

## Instruction Manual

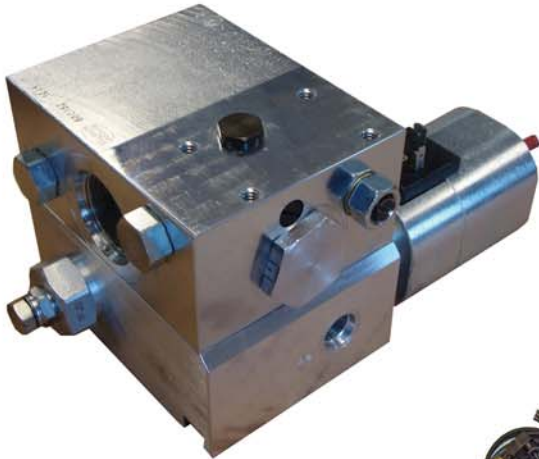
Route tested. Driver approved.



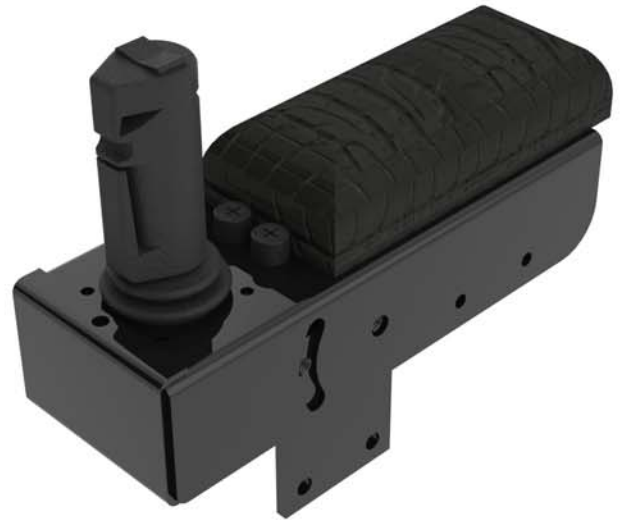
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**Model PAC 1.4 Perkins Automated Can**  
**An ISO 9001:2000 Company**

Route tested. Driver approved.



**FLOW DIVERTER  
VALVE (OPTIONAL)  
PART # A90190RV**



**JOYSTICK ASSEMBLY  
PART # A90137**



**Wire Harnesses  
A90258,A90262,A90264,A90331,A90332**

**CARRY CAN  
PART # A90649**

**GRABBER SYSTEM  
PART # PAC 1.4**





## Cart Glossary

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**THE PAC HAS BEEN DESIGNED TO LIFT THE WIDEST VARIETY OF ANSI COMPATIBLE REFUSE CARTS POSSIBLE. ABOVE ARE EXAMPLES OF ACCEPTABLE CARTS, RANGING FROM 30 TO 96 GALLON IN SIZE. MAXIMUM ROUTE EFFICIENCY IS ACHIEVED USING THE CORRECT TYPE OF AUTOMATED-COMPATIBLE CART (ANSI TYPE "G").**



**THERE EXISTS A WIDE VARIETY OF GARBAGE CARTS COMMONLY AVAILABLE AT RETAIL STORES. THESE CARTS MAY BE LIFTED BY THE PAC SYSTEM. RESULTS MAY VARY WITH THE TYPE OF CART USED. FACTORS TO CONSIDER WHEN USING STORE-BOUGHT CARTS:**

- 1) THE PLASTIC MATERIAL AND STRUCTURE OF STORE-BOUGHT CARTS ARE INTENDED FOR HAND LOADING OPERATIONS, NOT FOR AUTOMATED MACHINE PICK-UP. CART BREAKAGE MAY OCCUR.**
- 2) UNLIKE THE CARTS ABOVE, LIDS ON STORE-BOUGHT CARTS ARE TYPICALLY NOT ATTACHED. LIDS MAY BE DROPPED INTO THE REFUSE BIN OR THE GROUND, OR MAY STAY LOCKED IN PLACE.**

# Truck Compatibility Guide

Route tested. Driver approved.

**PLEASE USE THIS GUIDE AS A QUICK REFERENCE TO ENSURE TRUCK COMPATIBILITY:**

**A STANDARD FORK ARMS, WITH DIMENSIONS EQUAL TO 74" INSIDE & LESS THAN 77" OUTSIDE.**

**B FORK ARM HEIGHT 17 1/2" TO THE GROUND OR LESS.**

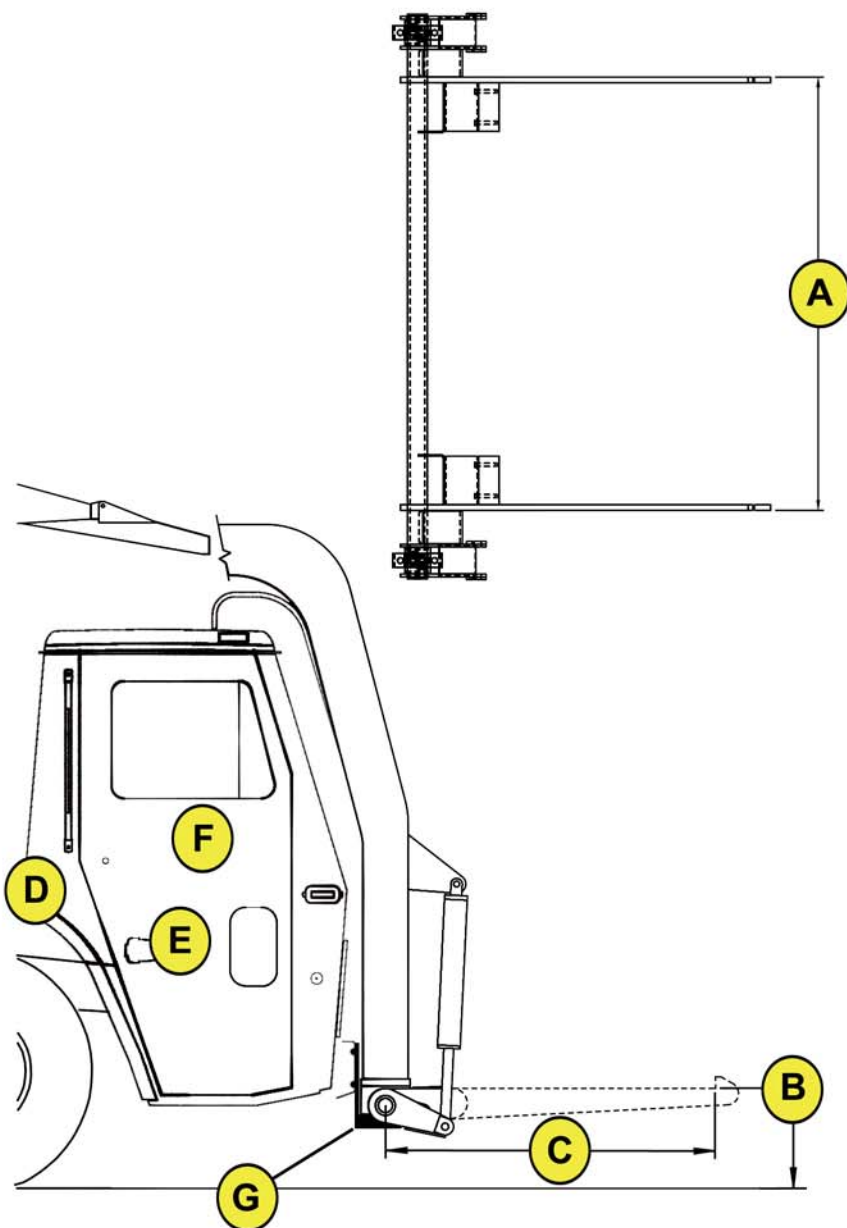
**C AUTOMATED-COMPATIBLE FORK ARM LENGTH OF 65" OR GREATER.**

**D PUMP CAPABLE OF PRODUCING UP TO 3,000 PSI AND VALVING PIPED TO DELIVER 10 GPM DOWN THE ARMS TO THE FORKS FOR THE PAC SYSTEM. (THE TRUCK MAY COME PRE-PLUMBED, OR IT MAY BE NECESSARY TO ADD A PERKINS DIVERTER VALVE.)**

**E CURB SIDE DRIVER POSITION IS NECESSARY FOR SAFE OPERATION**

**F ELECTRONIC JOYSTICK, WHICH CAN BE RE-USED FROM PREVIOUS INSTALLATION OR CAN BE INSTALLED NEW FROM PERKINS.**

**G IT IS RECOMMENDED THAT THE TRUCK MUST BE EQUIPPED WITH AN "ARMREST" BRACKET THAT SUPPORTS THE ARMS. TRUCKS SO EQUIPPED ARE TYPICALLY REFERRED TO AS "CAN-READY" BY THE MFG.**



**CONTACT PERKINS IF YOU HAVE ANY QUESTIONS ABOUT COMPATIBILITY (708) 482-9500.**



**INSTALLERS NOTE: FRONTLOAD TRUCKS THAT ARE NOT AUTOMATED COMPATIBLE SHOULD NOT BE USED WITH THE PAC SYSTEM. FOR EXAMPLE, COMMERCIAL TRUCKS HAVE A STREET SIDE DRIVER SEAT. WHILE THE SYSTEM COULD WORK IN THIS POSITION, IT IS NOT SAFE, AS THE DRIVER WILL NEED TO EXIT TO THE STREET FOR HAND LOADING MISCELLANEOUS ITEMS, NOR WOULD IT BE AS EFFICIENT AS A CURB-SIDE DRIVE TRUCK.**

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*First-time installation is relatively simple. The graphic at right shows all the major steps.*

*If your truck already has hydraulic flow delivered to the forks, it is not necessary to install the flow diverter valve. Simply make sure the existing valve delivers 10 GPM to the forks.*

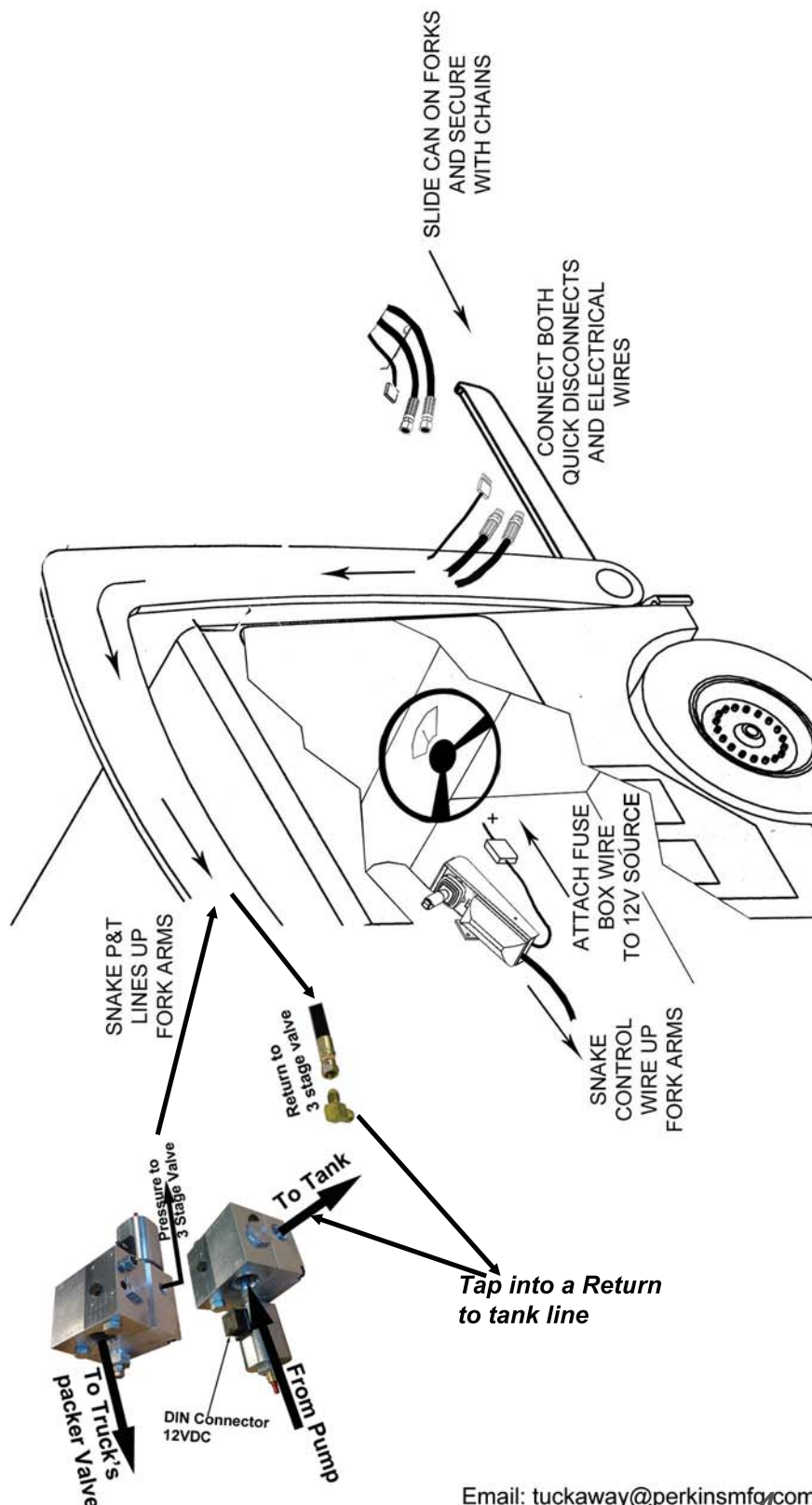
*If your truck was previously equipped with another brand of automated cart grabber and is already equipped with a joystick, it is possible to simply re-use the same joystick. (Some electrical rewiring may be necessary)*

*Slide the PAC container in place on the forks and secure with the chains.*

*Connect the quick-disconnects and electric plug.*

*Install the joystick and flow diverter valve as shown on following pages.*

*Bleed air from the system and start practicing!*



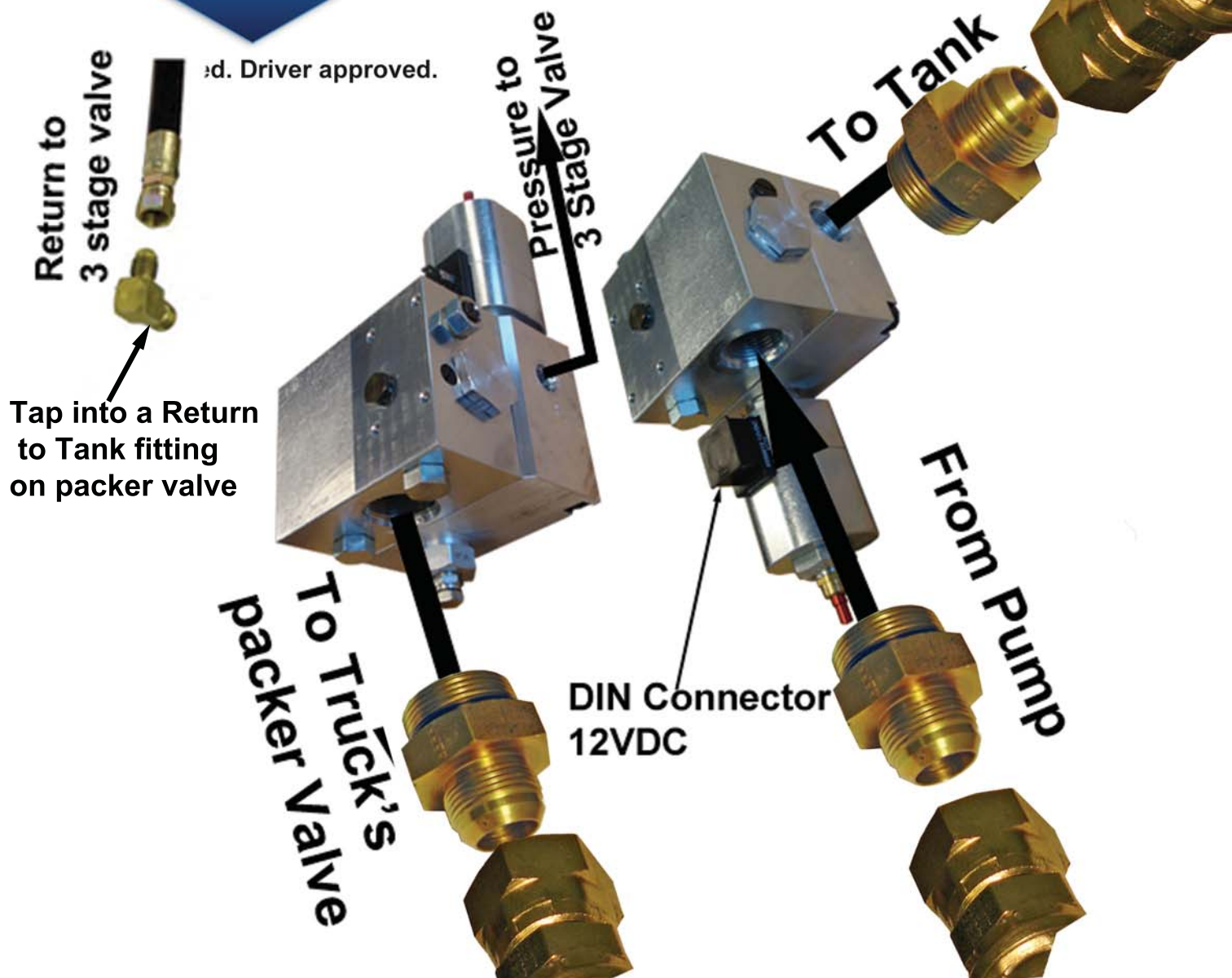
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*Note: Trucks that are equipped as semi-automated (residential) collectors may already come with a flow diverter. Also, if your truck had another automated can from a previous installation, the flow diverter should already be installed.*

*As long as the exiting plumbing can be adjusted to deliver 10 gpm to the fork arms, the existing plumbing will work for the Perkins PAC system.*

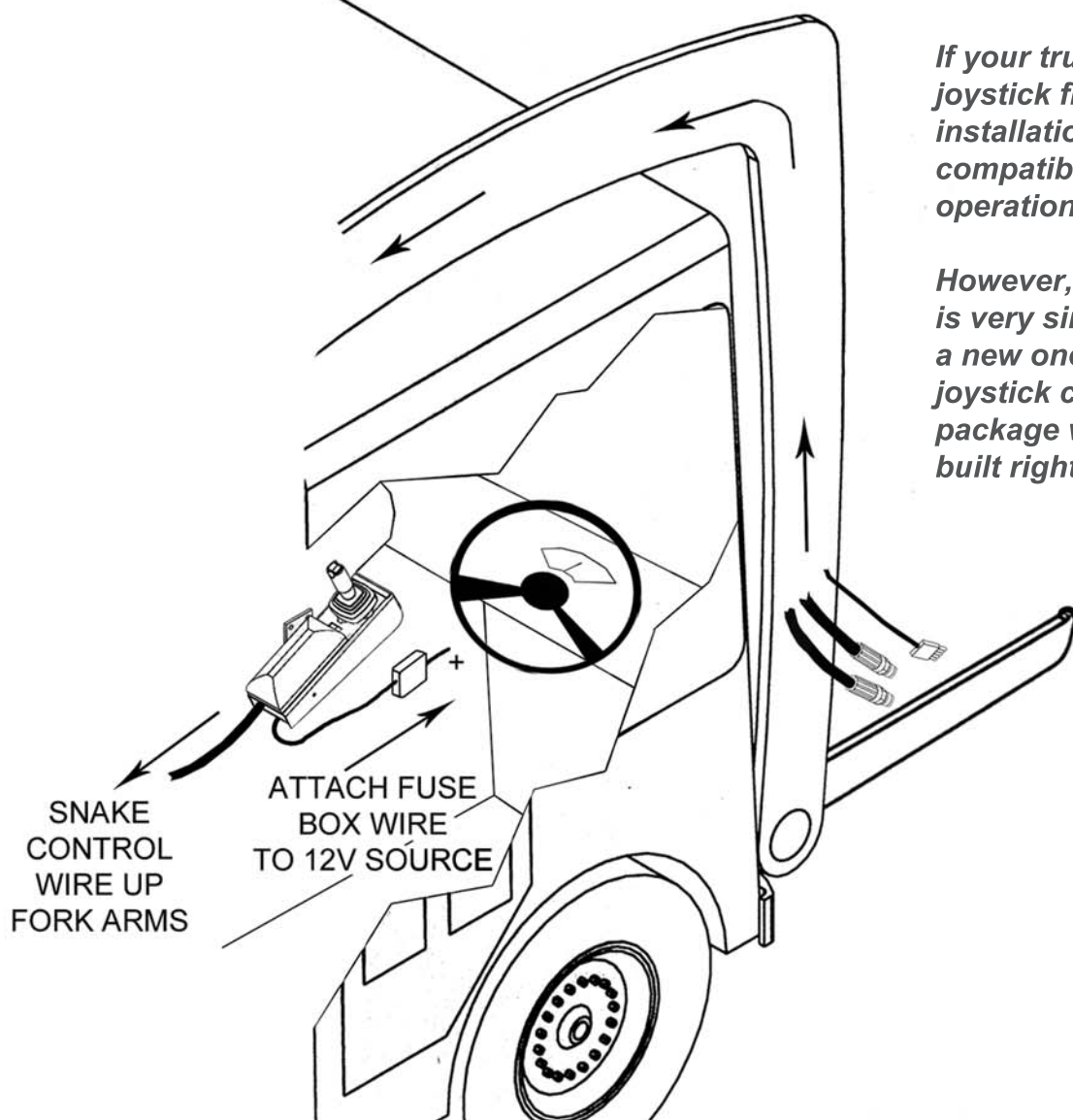
*If your truck does not come equipped, it will be necessary to install the flow diverter valve shown above. The valve should be placed so that the line feeding the packer valve will now feed into the diverter. The diverter will then feed into the packer. The diverter allows the packer to continue to function, while siphoning off 10 gpm for PAC function.*

*The solenoid shown allows the 10 GPM to flow only when the joystick is activated, which keeps heat low and greater speed to the packer when the PAC is not in use.*

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# Joystick Installation

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*If your truck already has a joystick from a previous installation, it is likely compatible to the PAC's operation.*

*However, joystick installation is very simple if you need a new one. The Perkins joystick comes as a complete package with all circuits built right in.*

**Attach the fuse box to the underside of a wall within the cab, and attach the positive wire (White) coming from the fuse box to a 12v power source, preferably coming directly from the truck's main fuse box panel. Attach Black wire to ground and Green wire to truck body.**

**Screw the joystick mounting plate to the cab interior at a comfortable height for the operator. Once installed, the angle is adjustable per operator preference.**

**Snake the control wire out of the cab, to the arm pivot point, up the arms, and down to the forks. Secure the wire in all places with plastic ties, where possible.**



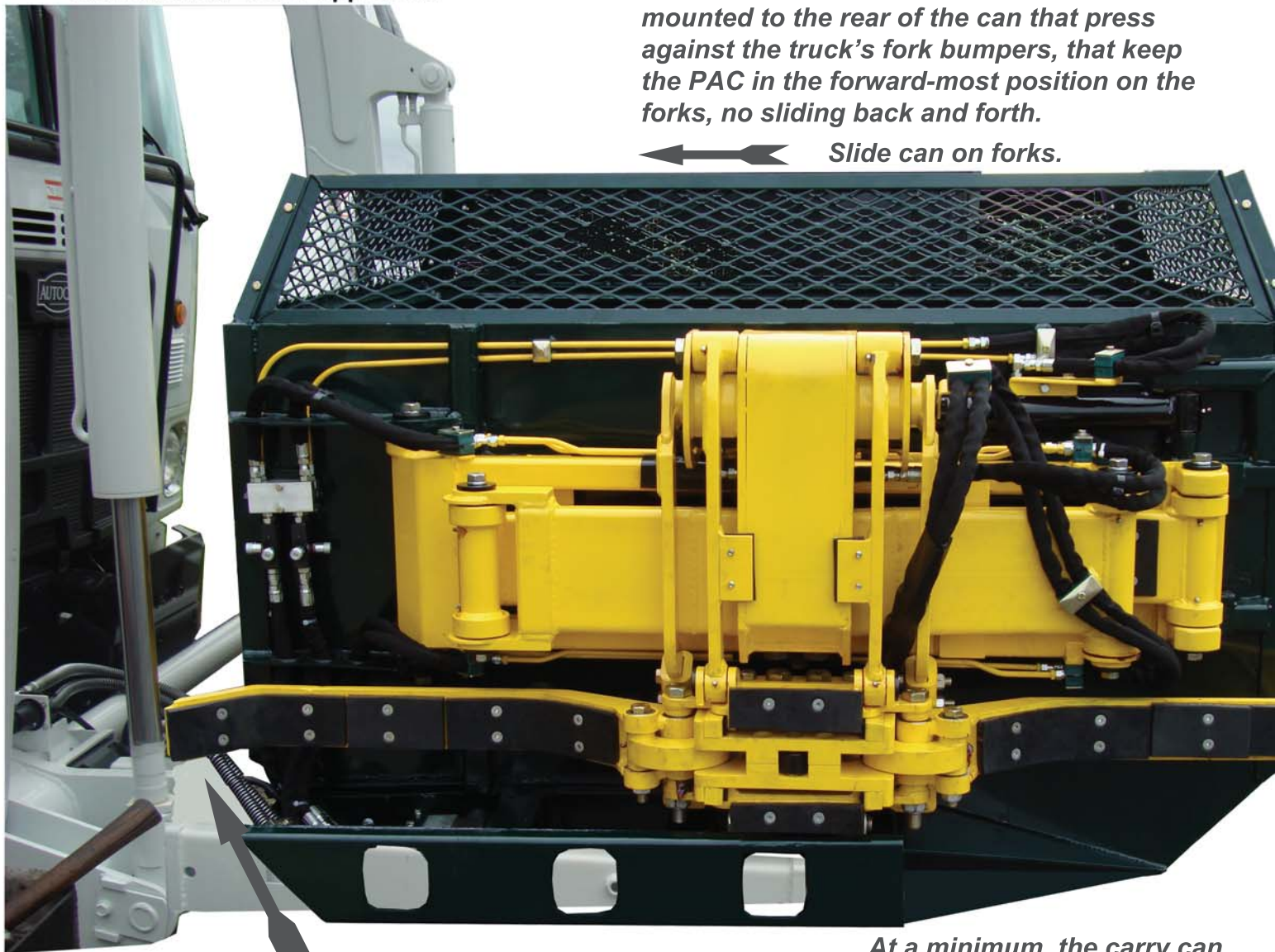
## Carry Can Installation

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*The PAC should have two spacer blocks mounted to the rear of the can that press against the truck's fork bumpers, that keep the PAC in the forward-most position on the forks, no sliding back and forth.*



*Slide can on forks.*



*Attach 2 hydraulic lines & 1 electrical line. Secure well against movement.*

*At a minimum, the carry can itself must be secured with the safety chains on either side.*

*Additional security measures are available as an optional feature. Blocks that reduce can movement and vibration can be installed but they will increase removal time. If the carry can is to be dropped frequently enroute, chains alone may be the better choice. If the the can is to be fixed to the forks and rarely removed, the additional blocks are recommended.*

*The only physical installation apart from sliding the can on the forks is the connection of the 2 quick disconnects and the electrical control wire.*

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## Joystick Operation

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*This is the standard control arrangement for the Perkins PAC / PAS joystick.*

*The controls can be customized, if desired, by swapping the solenoid plugs on the control valve to achieve different configurations to suit the operators preferences.*

# Onboard Valve Schematic / Hook-up

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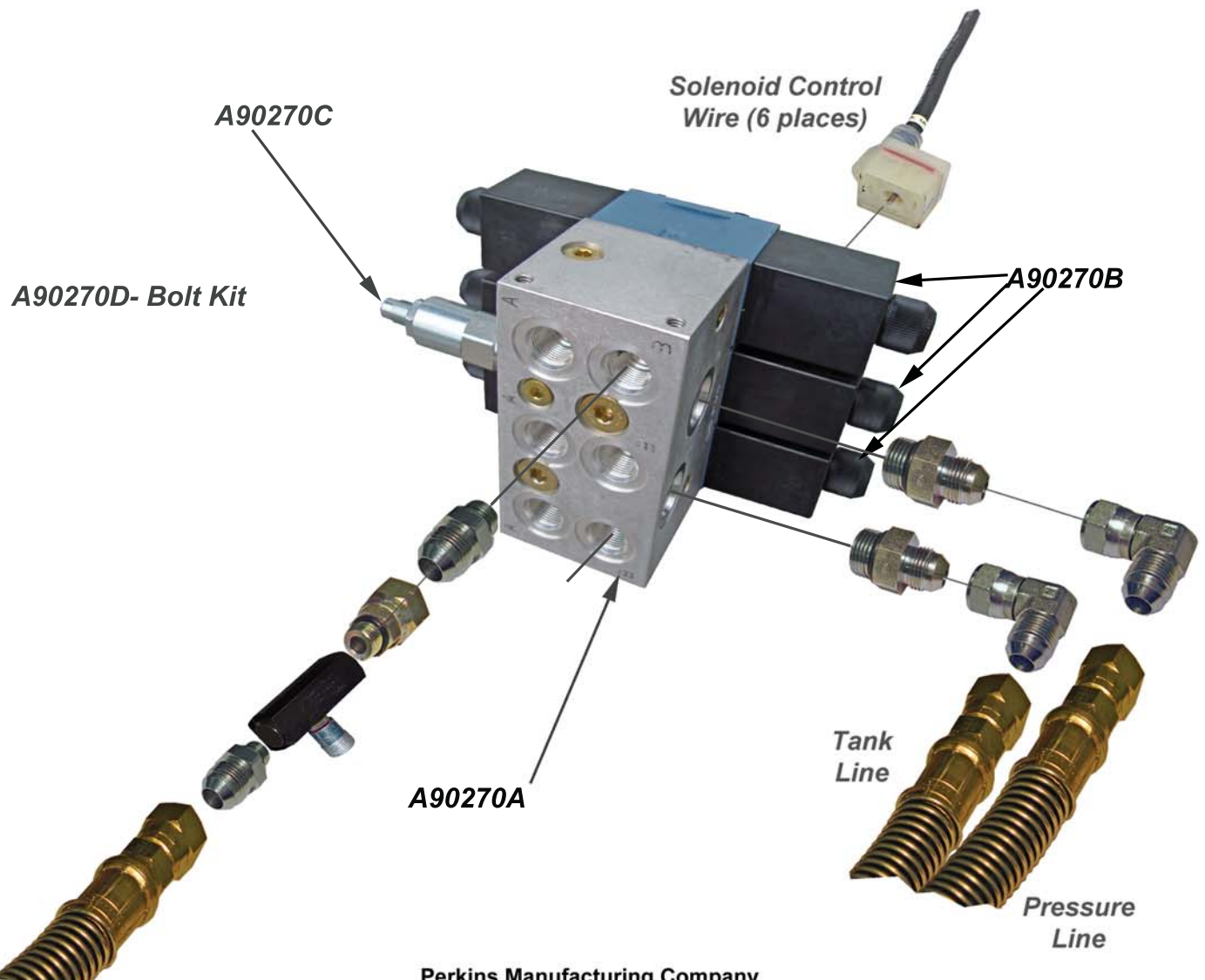
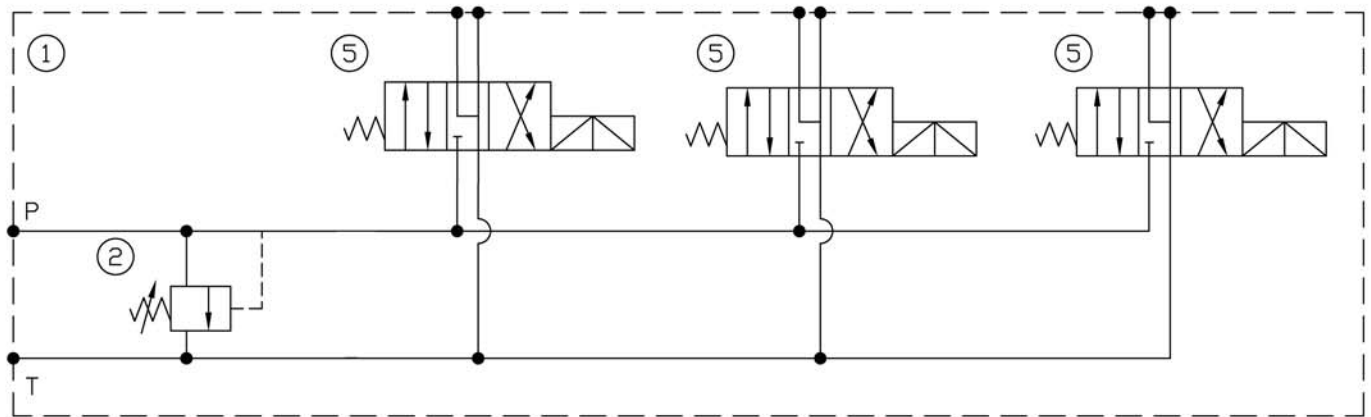
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HYDRAULIC LIFTERS

INDUSTRIAL LIFTERS

ACCESSORIES

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# Joystick Control Board

A90156

Perkins

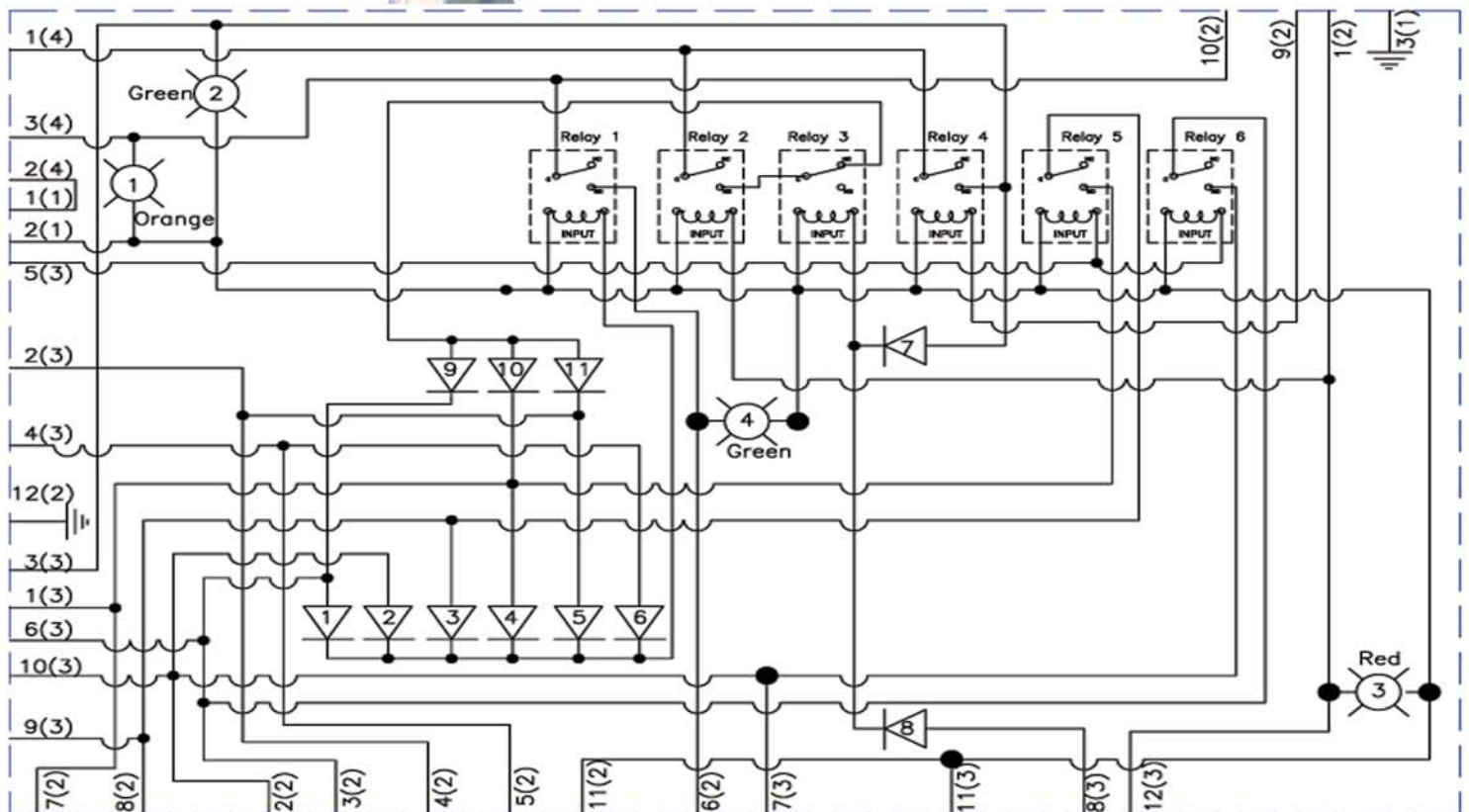
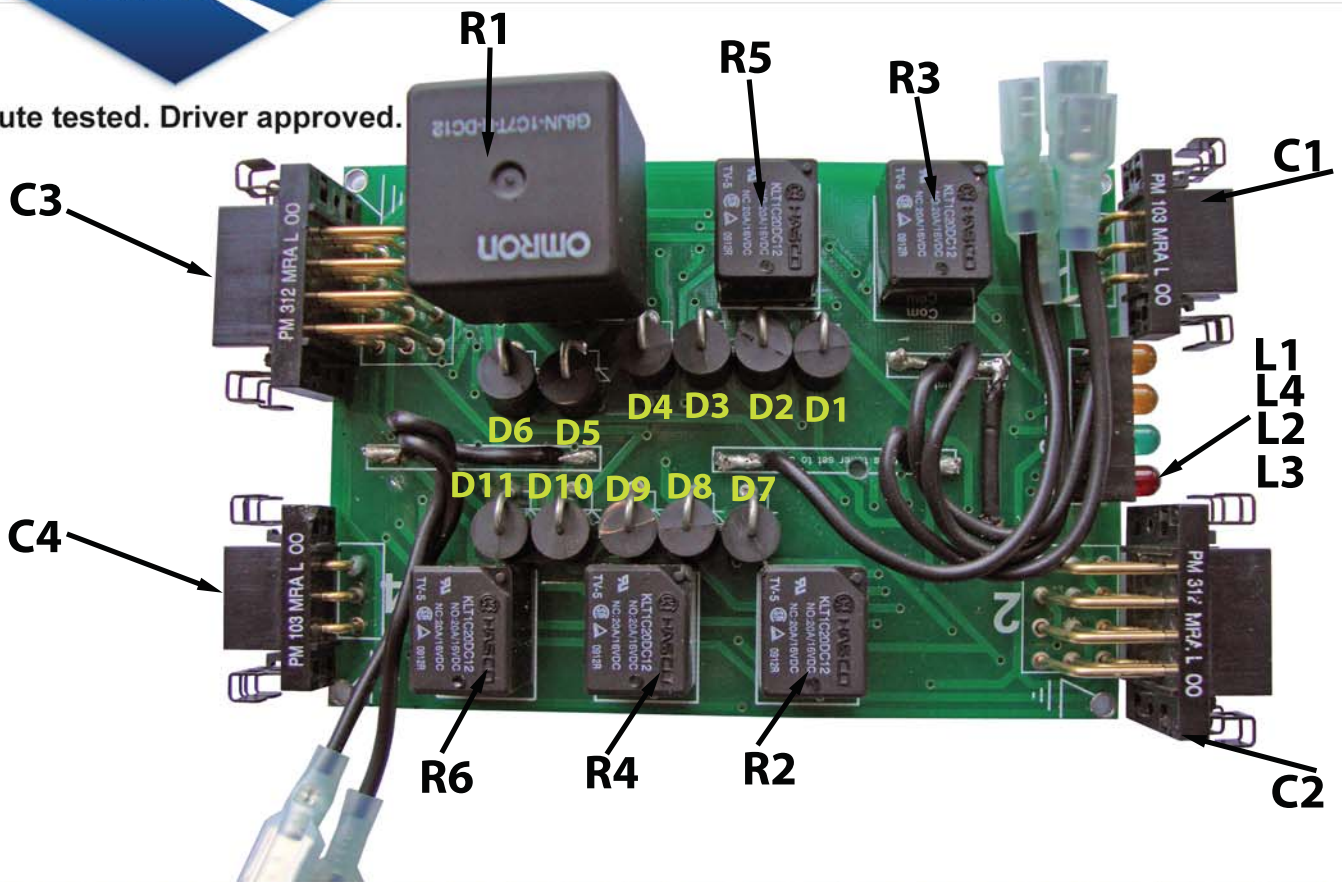
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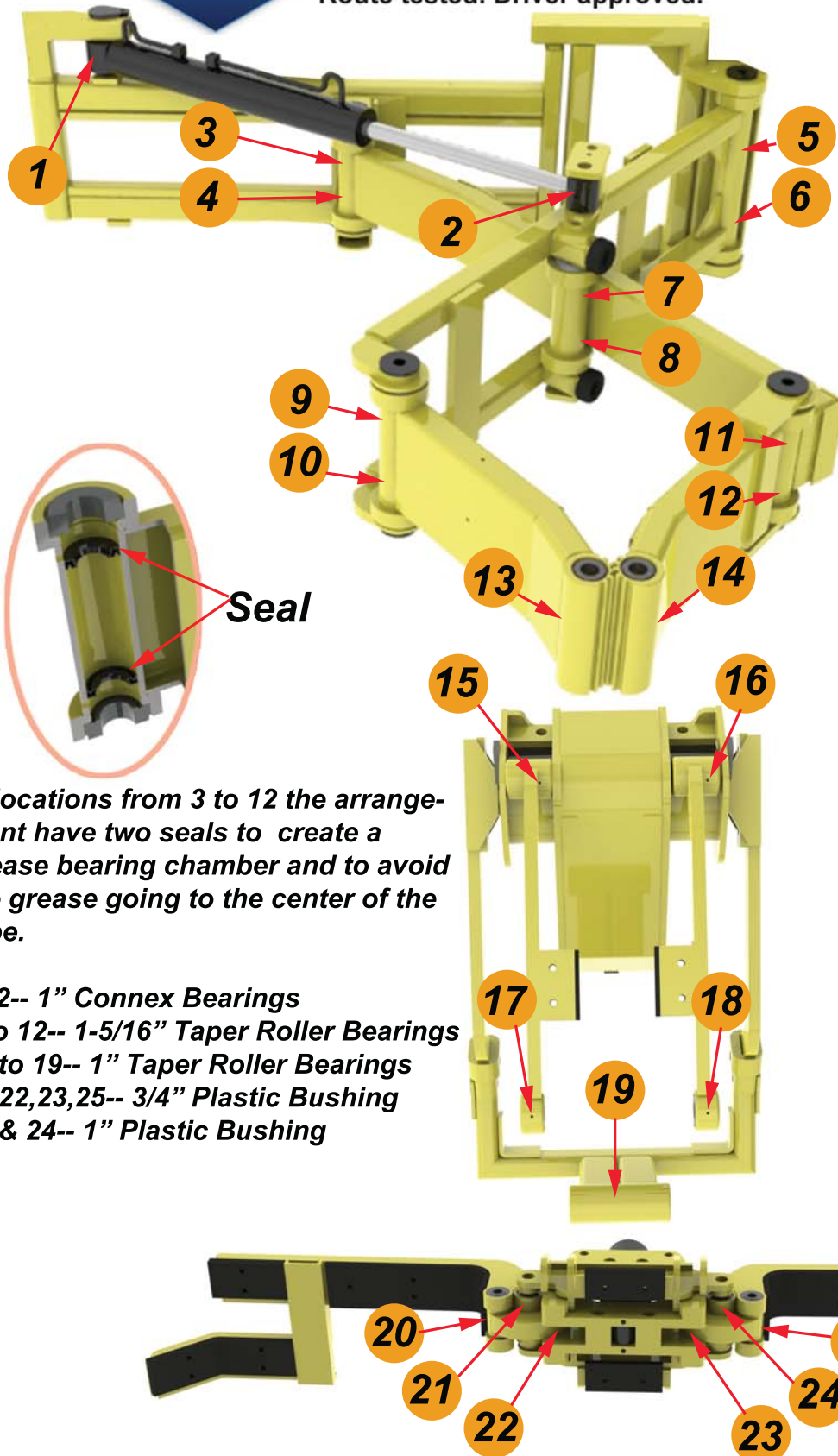
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# Preventative Maintenance-Grease

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*There are 19 points requiring greasing on the PAC. Greasing is recommended monthly, or as needed. There are 6 points where grease is not really a must place to grease, because of the use of plastic bushing, however we still use greaser at those points.*

*The regularity of greasing can vary widely due to customer usage and weather/environment. Most are best accessed in the extended position. Each require just enough grease to flush out any contaminants that have built up inside the bearings. Standard shop grease in a pump-gun is recommended.*

*In locations from 3 to 12 the arrangement have two seals to create a grease bearing chamber and to avoid the grease going to the center of the tube.*

**1&2-- 1" Connex Bearings  
3 to 12-- 1-5/16" Taper Roller Bearings  
13 to 19-- 1" Taper Roller Bearings  
20,22,23,25-- 3/4" Plastic Bushing  
21 & 24-- 1" Plastic Bushing**



**Route tested. Driver approved.**

**Daily Check before beginning route:**

*Run the PAC system thru a couple complete cycles. Check that the unit moves correctly, that all functions respond as they should, and that there are no obviously loose or broken components. Note any dripping of hydraulic fluid, unusual sounds, or any other difficulty. Make the shop mechanic aware of any problems before going on route.*

**Weekly Check:**

*Check all hardware. Note that everything is tight, there are no loose or missing bolts, pads, nuts, or other components.*

**Monthly Check:**

*Grease all 25 grease points using the prior page as a grease location guide. Note any components that show signs of wear or evidence of being struck by another object. Parts that show excessive wear will need replacement or repair. Consider having spare parts available for parts that show signs of age. Commonly replaced parts include rubber pads, bolts, cylinder seal kits, bearings, etc.*

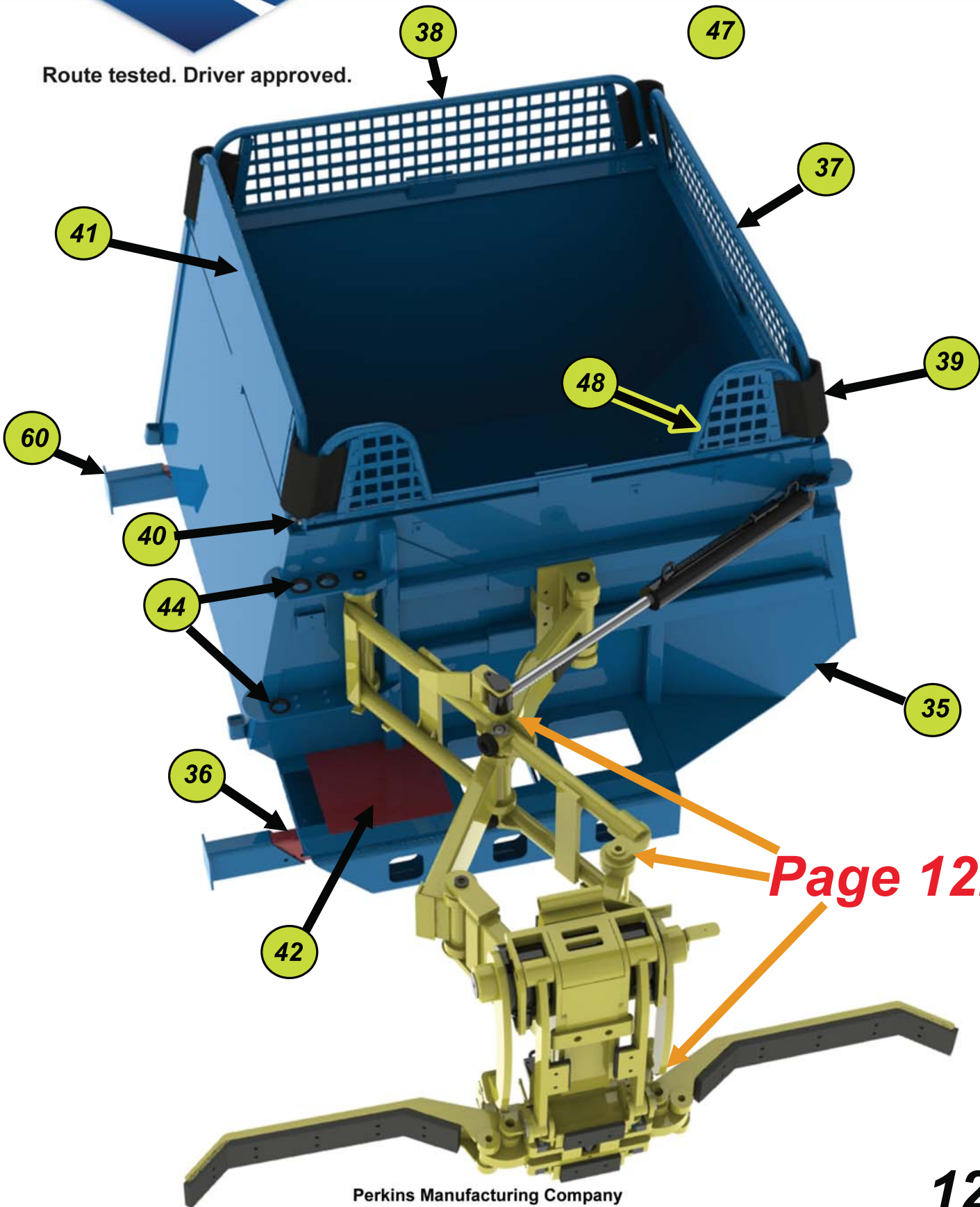
**NEW USER CHECK:**

*When placing the PAC into the hands of an individual who has not worked with the unit before, it is an excellent safety idea to replace any warning labels on the PAC unit that may have become worn or unreadable. All users should read and understand the manual and read thru the safety portion especially, before using the PAC.*



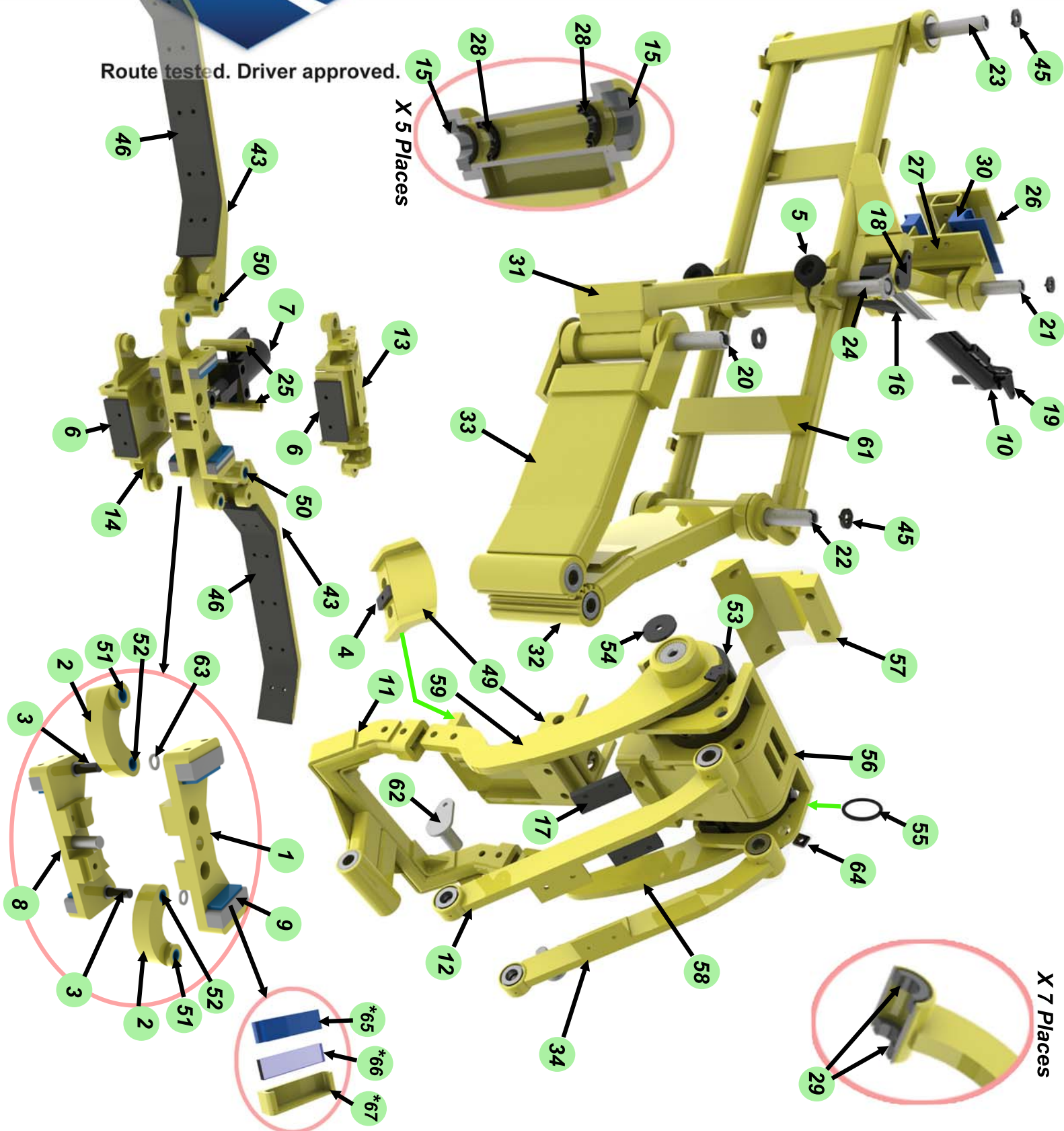
# Exploded View (Container)

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# PAC Parts Key

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ITEM	PART#	DESCRIPTION	Quantity per
1	A90086	Puller Bracket	1
2	A90091	Banana Link	2
3	A90099	Control Pin	2
4	A90168	Lock Bolt Plate	3
5	A90173	Rubber Bumper Small	2
6	A90188	Top Pad Rubber 3/4"	3
7	A90305	Grabbing Cylinder	1
8	A90319	Puller Weldment	1
9	A90372	Guide Pad Shoe	4
10	A90466	Hydraulic Cylinder	1
11	A90508	Driver Lifting Weldment	1
12	A90509	RH Idler Weldment	1
13	A90510	Gripper Bracket Weldment	1
14	A90515	Lower Bracket	1
15	A90518	Tapered Roller Bearing	10
16	A90571	Front Rubber Pad	1
17	A90577	Back Rubber Pad	2
18	A90583	Cylinder Pin Small	1
19	A90584	Cylinder Pin large	1
20	A90587	1 5/16 x 10 1/4 Pin	1
21	A90588	1 5/16 x 11 5/8 Pin	1
22	A90589	1 5/16 x 12 1/4 Pin	1
23	A90590	1 5/16 x 17 3/8 Pin	1
24	A90591	1 5/16 x 12 3/4 Pin	1
25	A90593	Round Spacer Tube	2
26	A90599	Slide Back Plate	1
27	A90602	Slider Bracket Weldment	1
28	A90608	U Cup Seal	10
29	A90622	Tapered Roller Bearing	14
30	A90623	Nylatron GSM Blue Slide	2
31	A90628	Inside Tube Weldment	1
32	A90630	Front Tube LH Weldment	1
33	A90631	Front Tube RH Weldment	1
34	A90646	LH Idler Weldment	1





# PAC Parts Key

ACCESSORIES | AUTOMATED SYSTEMS | HYDRAULIC LIFTERS | INDUSTRIAL LIFTERS | ACCESSORIES

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ITEM	PART#	DESCRIPTION	Quantity per
35	A90649	Automated Container Weldment	1
36	A90663	Spacer Tube Weldment	2
37	A90664	Sidewind Weldment	1
38	A90665	Frontwind Weldment	1
39	A90671	Corner Rubber	4
40	A90678	Holding Pin	8
41	A90686	Backwind Weldment	1
42	A90698	Valve cover plate	1
43	A90716	Gripper weldment	2
44	A90719	Rubber grommet	5
45	A90722	Retainer w/Lock disc	8
46	A90725	Rubber grippers pad	2
47	A90729	Center flat bar	8
48	A90731	Sidewind weldment	1
49	A90734	Lower Mount Bracket Weldment	1
50	A90775	Plastic Bushing LG.	2
51	A90776	Plastic Bushing Med.	2
52	A90777	Plastic Bushing Sm.	2
53	A90780	45K Actuator	1
54	A90780-4	RETAINING DISC	2
55	A90780-6	EXTERNAL O-RING SEAL	2
56	A90785	Mounting Front	1
57	A90790	Mounting Back	1
58	A90792	LH Driver Arm Weldment	1
59	A90793	RH Driver Arm Weldment	1
60	A90830	Adjustable Bumper	2
61	A90833	Outside Tubes Weldment	1
62	D69434	SHORT PINLOCK	2
63	D72037	SPACER 3/4 ID x 1-1/8 x .125	4
64	DC4288	Lock Plate	2
65	*A90394	Plastic Shoe	4
66	*A90395	Rubber Shoe	4
67	*A90376	Steel Shoe	4

\*Part of item 9 and can be sold separately.

## 13b

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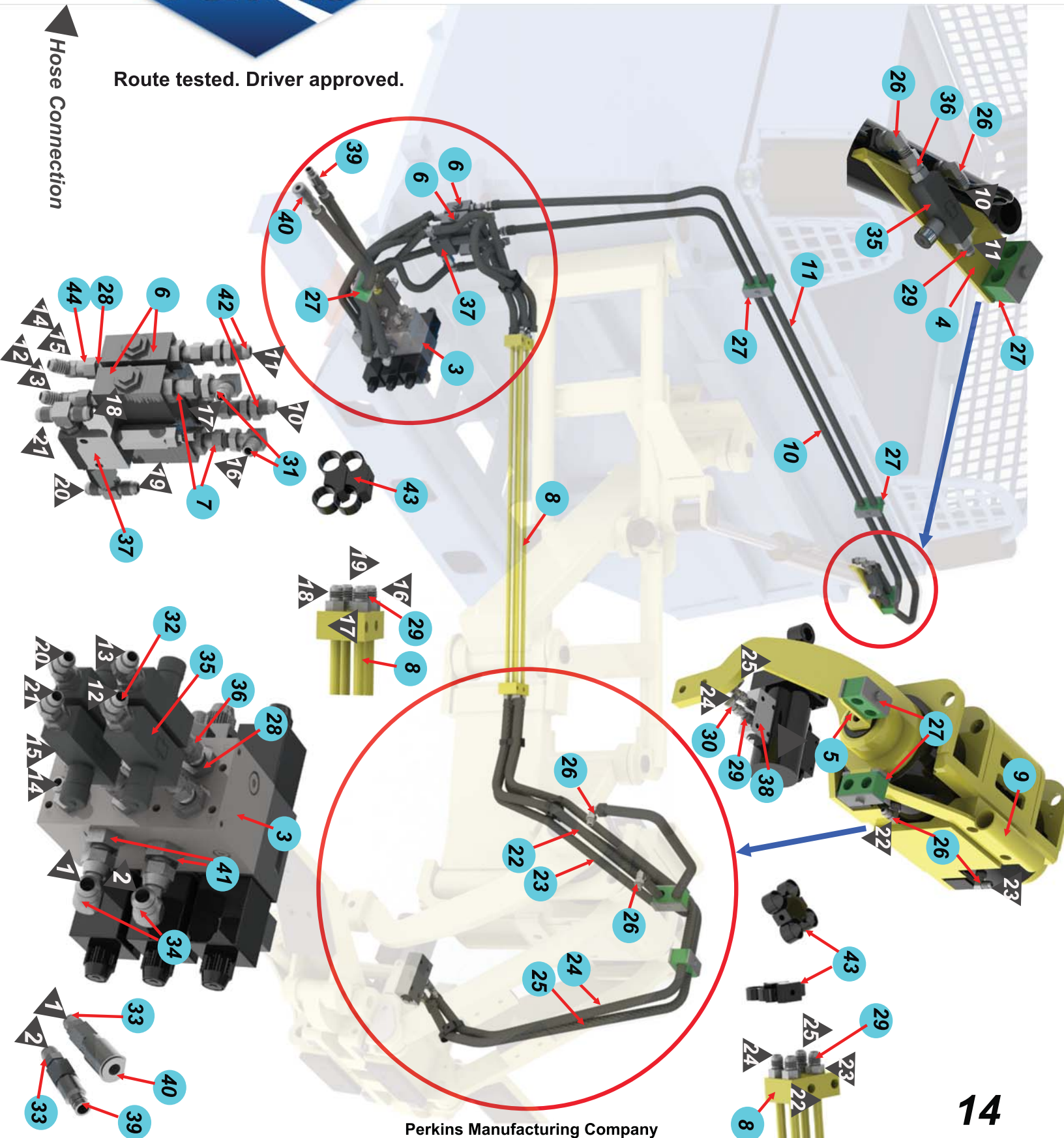
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Hose Connection



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# PAC Hydraulics List

ACCESSORIES | AUTOMATED SYSTEMS | HYDRAULIC LIFTERS | INDUSTRIAL LIFTERS | ACCESSORIES

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	PART #	Description	Qty.
1	A90130	#8 Hose Assembly 45" w/nylon a	1
2	A90130	#8 Hose Assembly 45" w/nylon a	1
3	A90270	3 stage Solenoid with Pressure	1
4	A90699	Clamp plate	1
5	A90700	Swivel clamp plate	1
6	A90757	Double P.O. Check #8	2
7	A90758	Adapter str. #8MO-#6FT	2
8	A90858	Hydraulic Tube	4
9	A90860	Hose Bracket Weldment	1
10	A90877-103	Hose Assembly 103" LG.	1
11	A90877-103	Hose Assembly 103" LG.	1
12	A90877-13	Hose Assembly 13" LG.	1
13	A90877-13	Hose Assembly 13" LG.	1
14	A90877-18	Hose Assembly 18" LG.	1
15	A90877-18	Hose Assembly 18" LG.	1
16	A90877-22	Hose Assembly 22" LG.	1
17	A90877-22	Hose Assembly 22" LG.	1
18	A90877-30	Hose Assembly 30" LG.	1
19	A90877-30	Hose Assembly 30" LG.	1
20	A90877-35	Hose Assembly 35" LG.	1
21	A90877-35	Hose Assembly 35" LG.	1
22	A90877-42	Hose Assembly 42" LG.	1
23	A90877-60	Hose Assembly 60" LG.	1
24	A90877-68	Hose Assembly 68" LG.	1
25	A90877-68	Hose Assembly 68" LG.	1
26	D63011	ELBOW 90 #6MT-#6MO	4
27	D63014	Hose Clamp #8	6
28	D63061	ADAPTER #6MT-#8MO	10
29	D63074	ADAPTER #6MT-#6MO	11
30	D63106	ELBOW 90 6MT-6FT	2
31	D63124	Bull nose Adapter #6 elbow 90	2
32	D63147	ELBOW 45 6MT-6MO	4
33	D63425	ADAPTER #8MT-#6MP	2
34	D63532	ELBOW 90 #8FT-#8MT	2
35	D63575P	Adjustable Flow Control	5
36	D63597	ADAPTER #6MO-#6FT	5
37	D63614	Relief Valve Assembly	1
38	D63615	Cylinder Check Valve	1
39	D63728	COUPLING - MALE - HYD.	1
40	D63729	COUPLING FEMALE-HYD.	1
41	D65761	Adapter Straight #10MO - #8JIC	2
42	D68081	Bull nose Adapter str. #6	2
43	D72159	PLASTIC DUAL CLAMP TIE	6
44	D63581	Elbow Swivel 45 #6MT- #6FT	4

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# Joystick Assembly Exploded View

A90137Rev A

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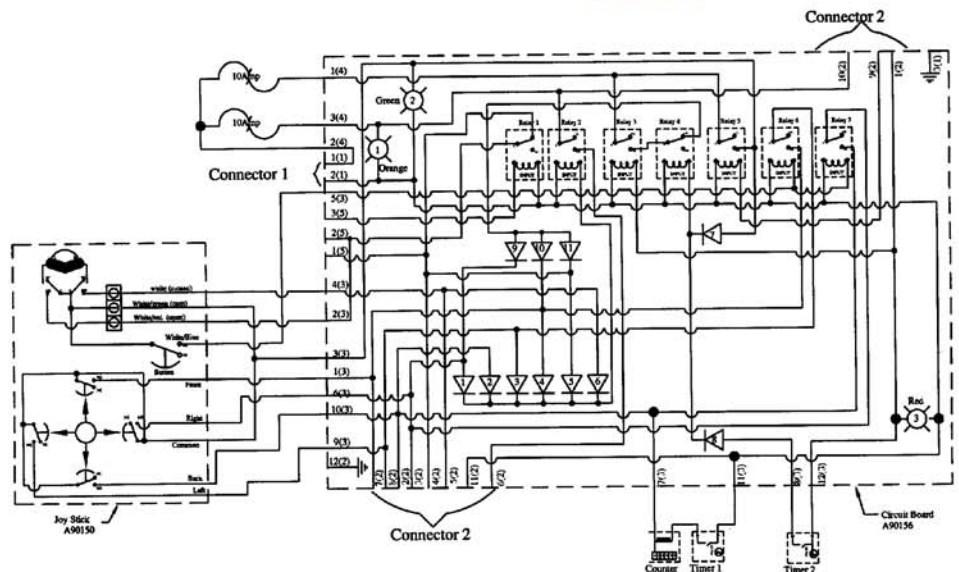
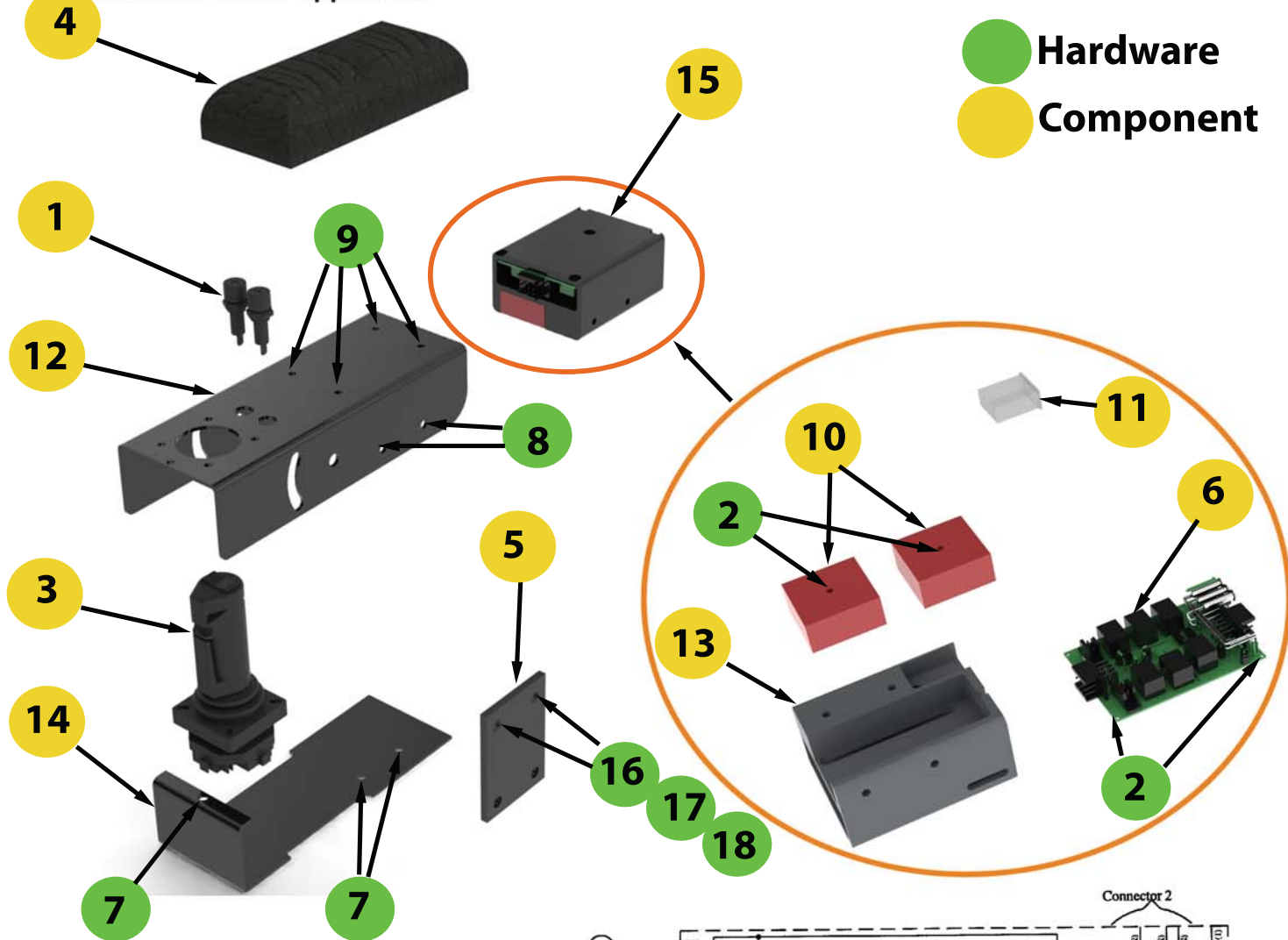
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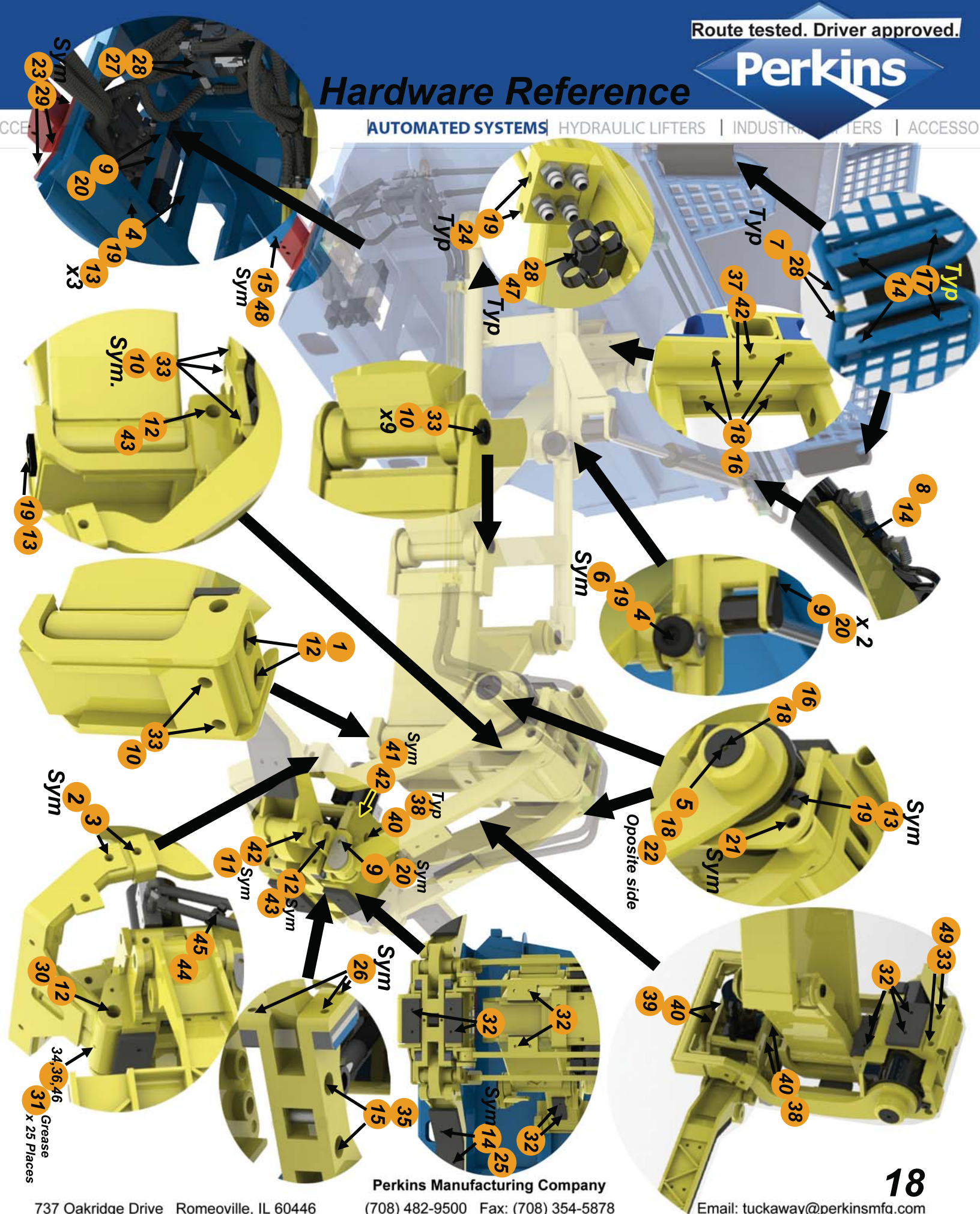
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# Hardware Reference

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# PAC Hardware List

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	Part#	Description	Qty.
1	A90614	Bolt HHCS 1-8 x 11"	2
2	A90640	Bolt HHCS 5/8-11x2.75" lg	4
3	D62001	LOCKNUT 5/8-11	4
4	D62004	FLATWASHER 3/8"	5
5	D62008	SAE FLATWASHER 1/2"	1
6	D62020	BOLT HHCS 3/8-16 X 1 1/4	2
7	D62036	BOLT HHCS 1/4-20 X 1-1/2"	8
8	D62042	BOLT HHCS 3/8-16 X 2	1
9	D62053	SPLIT LOCKWASHER 5/16"	4
10	D62054	BOLT HHCS 3/4-10 X 1 1/2	19
11	D62069	BOLT HHCS 3/4-10 x 6	2
12	D62071	LOCKNUT 1-8	5
13	D62079	BOLT HHCS 3/8-16 X 1	6
14	D62080	LOCK NUT 3/8-16	37
15	D62081	LOCKNUT 1/2-13	2
16	D62082	BOLT HHCS 1/2-13 X 1 1/2	5
17	D62085	BOLT HHCS 3/8-16 x 1 3/4	16
18	D62105	SPLIT LOCKWASHER 1/2"	6
19	D62106	SPLIT LOCKWASHER 3/8"	12
20	D62113	BOLT HHCS 5/16-18 X 3/4	4
21	D62401	Bolt HHCS 1"-8 x 4 1/2"	2
22	D62405	BOLT HHCS 1/2-13 X 2,	1
23	D62410	BOLT HHCS 5/8-11 X 1 1/2	8
24	D62412	BOLT HHCS 3/8-16 X 2-1/4"	4
25	D62420	BOLT FHCS 3/8-16 X 1 1/2	20
26	D62430	SET SCREW 1/2-13 X 3/4 LG	8
27	D62449	BOLT HHCS 1/4-20 X 3"	2
28	D62457	LOCKNUT 1/4-20	13
29	D62458	SPLIT LOCKWASHER 5/8"	8
30	D62491	BOLT HHCS 1-8 X 8 1/2"	1
31	D63029	PLASTIC GREASE ZERK CAP	25
32	D72005	BOLT FHCS 3/8-16 X 1	14
33	D72014	SPLIT LOCKWASHER 3/4"	19
34	D72028	90 DEG GREASE ZERK 1/4-28	4
35	D72042	BOLT HHCS 1/2-13 X 2 1/2	2
36	D72058	45° Grease Zerc 1/4-28	4
37	D72063	BOLT HHCS 3/4-10 X 2	2
38	D72071	BOLT HHCS 1-8 x 2	2
39	D72071-1	Bolt HHCS 1-8 x 2	2
40	D72072	SPLIT LOCKWASHER 1"	4
41	D72081	Bolt HHCS 3/4-10 x 7-1/2"	2
42	D72132	LOCKNUT 3/4-10	6
43	D72135	BOLT HHCS 1-8 X 7.5"	2
44	D72146	BOLT SHCS #10-24 X 1 1/4	1
45	D72150	Nylock Lock nut #10-24	1
46	Z102	GREASE ZERK-STRAIGHT 1/4-28	17

Qty.

3 2 2

Description

Bolt HHCS 1/4-20 x 2-1/4"  
Bolt FHCS 1/2-13 x 3-1/2"  
Bolt HHCS 3/4-10 x 3-1/2"

Part#

D62066  
D62078  
D62473

Item

47  
48  
49

19

# Electrical Exploded View (A90310)

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FUSES

- | NO | switch         |
|----|----------------|
| 1  | Black w/strip  |
| 2  | Blue w/strip   |
| 3  | White          |
| 4  | Green w/strip  |
| 5  | Green w/strip  |
| 6  | Orange w/strip |
| 7  | Blue           |
| 8  | Red w/strip    |
| 9  | Red            |
| 10 | Black          |
| 11 | Green          |
| 12 | Ground         |

**A90137**

**A90262**

**A90331**

**A90332**

**A90190KIT**

**A90261**

**A90258**

**A90270**  
**A90264**  
**A90356**

**SOLENOID PLUGS (6)**

**PLUG ON FORK ARM**

**PLUG FROM CONTAINER**

**ACTIVATE JOYSTICK TO LIGHT UP SOLENOID PLUGS.**

**NOT PART OF THIS KIT. PART OF PAC**

**USE LIGHT ON JOYSTICK WITH LIFTER OPERATION**

**RETRACT**

**GRAB**

**UP**

**DOWN**

**EXTEND**

**RELEASE**

**SOLENOID VALVE BLOCK**

**DIVERTER VALVE**

**SOLENOID ON DIVERTER VALVE**

**ATTACH POWER CABLE INTO MAIN FUSE BOX, GROUND WIRE TO CHASSIS**

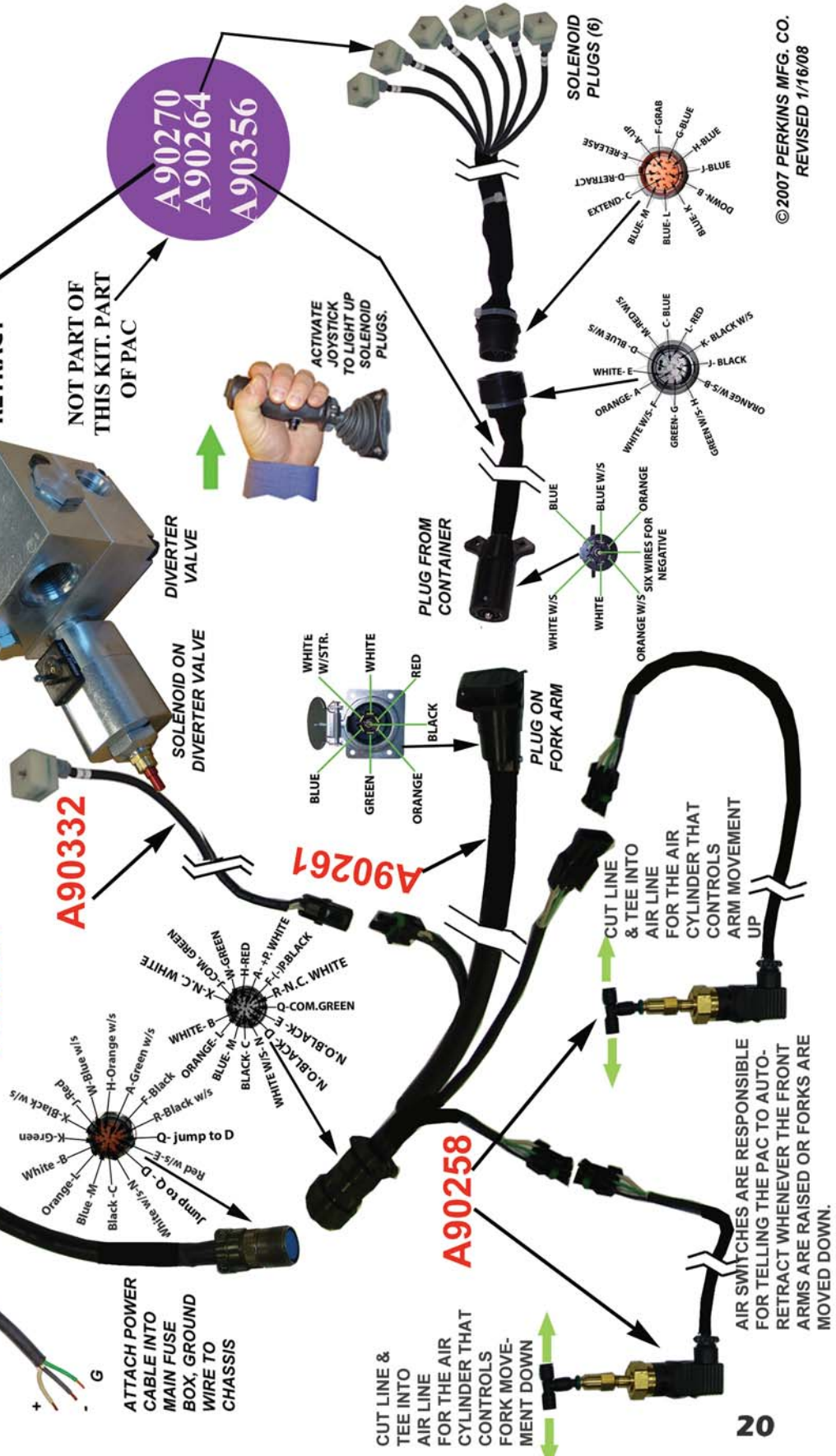
**Function activated**

Function	Color
AUTO-RETRACT ACTIVATED	Red
SYSTEM POWER ON	Orange
JOYSTICK POWER	Green

**Function activated**

Function	Color
Green	Ground
Black	Negative
White	Positive

**ATTACH POWER CABLE INTO MAIN FUSE BOX, GROUND WIRE TO CHASSIS**



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REVISED 1/16/08



Perkins

# Troubleshooting

ACCESSORIES | AUTOMATED SYSTEMS | HYDRAULIC LIFTERS | INDUSTRIAL LIFTERS | ACCESSORIES

**Route tested. Driver approved.**

**WARNING:** parts in movement could cause serious injury or death, please make sure to disconnect container from truck for any electrical testing to the equipment and only allow qualified personnel perform testing.

Turn Engine off and remove the key when servicing, use proper tools to secure the unit in the desired position to perform the required maintenance.

The PAC doesn't operate:

1. Are the fuses OK?
  - Yes. Skip
  - No. Replace fuses
2. On back of the joystick, is the orange light on?
  - Yes. Skip
  - No. check fuses and power source 12vdc for proper feeding
3. On back of the joy stick, is the green light on?
  - Yes. Skip
  - No. check fuses and pressure switch for auto retract activation, power must be present between negative black and red w/strip, if not circuit could be open due to a mal function of the pressure switch or air could be trapped in the switch activating it (pressure switch is activated only when arms are moved up and/or forks are lowered down at this time red light is turn on and green shut off only for 1.5sec after such should come back to normal. Circuit is set to power up joy stick only when auto retract is off, when auto retract is activated, power to joystick cuts off and manual functions disabled this is indicated with the green light for joystick power on and red light for joystick power off and auto retraction on) also check connector from fuses to circuit board are connected properly or for any loose wires.
4. When operating any joystick functions, do the connector coils on the stock valve light on?
  - Yes. Skip
  - No. check that the signal cable going from joystick to the forks is properly connected, check with the electrical circuit exploded view (provided in the manual) for proper location of the color code wires connected to the joystick as well to the connector at the other end, mainly for the negative black been properly connected. Check container wire harness for proper connection with wire harness on the truck; with the container hamess disconnected, check for power at the end of the harness on the truck, if there is no power, there is a faulty harness on truck if there is power; we have a faulty harness on container.
  - Some light up and some not. Inspect wire harnesses for proper connection; also check the joystick connections for improper or loose connection.
5. Is there oil pressure?
  - Yes. Skip
  - No. check other hydraulic functions and make sure they are properly working, if not, there might be a problem with main hydraulic system,



**Route tested. Driver approved.**

- if properly working, check power between negative black and green w/strips, run a function you must read 12vdc between this two wires, if not, check wire harness connection if properly connected, check power at the plug for the diverter valve, the same reading you must have every time you run a function if not you have faulty wire harness between main wire harness and diverter valve, if properly working, you either have a faulty coil or stuck spool in the diverter valve; remove coil from diverter and with a screw driver inside the coil, energized the coil applying 12vdc, the magnet will pull the screw driver then remove the diverter valve and flushed thoroughly, make sure all the spools inside are moving freely.

**NOTES:**

The timing for the auto retract to switch off, can be set anywhere between .25 to 5 sec. factory settings are 1.5sec.



## Manufacturing Company

### Perkins Return Policy:

If, within 30 days of receipt of the item(s), a customer would like to return an unused item(s), the customer may contact Perkins for a return authorization (RGA#). The item must be shipped within 2 weeks of the return authorization. The customer will pay the return freight and a 15% restocking fee on the return(s). The item must be in new / unused condition, and any damage or clean up required to restore the product to resalable condition will be charged to the customer.

Packages received without an RGA# on the packaging identifying who the product is from may be discarded or refused and credit may not be issued. Always make sure the RGA# is displayed on the box and on any included paperwork.

If Perkins shipped the wrong item(s), the incorrect item(s) may be returned within 30 days of receipt of the item by contacting Perkins for a return authorization (RGA#). The item(s) must be shipped within 2 weeks of the return authorization. Perkins will pay the return freight and waive the restocking fee.

If the return results in a net debit, the customer will be invoiced. If the return results in a net credit, the credit can be used against the replacement item(s) or a future purchase.

### Special Notes:

**Perkins does offer customized solutions and due to the customization of these items, Perkins cannot accept returns or refunds on anything custom ordered. This includes industrial units, cane lifters, and other items which have been specially fabricated to the customer's specifications. Unfortunately returns on these products cannot be accepted.**

## Perkins Manufacturing One-Year Limited Warranty

PERKINS MANUFACTURING COMPANY warrants its products to be free from defects in material and workmanship under normal use for a period of **one (1) year** from the date of delivery to the first purchaser.

Any claim under this warranty must be handled in accordance with PERKINS' warranty procedure.

This warranty is expressly limited to the repair or replacement in PERKINS' discretion of any component or part of any PERKINS product unit manufactured by PERKINS which is brought to PERKINS attention promptly after discovery and is proven to PERKINS' satisfaction to have been defective in material or workmanship.

This warranty shall not obligate PERKINS to bear the cost of labor or transportation charges in connection with the repair or replacement of defective parts, and it shall not apply to a product upon which repairs, or alterations have been made unless authorized in writing by PERKINS.

Any damage, wear & tear or improper use, substitution of parts not approved by PERKINS, modifications other than those done by PERKINS or as authorized in writing by PERKINS, or any alteration or repair by others in such a manner which, in PERKINS' judgment, materially and adversely affects the product shall void this warranty. Operation at an actuator cycle time of less than six seconds shall void this warranty. Wear items used for anti-friction purposes are not covered by this warranty.

Periodic maintenance is required in order to maintain warranty but is not covered by warranty. Please refer to the maintenance section of the service manual for instructions.

PERKINS makes no warranty of products manufactured by others and supplied by PERKINS, the same being subject to warranties, if any, of their respective manufacturers.

PERKINS shall not assume any liability for any incidental, consequential, direct, or indirect damage, loss or delay of any kind, including, but not limited to, the loss of profits, product or downtime.

PERKINS warrants any service parts it may sell for a period of ninety (90) day from the date of delivery for replacement only. The item being replaced must be returned to PERKINS for evaluation upon its request. The cost of labor to replace such part shall be the responsibility of the owner. PERKINS does not warrant any used parts.

PERKINS, whose policy is one of continuous improvement, reserves the right to improve its products through changes in design or materials as it may deem desirable without obligation to incorporate such changes in products of prior manufacture.

**THE ABOVE WARRANTY SUPERCEDES AND IS IN LIEU OF ALL OTHER EXPRESS OR IMPLIED WARRANTIES INCLUDING, WITHOUT LIMITING, ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. NO EMPLOYEE OR ANY OTHER REPRESENTATIVE OF PERKINS IS AUTHORIZED TO CHANGE THIS WARRANTY IN ANY WAY OR TO GRANT ANY OTHER WARRANTY. THESE TERMS WILL BE CONSTRUED ACCORDING TO THE LAWS OF THE STATE OF ILLINOIS WITHOUT REGARD TO ITS CONFLICTS OF LAWS PROVISIONS. ALL ACTIONS OR PROCEEDINGS IN ANY WAY, MANNER OR RESPECT ARISING OUT OF OR RELATED TO THE GOODS WILL BE LITIGATED ONLY IN STATE OR FEDERAL COURTS, AS APPROPRIATE, LOCATED IN WILL COUNTY, ILLINOIS. BUYER CONSENTS AND SUBMITS TO JURISDICTION IN THE STATE OF ILLINOIS AND WAIVES ANY RIGHT TO TRANSFER THE VENUE OF ANY SUCH ACTION OR PROCEEDING.**