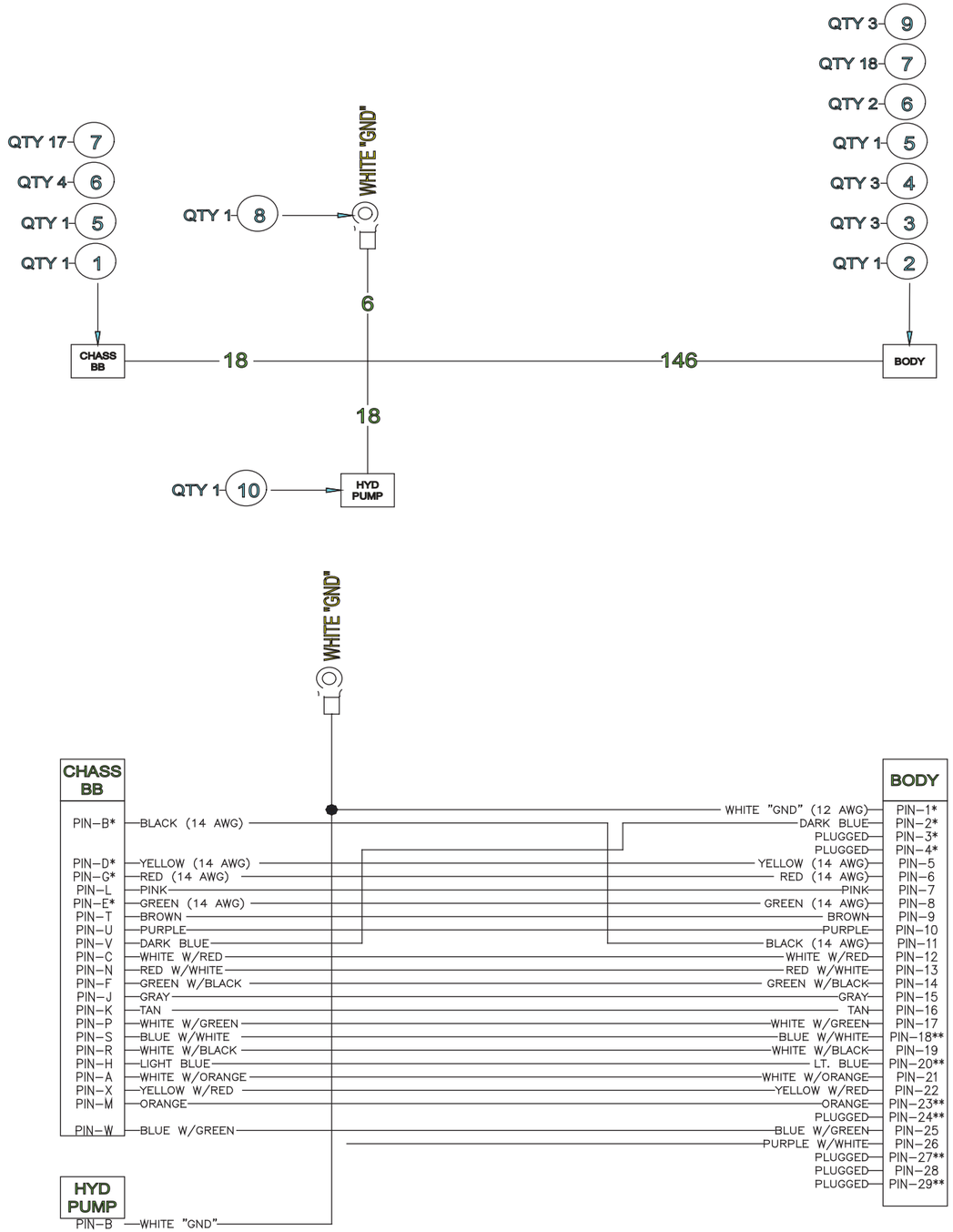




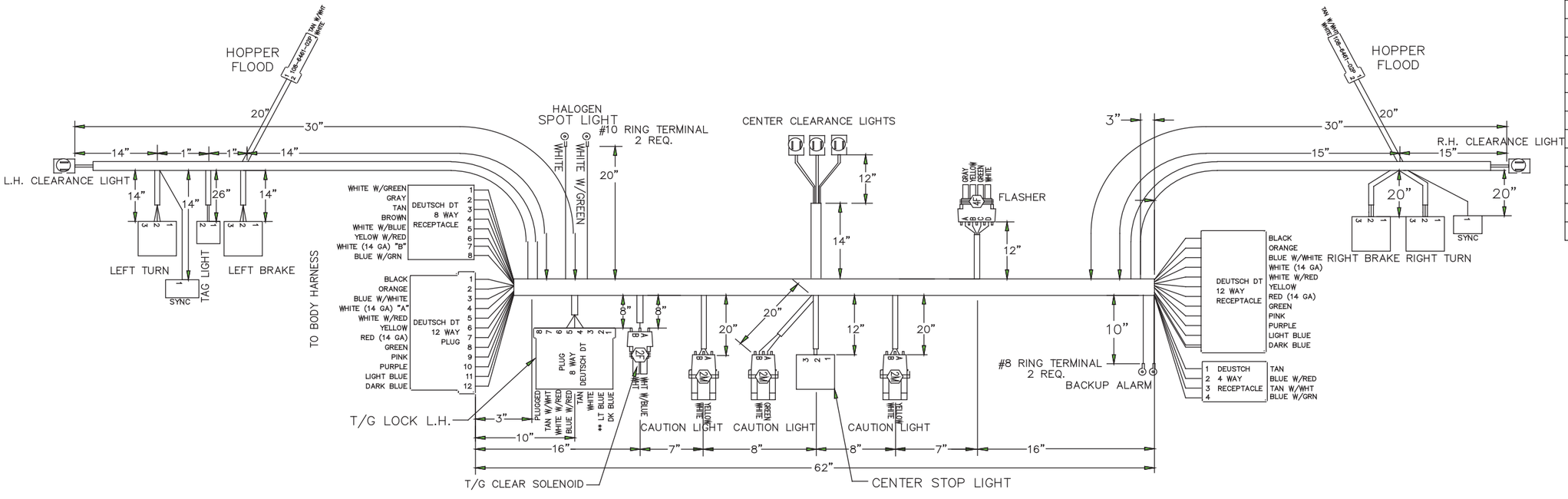
263-1784-012

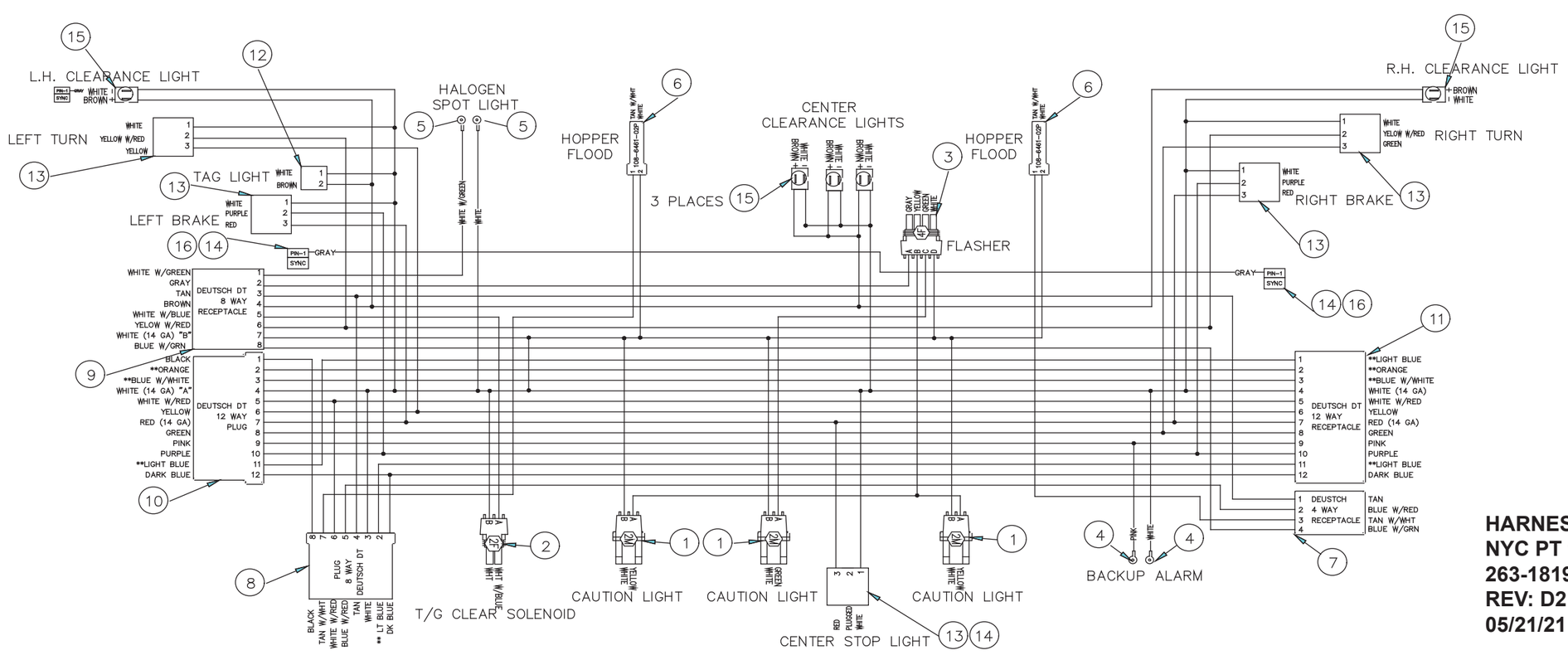
OIL TEMP HARNESS
263-1784-012
REV: -
09/05/14

REF.	PART No.	DESCRIPTION	QTY.
1	. 108-4815-021	CONNECTOR, 21 POS PLUG	1
2	. 108-4815-068	CONNECTOR, 29 POS. PLUG	1
3	. 108-4815-114	SEALING PLUG, SIZE 20	3
4	. 108-4815-127	TERMINAL, 20 AWG, SIZE 20, GOLD	3
5	. 108-4815-188	LG COMPRESSION BACKSHELL	1
6	. 108-4815-301	TERMINAL, FEMALE, 14-12 AWG, SIZE 12	6
7	. 108-4815-303	TERMINAL, FEMALE, 14-18 AWG, SIZE 16	35
8	. 108-4943-006	.40 RING TERMINAL	1
9	. 108-6461-100	SEALING PLUG	3
10	. 108-8309	CONNECTOR, 2 POS RECEPT.	1



HARNESS, CAB TO BODY EXTENSION
PRE-WIRED, MACK MRU, NYC PT 1100
263-1784-017
REV: A4
07/29/22



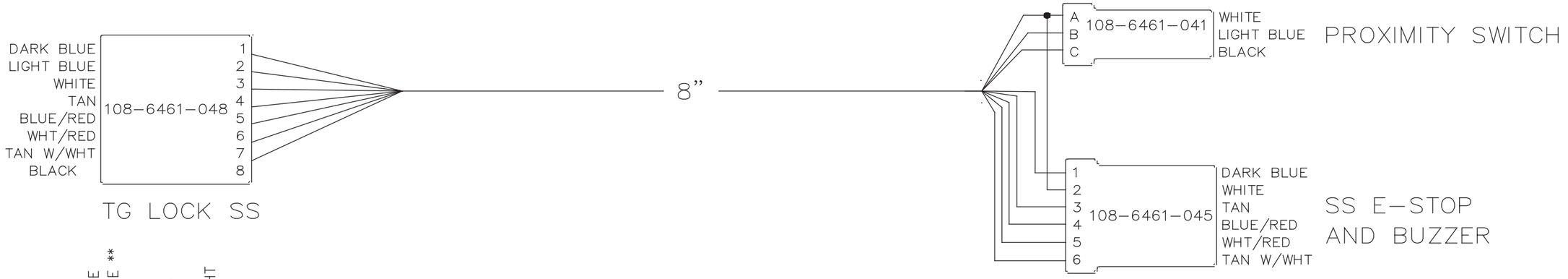


REF.	PART No.	DESCRIPTION	QTY.
1	. 108-4827-003	PACKARD, 2 WAY MALE	3
2	. 108-4827-004	PACKARD 2 WAY FEMALE	1
3	. 108-4827-008	PACKARD, 4 WAY FEMALE	1
4	. 108-4943-002	#8 RING TERMINAL	2
5	. 108-4943-003	#10 RING TERMINALS	2
6	. 108-6461-051	DEUTSCH DT 2 WAY PLUG	2
7	. 108-6461-044	DEUTSCH DT 4 WAY RECEPTACLE	1
8	. 108-6461-047	DEUTSCH DT 8 WAY PLUG	1
9	. 108-6461-048	DEUTSCH DT 8 WAY RECEPTACLE	1
10	. 108-6461-009	STRAIGHT 12-WAY PLUG	1
11	. 108-6461-050	DEUTSCH DT 12 WAY RECEPTACLE	1
12	. 108-8493-002	2 WAY SUPER SEAL PLUG HOUSING	1
13	. 108-8493-003	3 WAY SUPER SEAL PLUG HOUSING	5
14	. 108-8493-011	SUPER SEAL CAVITY PLUG	3
15	. 115-1036-002	FIT N FORGET CONNECTOR	5
16	. 108-8493-001	1 WAY SUPER SEAL PLUG HOUSING	2

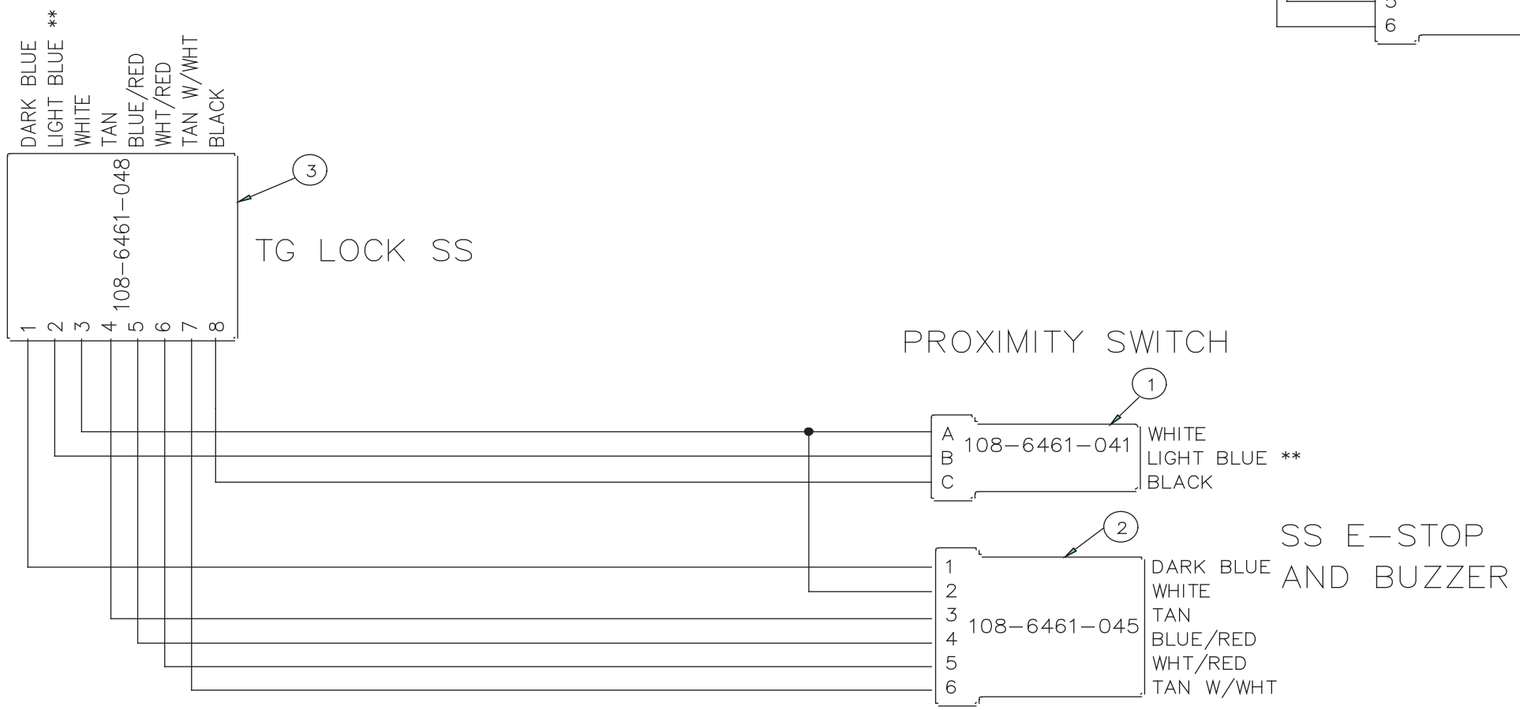
263-1819-001

HARNESS, LIGHT CLUSTER
NYC PT 1100
263-1819-001
REV: D2
05/21/21

REF.	PART No.	DESCRIPTION	QTY.
1	. 108-6461-041	3-WAY DT PLUG	1
2	. 108-6461-045	6-WAY DT PLUG	1
3	. 108-6461-048	8-WAY DT RECEPT.	1

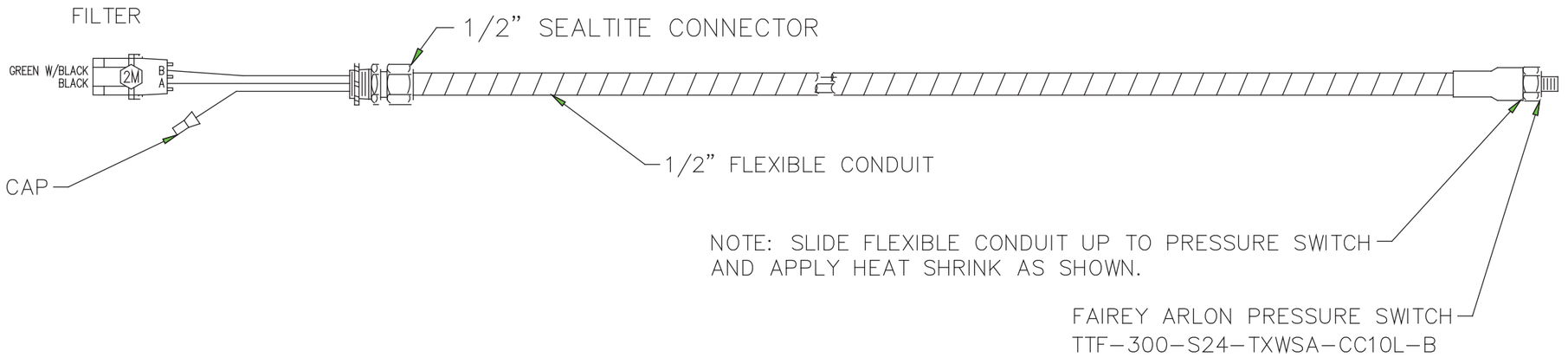


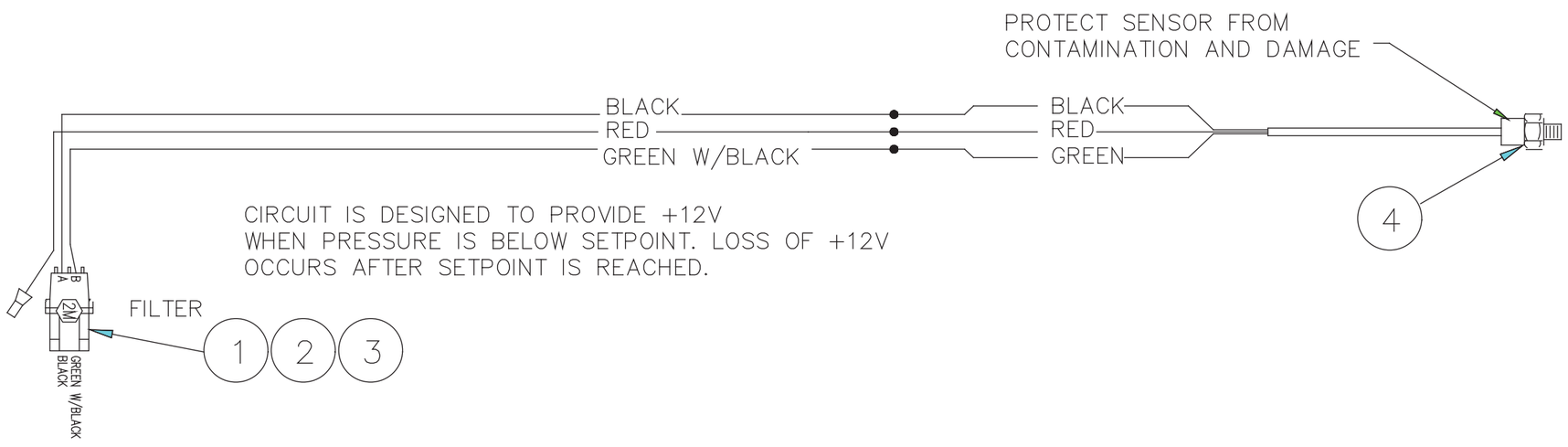
263-1819-002



S/S TAILGATE HARNESS
NYC PT 1100
263-1819-002
REV: B
05/21/21

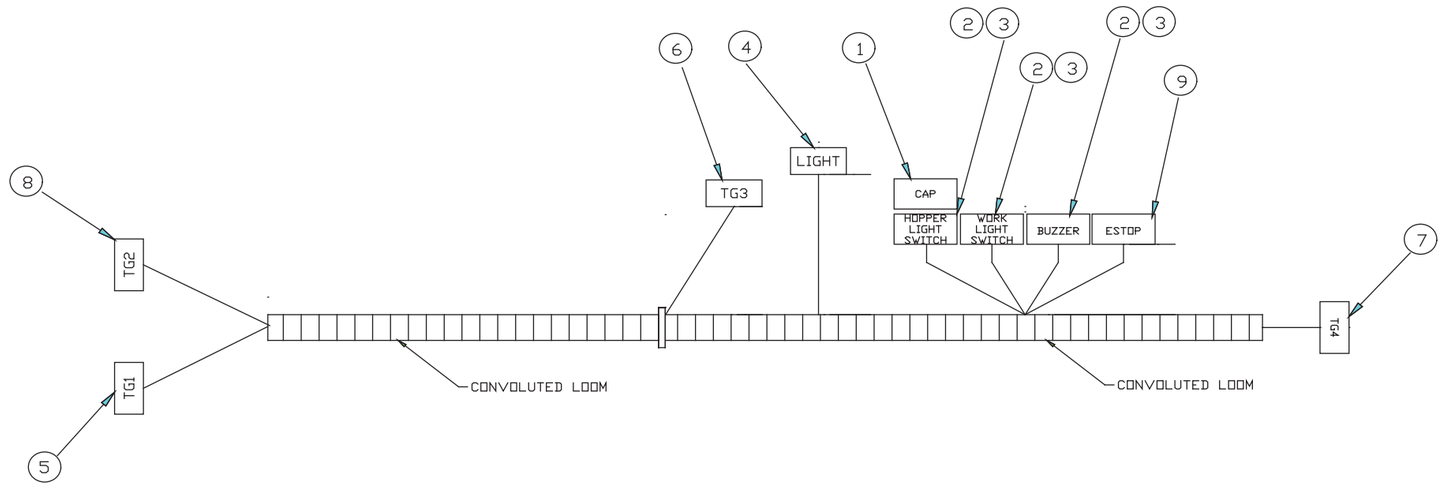
REF.	PART No.	DESCRIPTION	QTY.
1	. 108-4827-003	PACKARD 2 WAY MALE	1
2	. 108-4827-111	PACKARD MALE TERMINAL	2
3	. 108-4827-132	CABLE SEAL	2
4	. SEE BELOW	FAIREY ARLON PRESSURE SWITCH	1



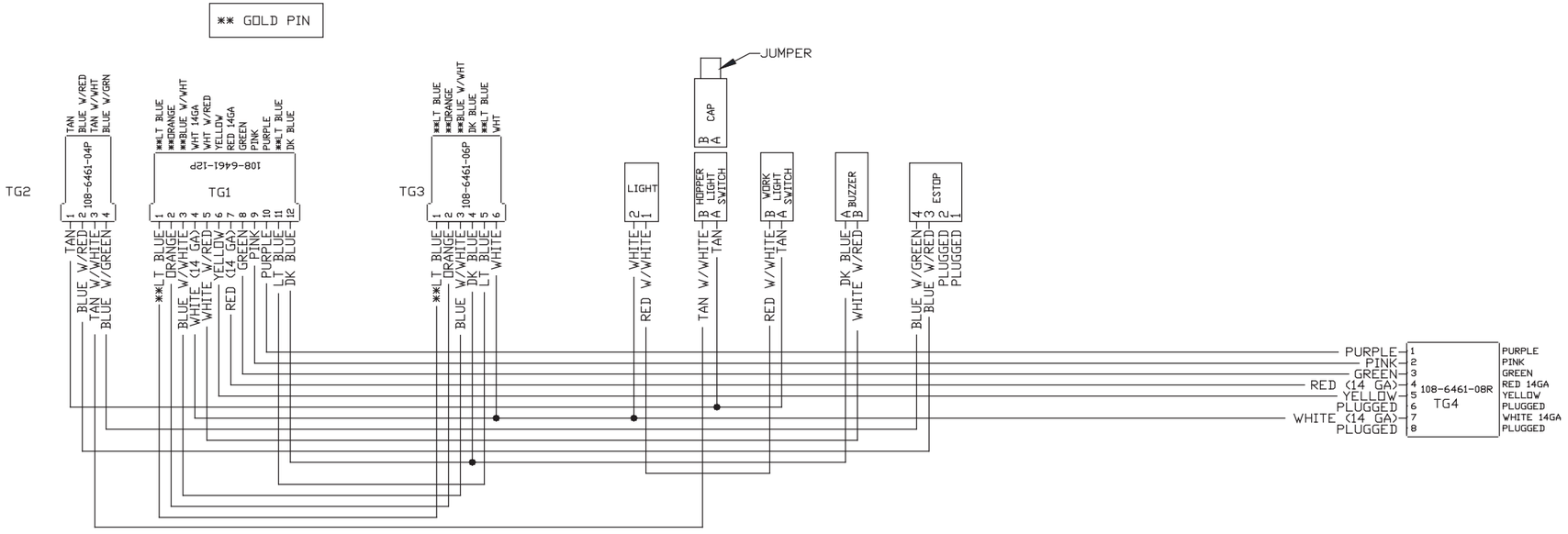


OIL FILTER MONITOR
NYC PT 1100
263-1900
REV: A
11/28/19

REF.	PART No.	DESCRIPTION	QTY.
1	. 108-4827-003	CONNECTOR, W/P, 2 POS, MALE	1
2	. 108-4827-004	CONNECTOR, W/P, 2 POS, FEM	3
3	. 108-4827-121	TPA, W/P, 2 POS	3
4	. 108-6461-02P	CONNECTOR, DT, 2 POS, FEM	1
5	. 108-6461-04P	CONNECTOR, DT, 4 POS, FEM	1
6	. 108-6461-06P	CONNECTOR, DT, 6 POS, FEM	1
7	. 108-6461-08R	CONNECTOR, DT, 8 POS, MALE	1
8	. 108-6461-12P	CONNECTOR, DT, 12 POS, FEM	1
9	. 108-8493-012	CONNECTOR, S-SEAL, 4 POS, FEM	1



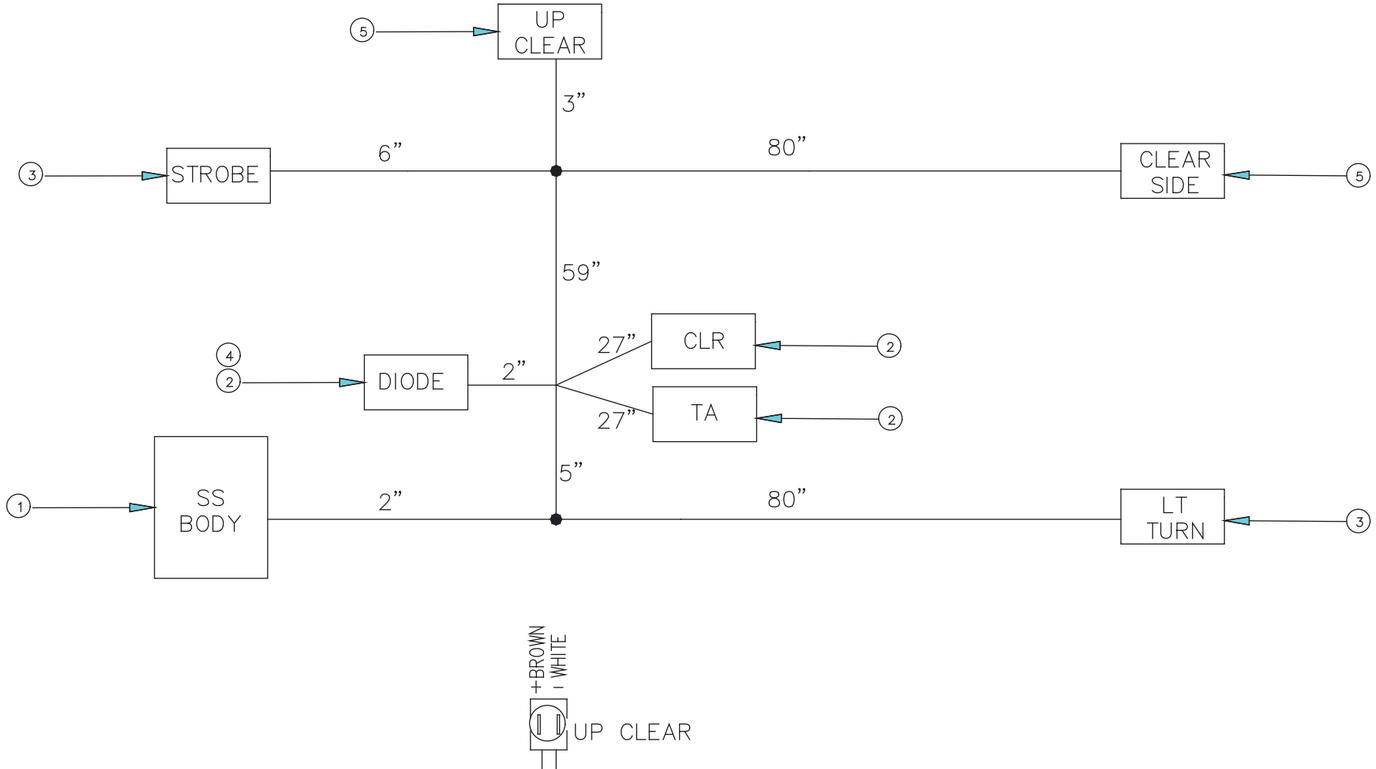
YELLOW - LH TURN
BLUE W/WHITE - BLADE PROX SW
WHITE W/RED STRIPE - BUZZER
RED W/WHITE - OIL TEMP SIG (200 DEG)
GREEN W/ BLACK - FILTER OK
RED 14 GA - BRAKE LIGHTS
WHITE 12 GA - GROUND
LT BLUE - T/G LATCHED SIG
GRAY - FLASHING LIGHTS
TAN - IGNS LIGHT
PINK - REVERSE
BLACK 14 GA - SENSOR POWER
WHITE W/ ORANGE - OIL TEMP SIG (125 DEG)
WHITE W/ GREEN - FLOOD LIGHT
WHITE W/ BLACK - OIL LEVEL FULL
GREEN - RH TURN
BROWN 14 GA - CLEARANCE LIGHT
PURPLE - PARKING LIGHTS
DARK BLUE - T/G PROX POWER
ORANGE - SLIDE PROG SIG
PURPLE W/ WHITE - PUMP LOAD VALVE

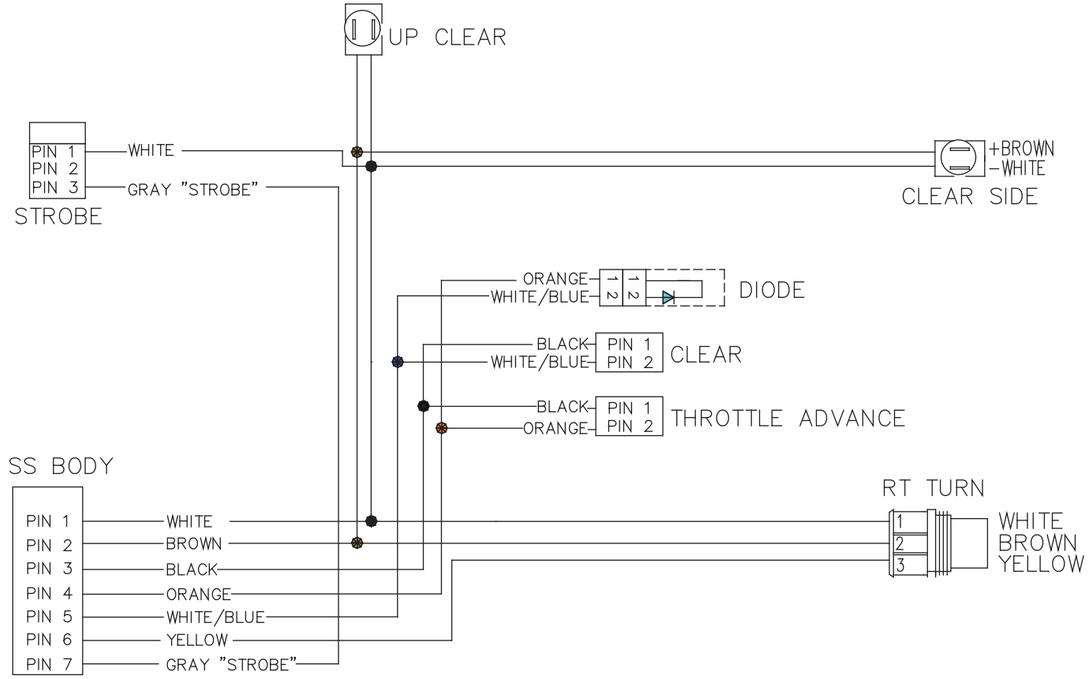


263-1898

HARNESS, SS TAILGATE
NYC PT 1100
263-1898
REV: B3
11/20/19

REF.	PART No.	DESCRIPTION	QTY
1	. 108-6461-007	CONNECTOR, 8-WAY PLUG	1
2	. 108-6461-011	CONNECTOR, 2-WAY PLUG	3
3	. 108-8493-003	SUPER SEAL 3 WAY PLUG	2
4	. 108-8587-001	DIODE	1
5	. 115-1036-002	FIT N FORGET CONNECTOR	2



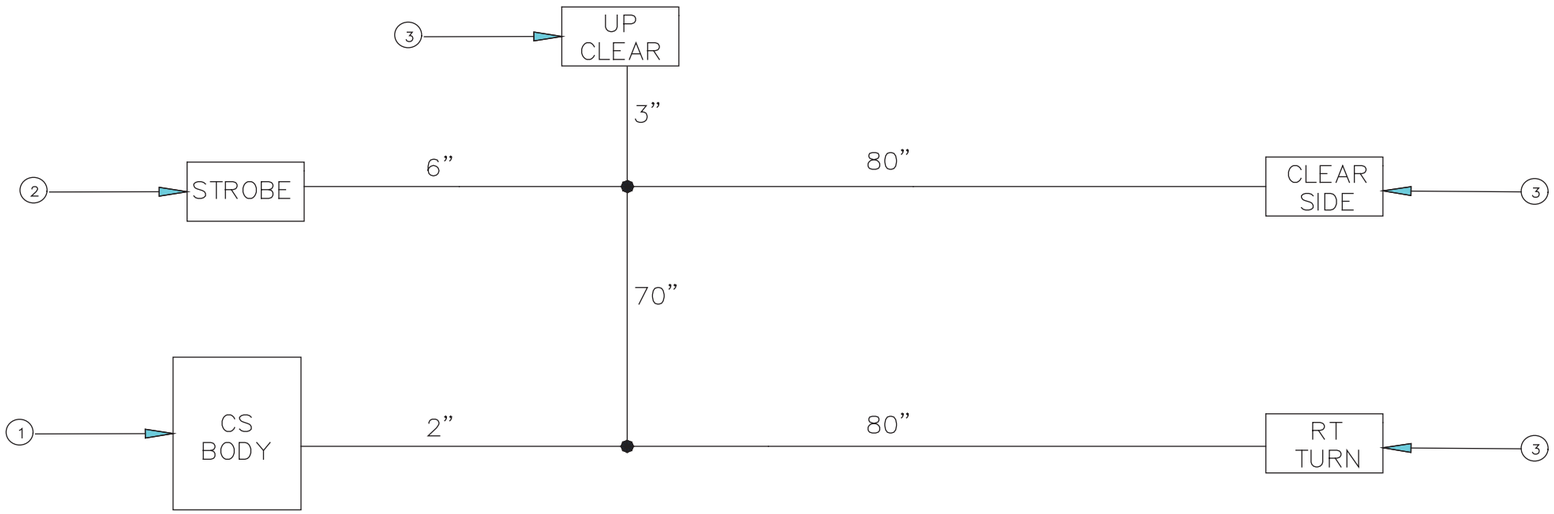


263-1895

BROWN – CLEARANCE
YELLOW – LEFT TURN
ORANGE – SLIDE
BLACK – SENSOR POWER
WHITE W/BLUE – BLADE
GRAY – STROBE
WHITE – GND

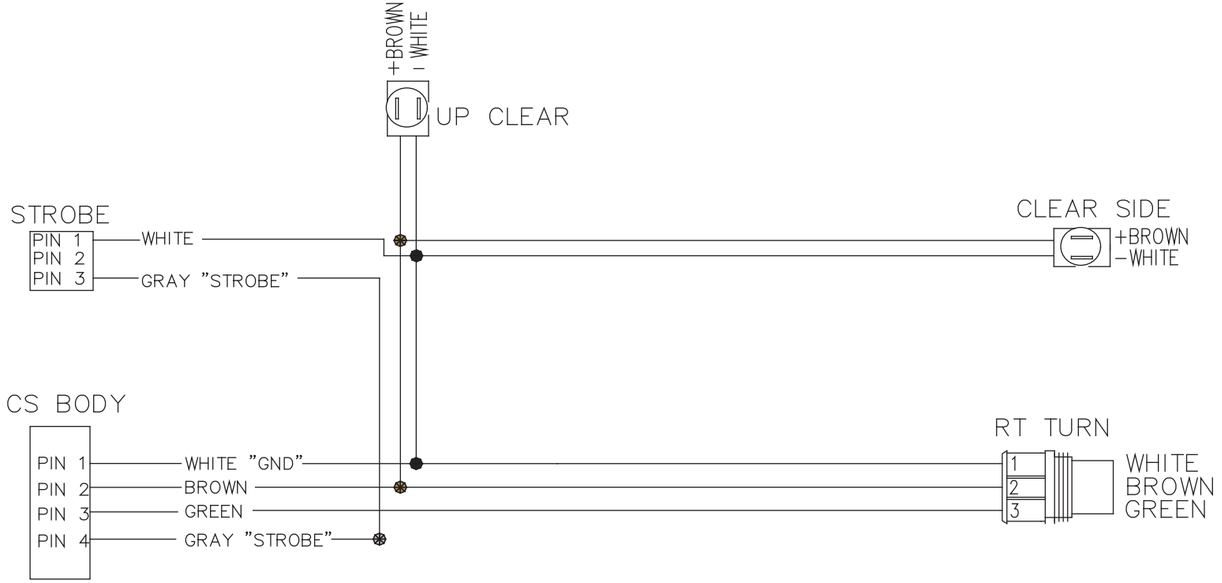
HARNESS, SS BODY
NYC PT 1100
263-1895
REV: B2
11/21/19

REF.	PART No.	DESCRIPTION	QTY
1	. 108-6461-003	CONNECTOR, 4-WAY PLUG	1
2	. 108-8493-003	SUPERSEAL 3 WAY PLUG	2
3	. 115-1036-002	FIT N FORGET CONNECTOR	2



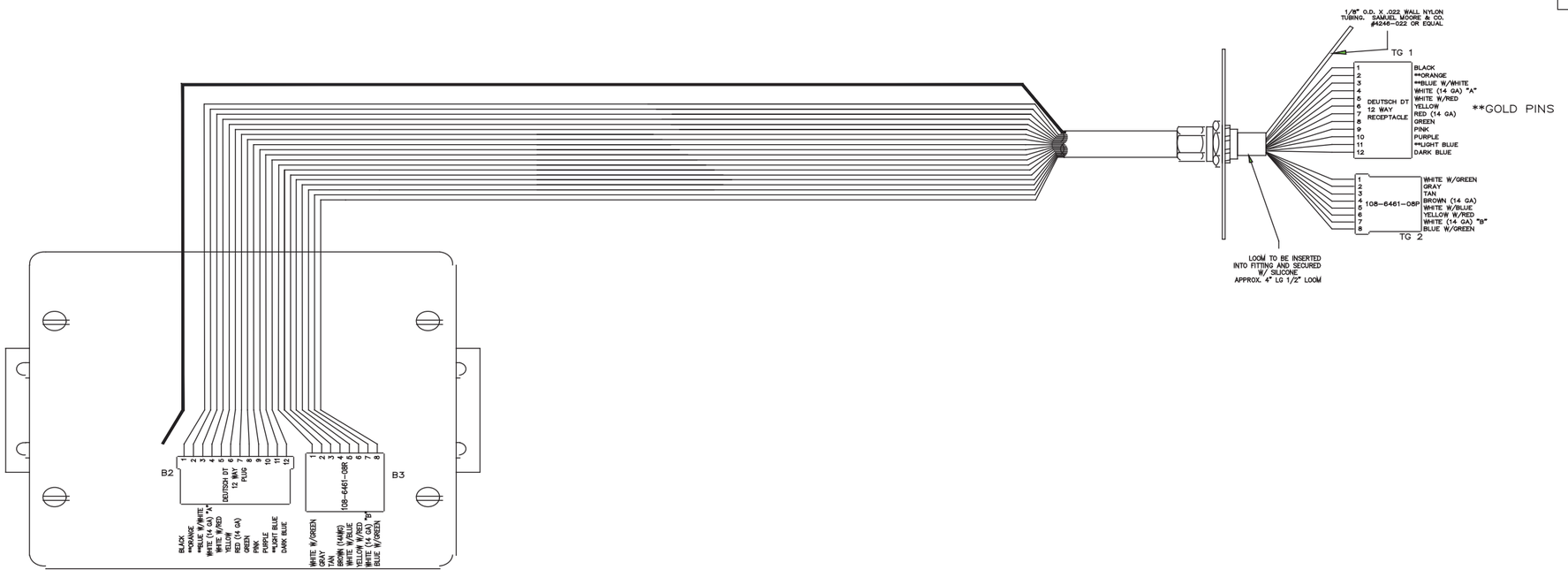
263-1896

BROWN – CLEARANCE
GREEN – RIGHT TURN
WHITE – GND
GRAY – STROBE

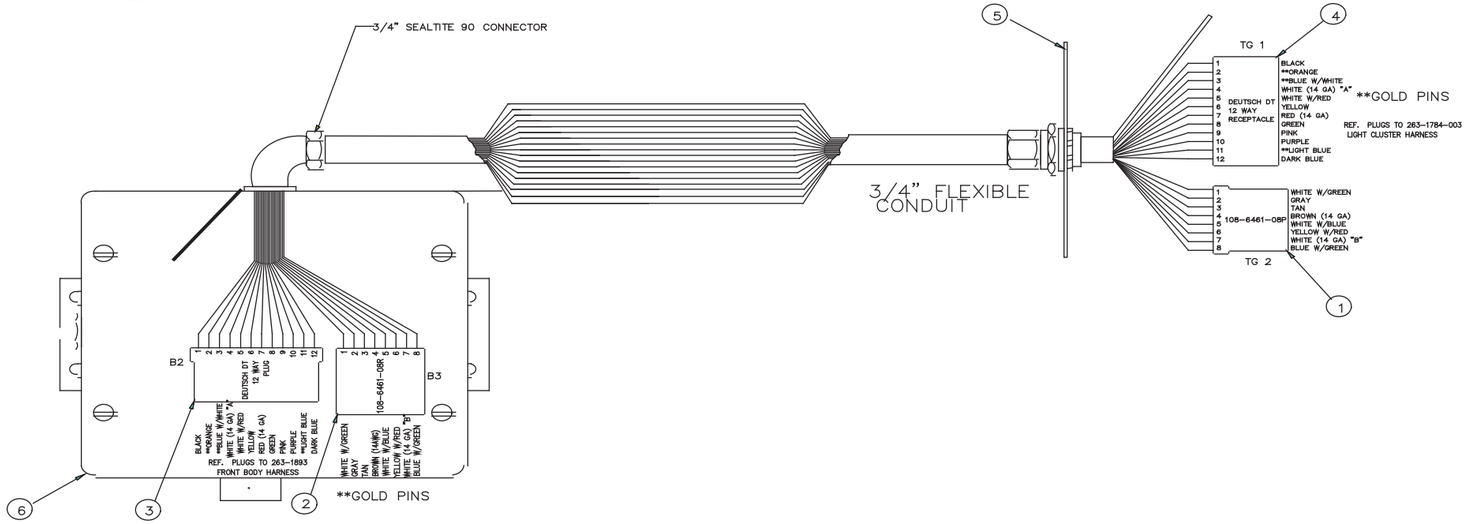


HARNESS, CS BODY
NYC PT 1100
263-1896
REV: A
11/21/19

REF.	PART No.	DESCRIPTION	QTY.
1	. 108-6461-08P	DEUTSCH DT SERIES 8 WAY PLUG	1
2	. 108-6461-08R	DEUTSCH DT SERIES 8 WAY REC.	1
3	. 108-6461-12P	DEUTSCH DT SERIES 12 WAY PLUG	1
4	. 108-6461-12R	DEUTSCH DT SERIES 12 WAY RECEPTACLE	1
5	. 074-4920	PLATE, COVER	1
6	. 151-4779	UPPER ELECTRICAL BOX, PT1100 NYC	1



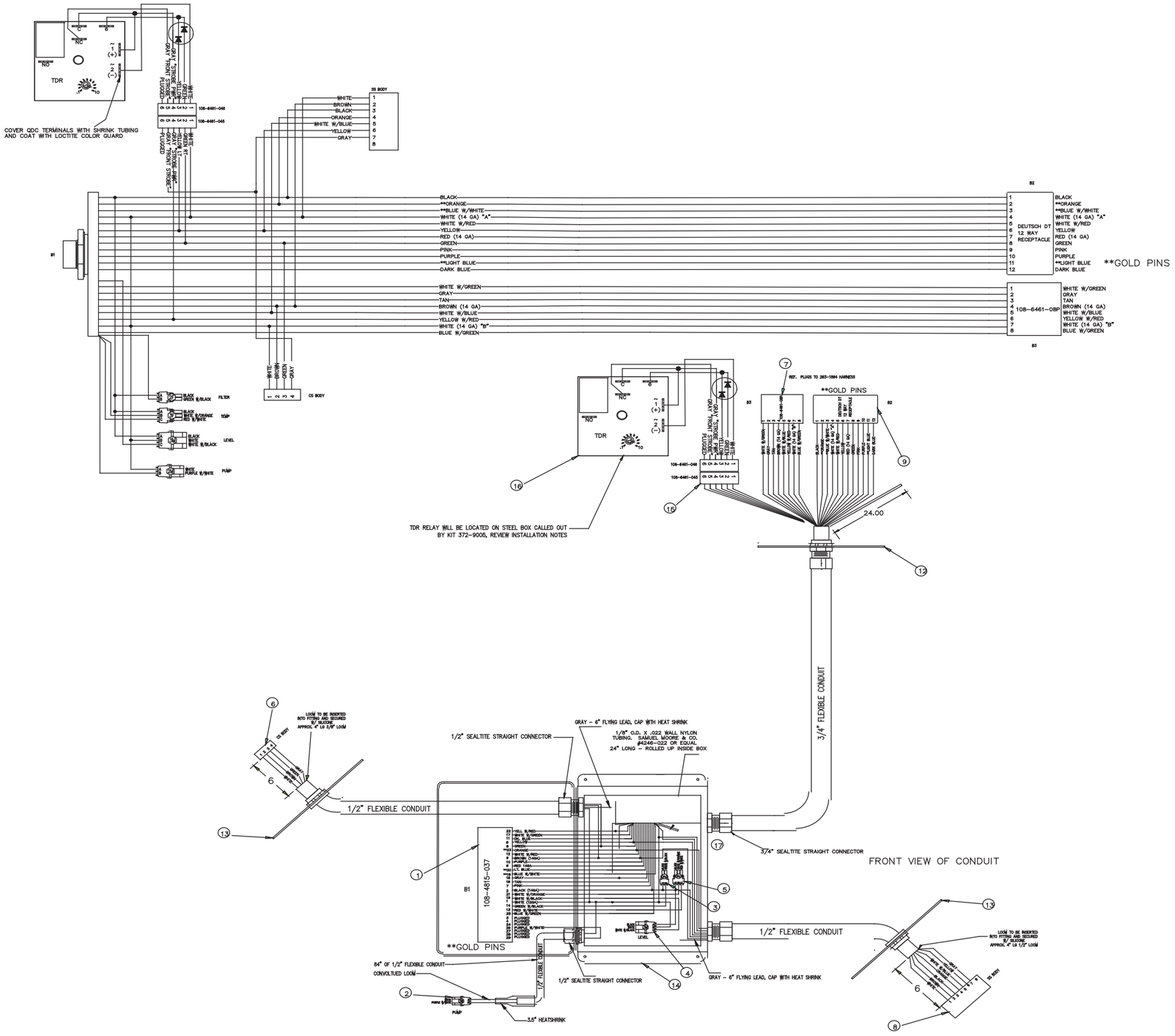
263-1894



HARNESS, REAR BODY
NYC PT 1100
263-1894
REV: B
11/26/19

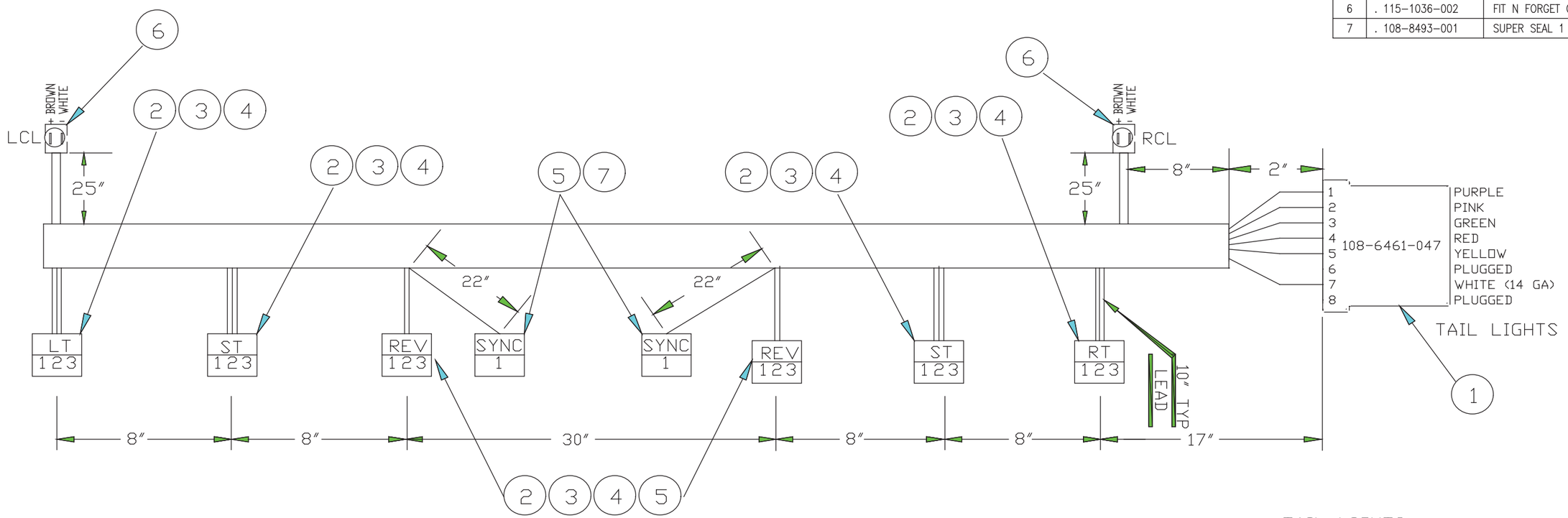
REF.	PART No.	DESCRIPTION	QTY
1	. 108-4815-037	DEUTSCH HDP 29 PIN RECEPTACLE	1
2	. 108-4827-003	PACKARD 2 WAY MALE	1
3	. 108-4827-004	PACKARD 2 WAY FEMALE	1
4	. 108-4827-005	PACKARD 3 WAY MALE	1
5	. 108-4827-006	PACKARD 3 WAY FEMALE	1
6	. 108-6461-004	CONNECTOR, 4-WAY RECEPTACLE	1
7	. 108-6461-007	CONNECTOR, 8-WAY PLUG	1
8	. 108-6461-008	CONNECTOR, 8-WAY RECEPTACLE	1
9	. 108-6461-010	CONNECTOR, 12-WAY RECEPTACLE	1
10	. 108-6461-08P	DT SERIES 8 WAY PLUG	1
11	. 108-6461-12R	DT SERIES 12 WAY RECEPTACLE	1
12	. 113-7564	COVER, CONDUIT CONNECTION 3/4"	1
13	. 113-7651	COVER, CONDUIT CONNECTION 1/2"	2
14	. 151-4778	ELECTRICAL BOX, PT1100 NYC	1
15	. 108-6461-045	CONNECTOR, 6-WAY PLUG	1
16	. 263-1888-006	HARNESS, FRONT STROBE CONTROL	1

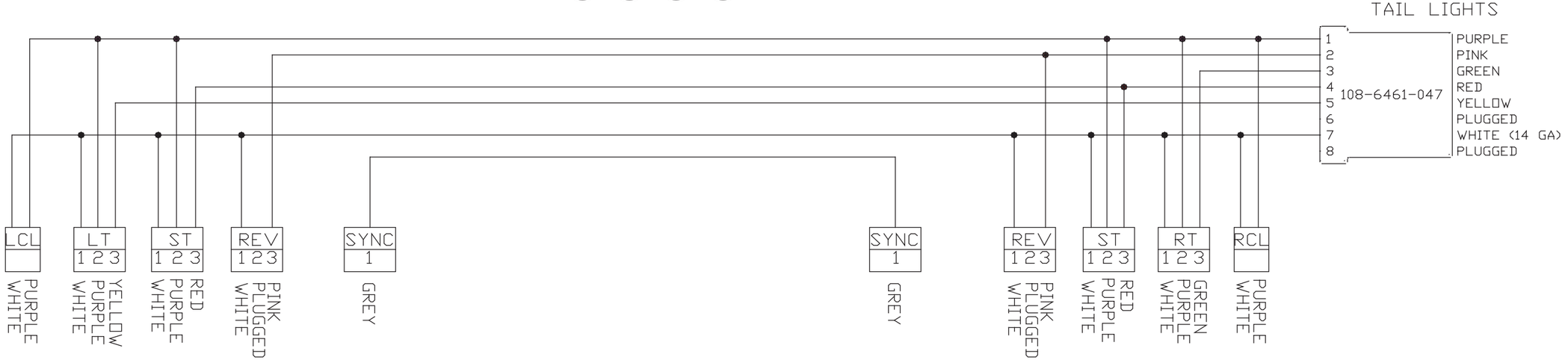
263-1893



HARNESS, FRONT BODY
NYC PT 1100
263-1893
REV: D2
11/18/19

REF.	PART No.	DESCRIPTION	QTY.
1	. 108-6461-047	DEUTSCH DT SERIES 8 WAY PLUG	1
2	. 108-8493-003	SUPER SEAL 3 WAY PLUG	6
3	. 108-8493-007	SUPER SEAL REC. CONTACTS	16
4	. 108-8493-009	SUPER SEAL WIRE SEAL 16-14 AWG	16
5	. 108-8493-011	SUPER SEAL CAVITY PLUG	4
6	. 115-1036-002	FIT N FORGET CONNECTOR	2
7	. 108-8493-001	SUPER SEAL 1 WAY PLUG	2

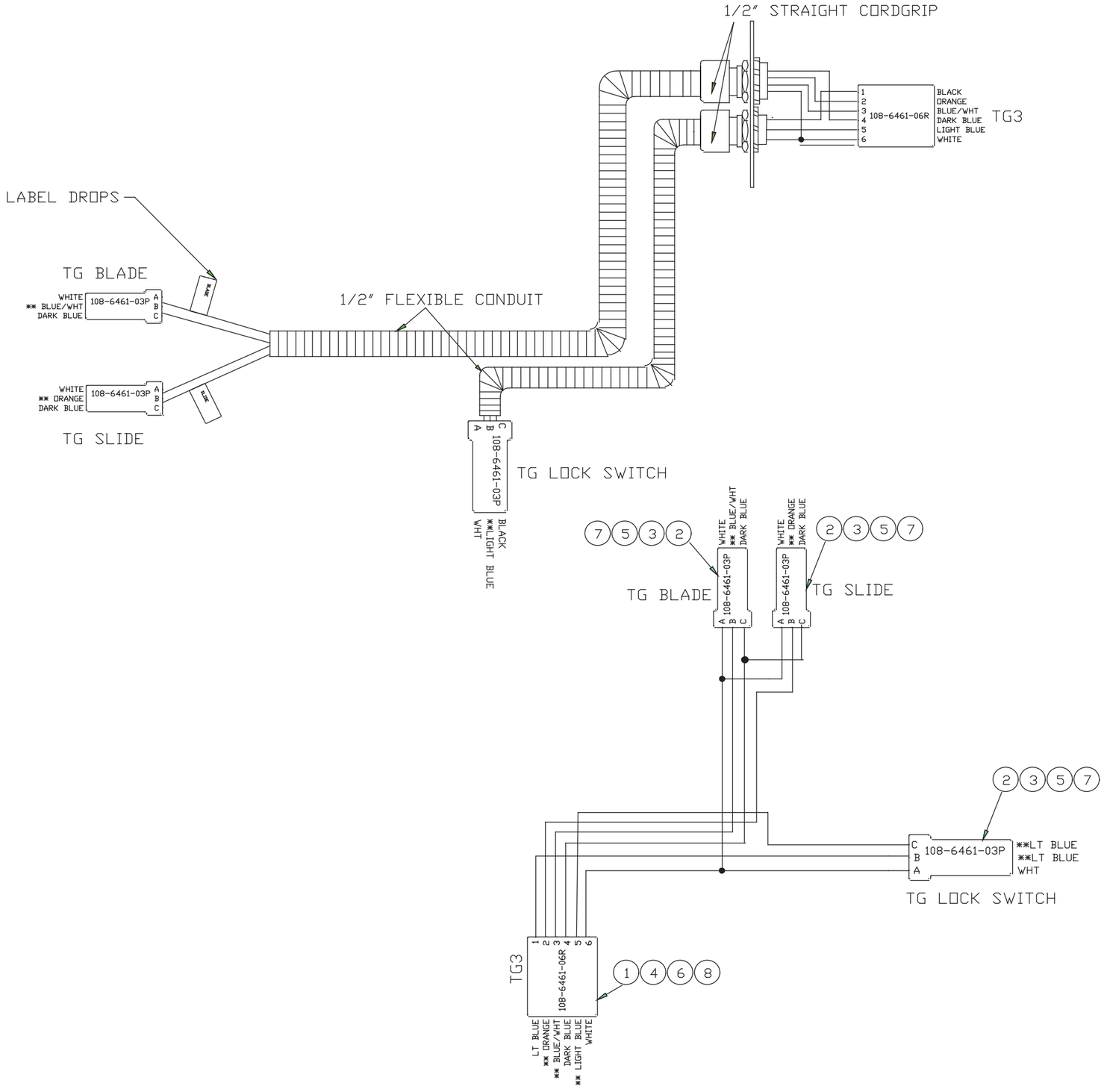




263-1819-007

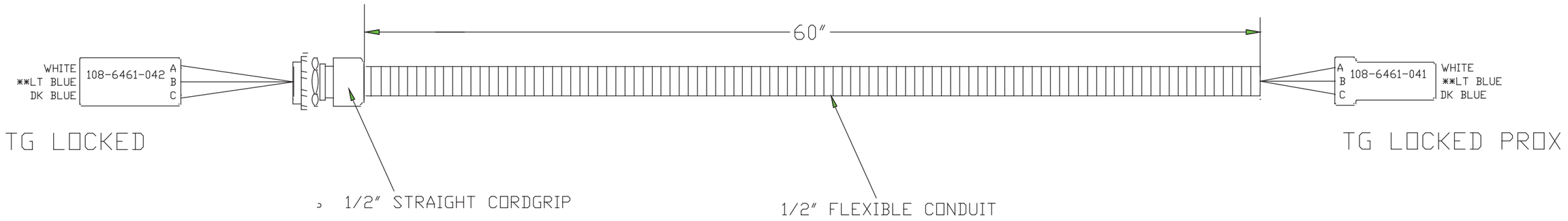
TAIL LIGHT HARNESS
NYC PT 1100
263-1819-007
REV: D
05/21/21

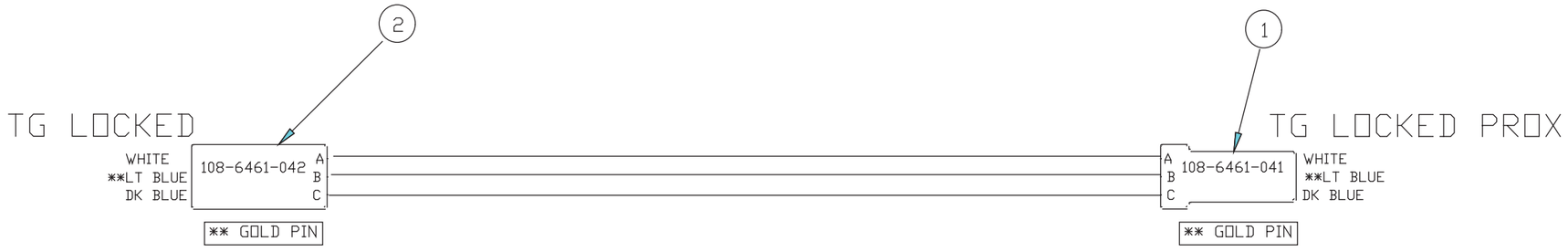
REF.	PART No.	DESCRIPTION	QTY
1	. 108-4815-122	PIN, GOLD, SOLID	3
2	. 108-4815-123	SOCKET, GOLD, SOLID	3
3	. 108-4815-303	SOCKET, NICKEL, S&F	6
4	. 108-4815-403	PIN, NICKEL, S&F	3
5	. 108-6461-03P	3-WAY DT PLUG	3
6	. 108-6461-06R	6-WAT DT RECEPT.	1
7	. 108-6461-3PW	3-WAY PLUG WEDGE	3
8	. 108-6461-6RW	6-WAY RECEPT. WEDGE	1
9	. 113-0125-001	BRACKET, C/S HARNESS MOUNT	1



263-1819-006

C/S TAILGATE OPEN HARNESS
NYC PT 1100
263-1819-006
REV: B
05/21/21

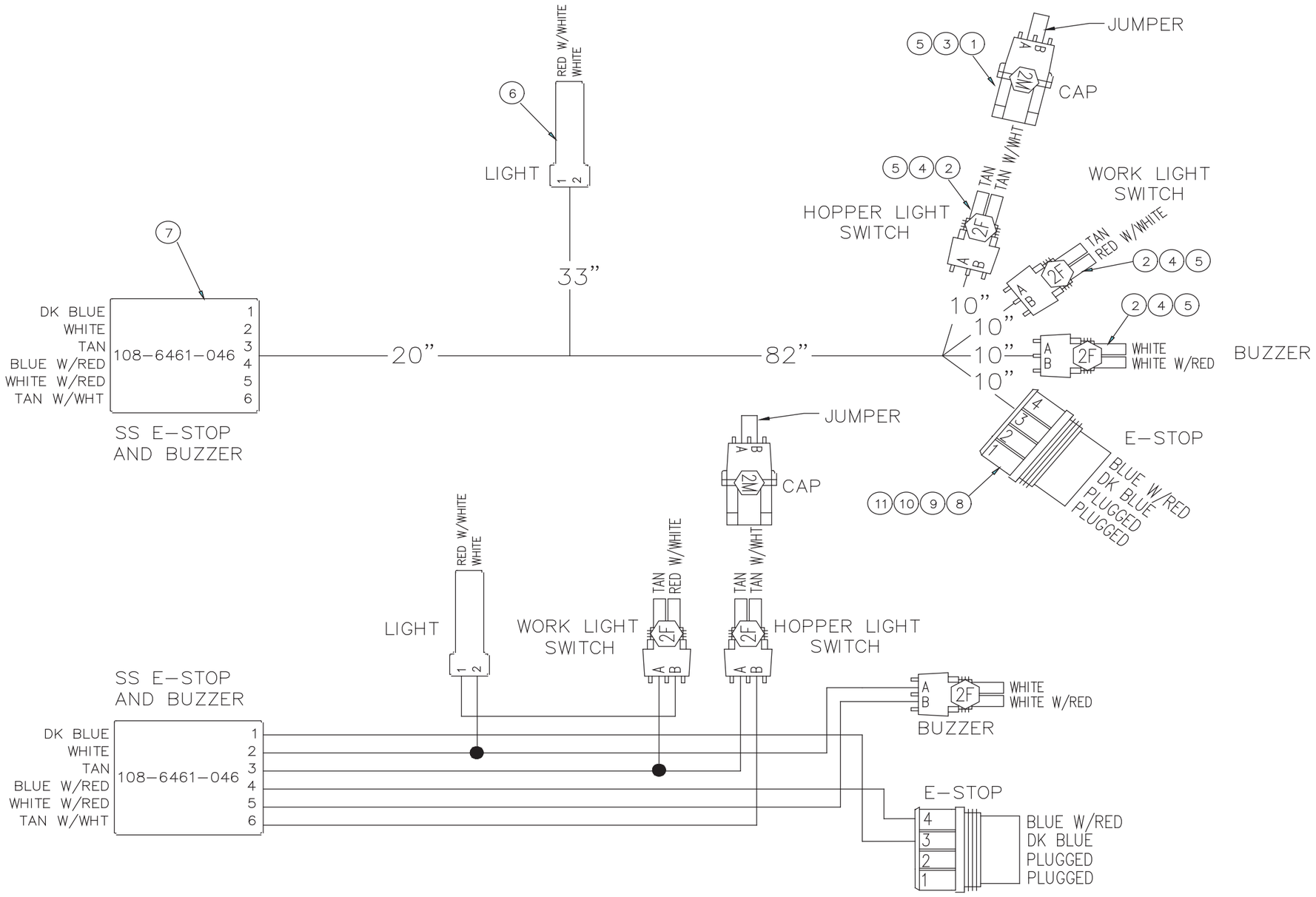




263-1819-004

S/S TAILGATE OPEN HARNESS
NYC PT 1100
263-1819-004
REV: B2
05/21/21

REF.	PART No.	DESCRIPTION	QTY.
1	. 108-4827-003	PACKARD, 2 WAY MALE	1
2	. 108-4827-004	PACKARD, 2 WAY FEMALE	3
3	. 108-4827-110	PACKARD MALE TERMINAL 16-14GA	2
4	. 108-4827-120	PACKARD FEMALE TERMINAL 16-14GA	6
5	. 108-4827-131	PACKARD CABLE SEAL 16-14GA	8
6	. 108-6461-051	DT SERIES 2 WAY PLUG	1
7	. 108-6461-046	DT 6 WAY RECEPTACLE	1
8	. 108-8493-007	SUPER SEAL RECEPTACLE CONTACTS	2
9	. 108-8493-009	SUPER SEAL WIRE SEAL	2
10	. 108-8493-011	SUPER SEAL CAVITY PLUG	2
11	. 108-8493-012	SUPER SEAL 4 WAY PLUG	1



263-1819-003

S/S ESTOP / BUZZER LT HARNESS
NYC PT 1100
263-1819-003
REV: B
05/21/21

BODY SCHEMATIC

- YELLOW – L.H. TURN
- ** BLUE W/WHITE – BLADE PROX SIG.
- WHITE W/RED STRIPE – BUZZER
- RED W/WHITE – OIL TEMP SIG. (200)
- GREEN W/BLACK – FILTER O.K. SIG.
- RED 14GA– BRAKE LIGHTS
- 12 GA WHITE – GROUND
- ** LT. BLUE – T/G LATCHED SIG.
- GRAY – FLASHING LIGHTS
- TAN – DOME LIGHT
- PINK – REVERSE
- 14 GA BLACK – +12v SENSOR POWER
- WHITE W/ORANGE – OIL TEMP SIG (125)
- WHITE W/GREEN – FLOOD LIGHT
- WHITE W/BLACK – OIL LEVEL FULL SIG.
- GREEN – R. H. TURN
- 14 GA. BROWN – CLEARANCE LIGHT
- PURPLE – PARKING LIGHTS
- DK. BLUE – T/G PROX. POWER +12v
- ** ORANGE – SLIDE PROX SIG.
- YELLOW W/RED
- BLUE W/GREEN
- PURPLE W/WHITE
- PLUGGED
- PLUGGED
- PLUGGED
- PLUGGED
- PLUGGED
- PLUGGED

**GOLD PINS

263-1784-017

CONNECT TO CHASSIS GROUND STUD STREET SIDE BESIDE RADIATOR

CONNECT TO CHASSIS BODY BUILDER CONNECTOR IN FRONT OF RADIATOR

CONNECT TO CHASSIS HYDRAULIC PUMP DROP IN FRONT OF RADIATOR

263-1784-010

263-1893

263-1894

263-1896

FOLLOW FOR MATING CONNECTORS.

263-1784-012

SWITCH IS DESIGNED TO PROVIDE +12 V WHEN TEMP IS BELOW SETPOINT. THE LOSS OF VOLTAGE SIGNIFIES SETPOINT HAS BEEN PASSED.

NOTE: PROTECT SENSOR FROM CONTAMINATION AND DAMAGE.

263-1900

CIRCUIT IS DESIGNED TO PROVIDE +12V WHEN PRESSURE IS BELOW SETPOINT. LOSS OF +12V OCCURS AFTER SETPOINT IS REACHED.

NOTE: PROTECT SENSOR FROM CONTAMINATION AND DAMAGE.

TAILGATE SCHEMATIC

263-1819-001

263-1819-002

263-1819-003

263-1819-004

263-1819-006

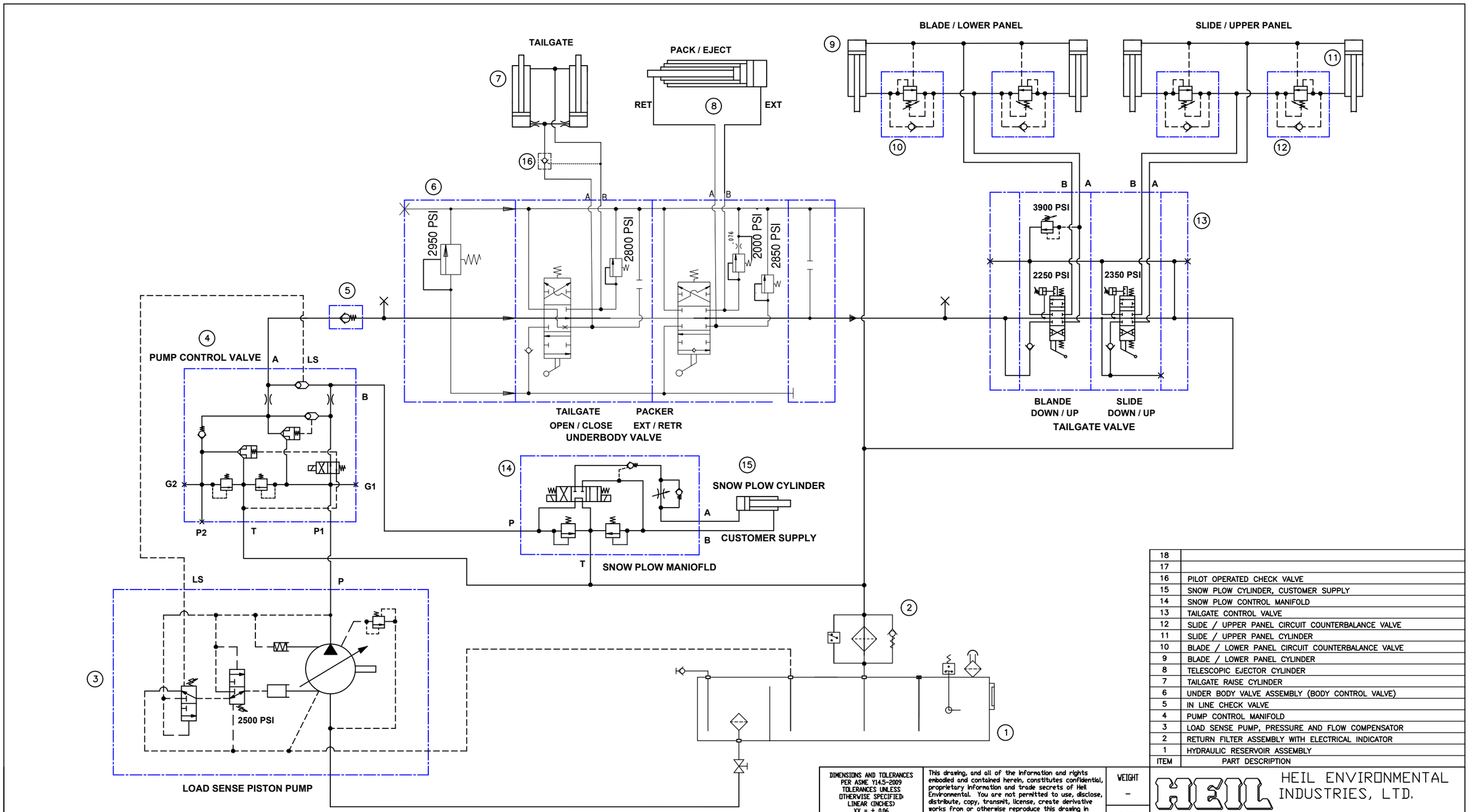
263-1819-007

263-1898

L.H. CLEARANCE LIGHT
HALDGEN SPOT LIGHT
LEFT TURN
TAG LIGHT
LEFT BRAKE
HOPPER FLOOD
3 PLACES
CENTER CLEARANCE LIGHTS
FLASHER
R.H. CLEARANCE LIGHT
RIGHT TURN
RIGHT BRAKE
**GOLD PINS
T/G LOCK L.H.
T/G CLEAR SOLENOID
CAUTION LIGHT
CAUTION LIGHT
CAUTION LIGHT
CENTER STOP LIGHT
BACKUP ALARM
BUZZER
E-STOP
SWITCH HOPPER LIGHT
SWITCH WORK LIGHT
LIGHT
CAP
JUMPER

701-9309

SCHEMATIC, OVERALL, PT1100
701-9309
1/14/20



ITEM	PART DESCRIPTION
18	
17	
16	PILOT OPERATED CHECK VALVE
15	SNOW PLOW CYLINDER, CUSTOMER SUPPLY
14	SNOW PLOW CONTROL MANIFOLD
13	TAILGATE CONTROL VALVE
12	SLIDE / UPPER PANEL CIRCUIT COUNTERBALANCE VALVE
11	SLIDE / UPPER PANEL CYLINDER
10	BLADE / LOWER PANEL CIRCUIT COUNTERBALANCE VALVE
9	BLADE / LOWER PANEL CYLINDER
8	TELESCOPIC EJECTOR CYLINDER
7	TAILGATE RAISE CYLINDER
6	UNDER BODY VALVE ASSEMBLY (BODY CONTROL VALVE)
5	IN LINE CHECK VALVE
4	PUMP CONTROL MANIFOLD
3	LOAD SENSE PUMP, PRESSURE AND FLOW COMPENSATOR
2	RETURN FILTER ASSEMBLY WITH ELECTRICAL INDICATOR
1	HYDRAULIC RESERVOIR ASSEMBLY

REV.	WAS	DATE	ECO NO.
-	-	-	-
-	-	-	-
-	-	-	-
-	RELEASED	12-Feb-20	PT20001

DIMENSIONS AND TOLERANCES PER ASME Y14.5-2009
TOLERANCES UNLESS OTHERWISE SPECIFIED:
LINEAR (INCHES)
XX = ± 0.06
XXX = ± 0.030
ANGULAR = ±1°

WEIGHT: -

TYPE: DRAFT

DATE: 12-Feb-2020

SCALE: N/A

MATERIAL: SEE TABLE

HEIL ENVIRONMENTAL INDUSTRIES, LTD.

TITLE: HYDRAULIC SCHEMATIC FOR NYC PT1100 REL WITH SNOW PLOW

DRAWN BY: MALATESH

PART No. 701-9323

NYC PT 1100
NOTES

NYC PT 1100
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NYC PT 1100
NOTES

HEIL ENVIRONMENTAL WARRANTY STATEMENT

The Heil Co. d/b/a Heil Environmental ("Heil") warrants its solid waste collection equipment to be free from defects in material and workmanship under normal use for a period of one (1) year or 2000 hours of operation (whichever comes first) from the date of equipment In-Service or during the period of coverage offered by an extended warranty program, when proper service and maintenance as described in Heil Service Bulletins and Parts & Service Manuals are performed. The standard or extended equipment warranty is not transferable except for sales demonstration units.

This warranty is expressly limited to the repair or replacement of any component or part thereof, of any such refuse or recycling collection body manufactured by Heil that is proven to Heil's satisfaction to have been defective in material or workmanship. Such components or parts shall be repaired or replaced at Heil's option without cost to the standard purchaser for parts and labor provided such unit is returned to an authorized Heil Distributor for replacement or repair. The repair or replacement must be made during the standard or extended warranty coverage period. Before any warranty can be allowed on new equipment, a validated warranty registration form must be on file with Heil's Customer Service Department within sixty (60) days of the equipment's In-Service date. Wear items are excluded from warranty coverage.

All OEM service parts sold by Heil have a six (6) month warranty from the date of purchase. Aftermarket parts purchased from Heil are supported by a 90-day warranty. The parts warranty covers parts only, providing that factory inspection reveals a defect in material or workmanship. Labor, troubleshooting, equipment downtime, etc. is not covered under the parts warranty policy.

HEIL MAKES NO OTHER WARRANTY, EXPRESSED OR IMPLIED, AND MAKES NO WARRANTY OF MERCHANTABILITY OR OF FITNESS FOR ANY PARTICULAR PURPOSE. HEIL DOES NOT ASSUME ANY LIABILITY OR ACCEPT CLAIMS FOR LOSS OF PROFITS, PRODUCT DOWN TIME OR ANY OTHER DIRECT, INCIDENTAL OR INDIRECT CONSEQUENTIAL LOSSES, COSTS, DAMAGES OR DELAYS.

Any improper use, operation beyond rated equipment or component capacity, substitution of parts that are not Heil-approved, or any alteration or repair by others in such a manner as in Heil's sole judgment affect the product operation or integrity shall void the warranty.

Other than the extension of the standard warranty period purchased under a supplemental Heil Extended Warranty Program, no employee or representative is authorized to modify this warranty in any way nor shall any other warranties be granted. No dealer-supplied warranty program is endorsed or supported by Heil.

Heil retains the right to modify its factory warranty program prospectively at any time.

Revised 1/2013

www.heil.com

Customer Care:
866-ASK-HEIL
(866-275-4345)

Heil Environmental
4301 Gault Avenue North
Fort Payne, AL 35967-9984

Parts Central:
800-528-5308

Technical Service:
866-310-4345
TechSupport@DoverESG.com