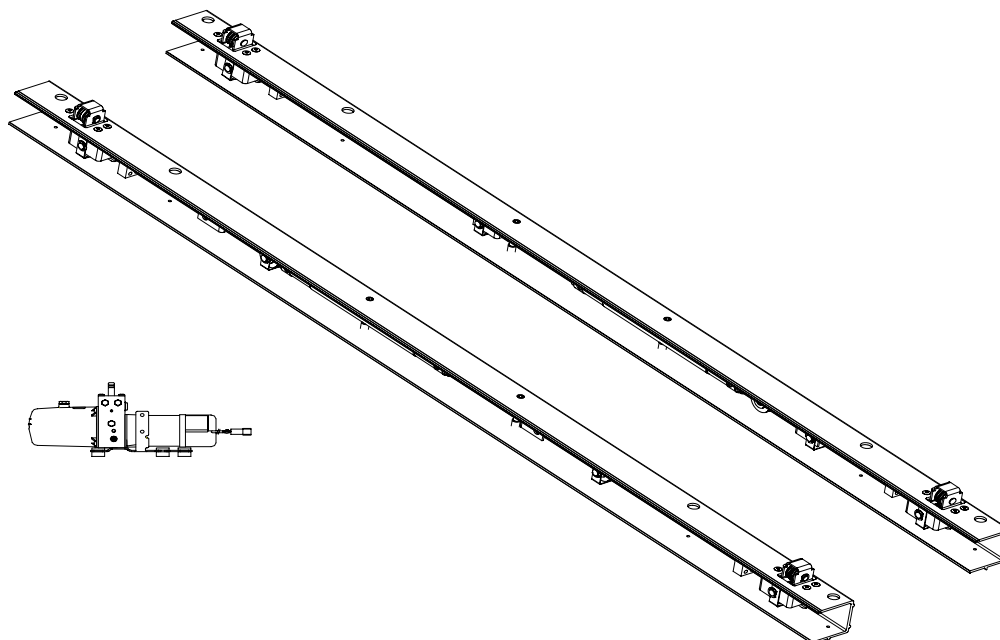




Parts & Service Manual Power Gear H-point Mini Hydraulic Slideout System



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PREVENTIVE MAINTENANCE

WARNING

The hydraulic slide out system is designed as a slide out system only. Use of the hydraulic slide out system for any other reason or function could result in damage to the coach and/or cause serious injury or even death.

Check that potential parking locations are clear of obstructions, either permanent or temporary, before operation.

Keep people clear of coach while operating the slide out system.

Never expose hands or other parts of the body near hydraulic leaks. High pressure oil leaks may cut and penetrate the skin causing serious injury.

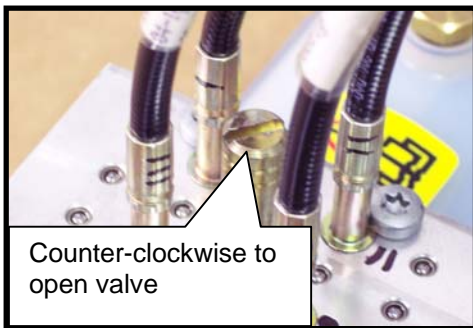
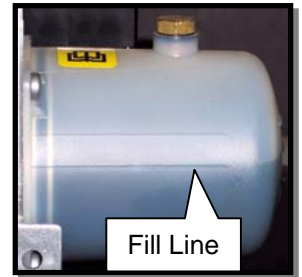
Park the coach on a reasonably solid and level surface to optimize the slide out system function.

Read, study, and understand this manual before operating the slide out system.

Your Power Gear slide-out system has been designed to require very little maintenance. To ensure the long life of your slide-out system, read and follow these few simple procedures:

Caution: Do not work on your slide out system unless the battery is disconnected.

1. There is no requirement to change the Pentosyn hydraulic fluid. Pentosyn® CHF-11S is also used as a power steering fluid in the following automobiles: Volkswagen, Mercedes, Audi, Peugeot, Saab, Jaguar, and some models of Daimler-Chrysler. Pentosyn® CHF-11S is recommended due to excellent performance in extreme heat and cold. It also has a long life and doesn't thicken when the RV is in storage.
2. Check the fluid level periodically. Under normal usage, fluid should not have to be added. Immediately investigate and correct any leaks, as the system is designed to be leak-tight. Fluid level may be checked with room in any position.
3. Inspect and clean all hydraulic pump electrical connections every 12 months.
4. Be sure that slide room is free of obstacles before attempting to open or close the room.



Your Power Gear slide system is equipped with a **manual override** that allows you to retract the room in the event of a loss of power.

NOTE: If the room does not move when the switch is pressed, check the following:

- Make sure the room slide system is turned on
- Battery is fully charged and connected
- If pump runs but room does not move, be sure that the manual override valve on top of pump is closed (turn clockwise until valve stops to close valve).

NOTE:

The room slide system cannot be manually pushed out using this method. It can only be pushed in so the RV can be taken to the nearest service center.

After the previous items have been checked and the room still does not move when the room slide switch is pressed, follow these simple steps to manually override your slide-out room.

1. Turn 'OFF' the on/off switch.
2. Locate the room slide power unit
3. Locate manual override valve on top of pump block. Open the manual override valve by turning it counter-clockwise with a flat blade screwdriver.
4. The room is now free to move. With the assistance of several people, push room in.
5. Tighten the manual override valve with a flat blade screwdriver. Take to your authorized dealer for service.

MANUAL OVERRIDE

H-point extrusion (77.5")

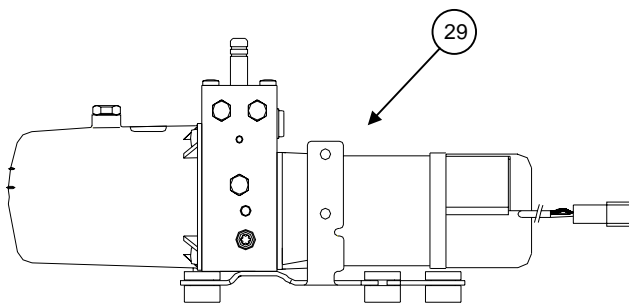
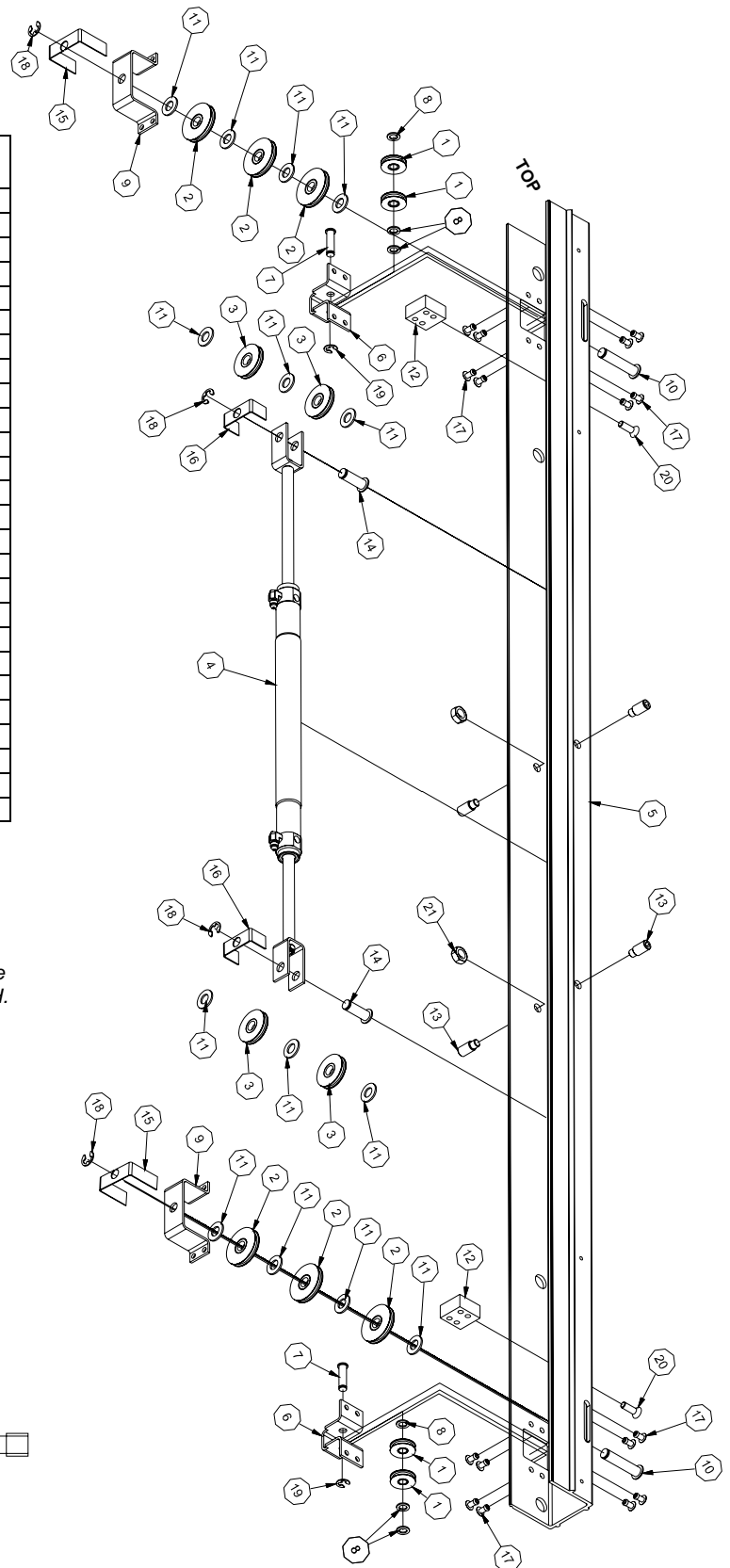
| Item | Part Number | Qty | Description |
|------|-------------|-----|----------------------------------------|
| 1 | 600251 | 4 | Pulley assy. 1.375" |
| 2 | 600244 | 6 | Pulley assy. 2.0" |
| 3 | 600242 | 4 | Pulley assy. 1.75" |
| 4 | 130-1275 | 1 | Cylinder assy 4pt 12" stroke |
| 5 | 600293 | 1 | Extrusion, side RH |
| | 600292 | 1 | Extrusion, side LH |
| 6 | 600286 | 2 | Bracket, outer pulley |
| 7 | 180-1082 | 2 | Pin, pulley 3/8 x 1.25" |
| 8 | 160-1070 | 6 | Washer, 3/8" |
| 9 | 600238 | 2 | Bracket, pulley |
| 10 | 180-1079 | 2 | Pin, pulley 1/2 x 2.125" |
| 11 | 160-1069 | 14 | Washer, 1/2" |
| 12 | 600276 | 2 | Block, cable adjustment |
| 13 | 150-1510 | 4 | Set screw, 1/2 - 20 x 1.125" |
| 14 | 180-1078 | 2 | Pin, pulley 1/2 x 1.3" |
| 15 | 600300 | 2 | Bracket, cable retaining 2.0" |
| 16 | 600301 | 2 | Bracket, cable retaining 1.84" |
| 17 | 150-1518 | 16 | Rivet, pop 1/4 x .25" |
| 18 | 170-1026 | 4 | E-clip .5" |
| 19 | 170-1031 | 2 | E-clip .375" |
| 20 | 150-1517 | 2 | Screw FHSC, 5/16 - 24 x 1.0" |
| 21 | 15-1364 | 2 | Nut jam 1/2 - 20 |
| 1-21 | 600289 | 1 | Assy, extrusion complete (77.5") RH |
| 1-21 | 600288 | 1 | Assy, extrusion complete (77.5") LH |
| * | 600273 | 2 | Extrusion cover, 77.5" (Not shown) |
| 29 | 130-1223 | 1 | Mini-hydraulic pump, .5 liter capacity |

*Part not shown

Note:

LH and RH refers to the extrusions from inside the coach, not the outside.

Only one extrusion shown. Other extrusion is mirror image. All parts are the same for left or right hand extrusion unless specifically marked as LH or RH.



H-point extrusion (75.75")

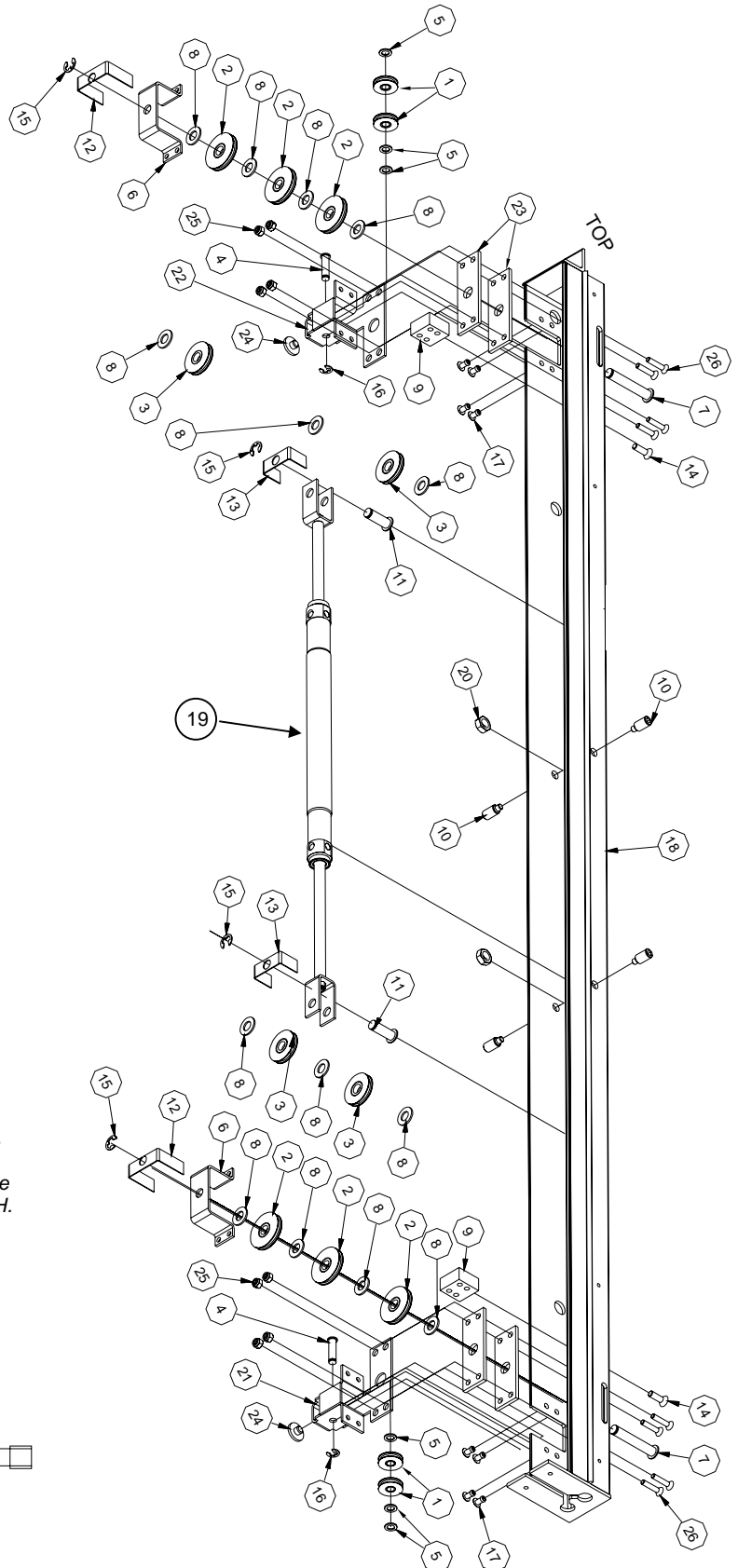
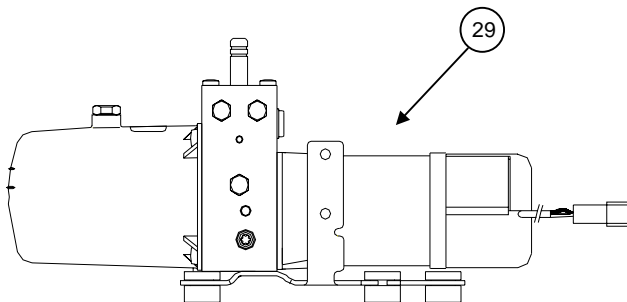
| Item | Part Number | Qty | Description |
|------|-------------|-----|----------------------------------------|
| 1 | 600251 | 4 | Pulley assy. 1.375" |
| 2 | 600244 | 6 | Pulley assy. 2.0" |
| 3 | 600242 | 4 | Pulley assy. 1.75" |
| 4 | 180-1082 | 2 | Pin, pulley 3/8 x 1.25" |
| 5 | 160-1070 | 6 | Washer, .38" |
| 6 | 600238 | 2 | Bracket, pulley |
| 7 | 180-1087 | 2 | Pin, Pulley .5 x 2.725" |
| 8 | 160-1069 | 14 | Washer, 1/2" |
| 9 | 600276 | 2 | Block, cable adjustment |
| 10 | 150-1510 | 4 | Set screw, 1/2 -20 x 1.175" |
| 11 | 180-1078 | 2 | Pin, pulley 1/2 x 1.3" |
| 12 | 600300 | 2 | Bracket, cable retaining 2" |
| 13 | 600301 | 2 | Bracket, cable retaining 1.84" |
| 14 | 150-1517 | 2 | Screw FHSC, 5/16 - 24 x 1.0" |
| 15 | 170-1026 | 4 | E-clip .5" |
| 16 | 170-1031 | 2 | E-clip .375" |
| 17 | 150-1518 | 8 | 1/4 x .25 std pop rivet |
| 18 | 600270 | 1 | Extrusion assembly, RH |
| | 600269 | 1 | Extrusion assembly, LH |
| 19 | 130-1275 | 1 | Cylinder assy 4pt 12" stroke |
| 20 | 15-1364 | 2 | Nut, jam 1/2 - 20 |
| 21 | 600319 | 1 | Bracket pulley weld, LH |
| 22 | 600320 | 1 | Bracket pulley weld, RH |
| 23 | 600318 | 4 | Plate spacer |
| 24 | DN11879 | 2 | Wear pad, 1 x .4 black |
| 25 | 15-1006 | 8 | Nylock nut, UNC 1/4-20 |
| 26 | 150-1525 | 8 | Screw FHSC, 1/4-20 x 1 1/4 |
| 1-26 | 600277 | 1 | Extrusion assy complete LH |
| 1-26 | 600278 | 1 | Extrusion assy complete RH |
| * | 600285 | 2 | Extrusion cover |
| 29 | 130-1223 | 1 | Mini-hydraulic pump, .5 liter capacity |
| ** | 14-1138 | 1 | Control harness |
| ** | 140-1197 | 1 | Wall switch |
| ** | 521279 | 1 | Relay control assy. |

*Part not shown
 **Part shown on page 6

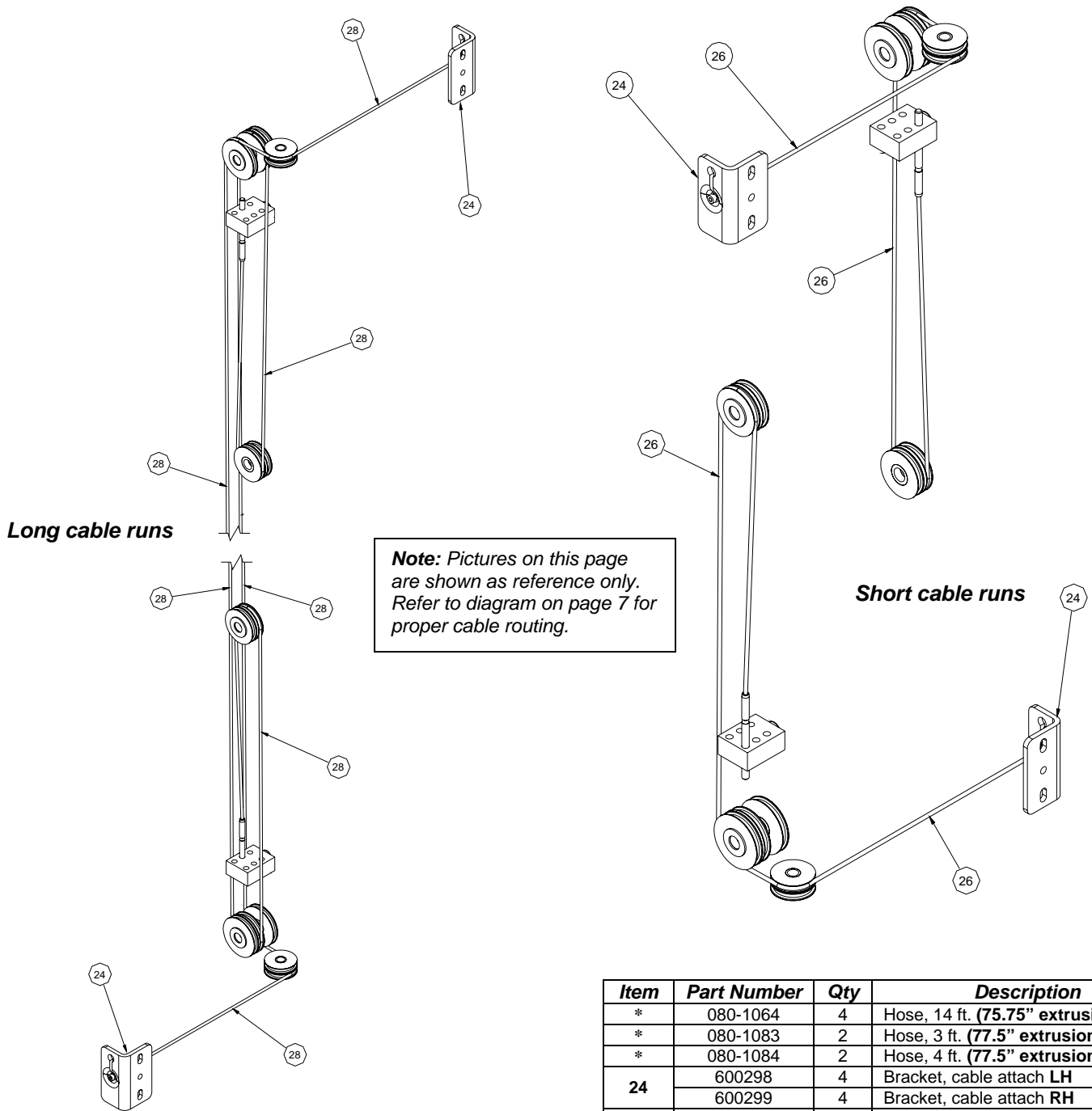
Note:

LH and RH refers to the extrusions from inside the coach, not the outside.

Only one extrusion shown. Other extrusion is mirror image. All parts are the same for left or right hand extrusion unless specifically marked as LH or RH.



PARTS



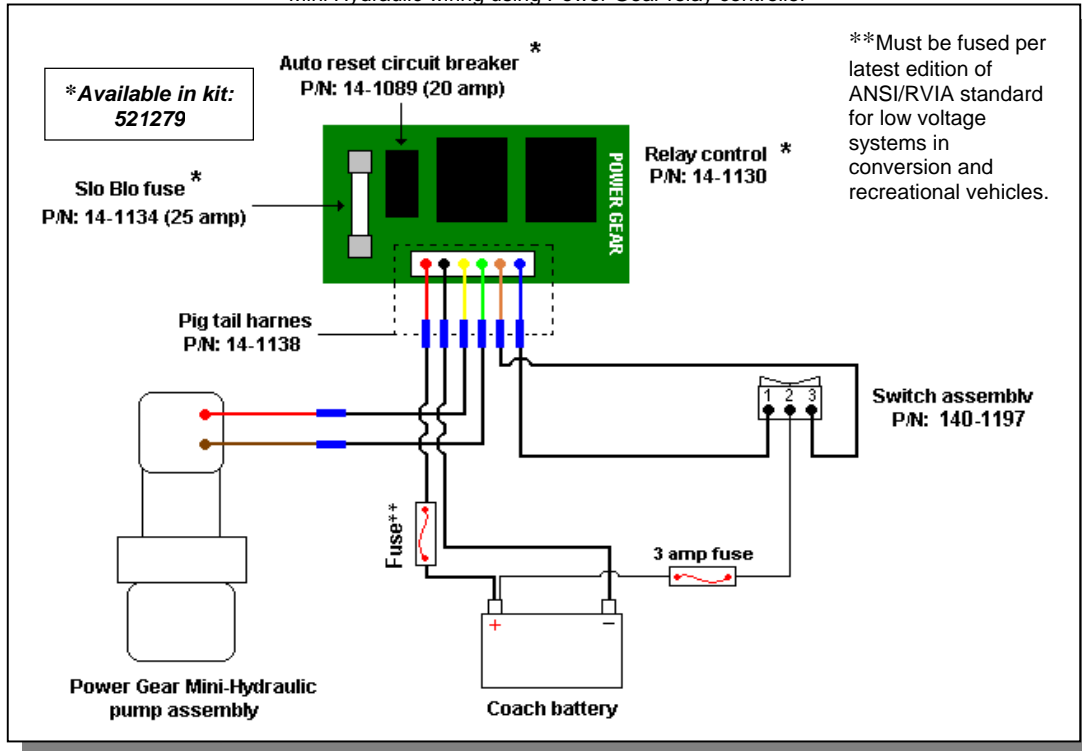
| Item | Part Number | Qty | Description |
|------|-------------|-----|-------------------------------------|
| * | 080-1064 | 4 | Hose, 14 ft. (75.75" extrusion) |
| * | 080-1083 | 2 | Hose, 3 ft. (77.5" extrusion) |
| * | 080-1084 | 2 | Hose, 4 ft. (77.5" extrusion) |
| 24 | 600298 | 4 | Bracket, cable attach LH |
| | 600299 | 4 | Bracket, cable attach RH |
| 26 | 080-1079 | 2 | Cable, 50.0 in. (75.75" extrusion) |
| | 080-1077 | 2 | Cable, 51.5 in. (77.5" extrusion) |
| 28 | 080-1080 | 2 | Cable, 119.0 in. (75.75" extrusion) |
| | 080-1078 | 2 | Cable, 120.5 in. (77.5" extrusion) |

*Part not shown

H-point extrusion cables & brackets

WIRING/HYDRAULIC DIAGRAMS

Mini Hydraulic wiring using Power Gear relay controller



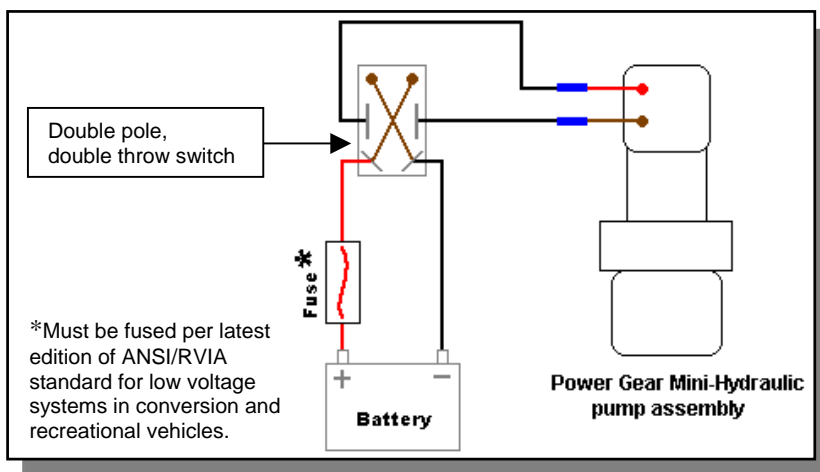
Note

These **wiring diagrams** represent the different ways that the vehicle manufacturer can wire the Power Gear H-point Mini-Hydraulic slide out system. Electrical components represented here may or may not be used on your system.

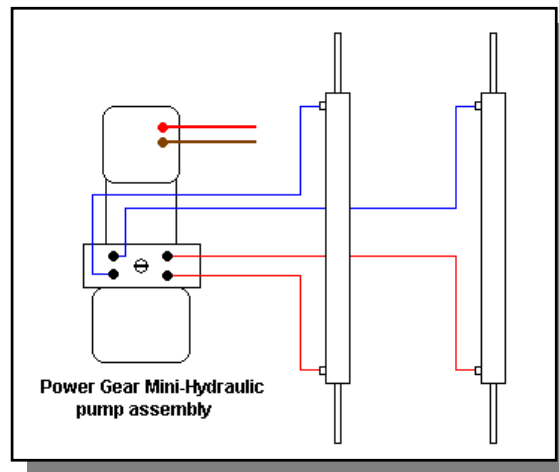
Power supply and wiring must be capable of sustaining 10.5 volts under maximum load.

System must be wired and fused per latest edition of ANSI/RVIA standard for low voltage systems in conversion and recreational vehicles.

Mini Hydraulic wiring using double pole, double throw



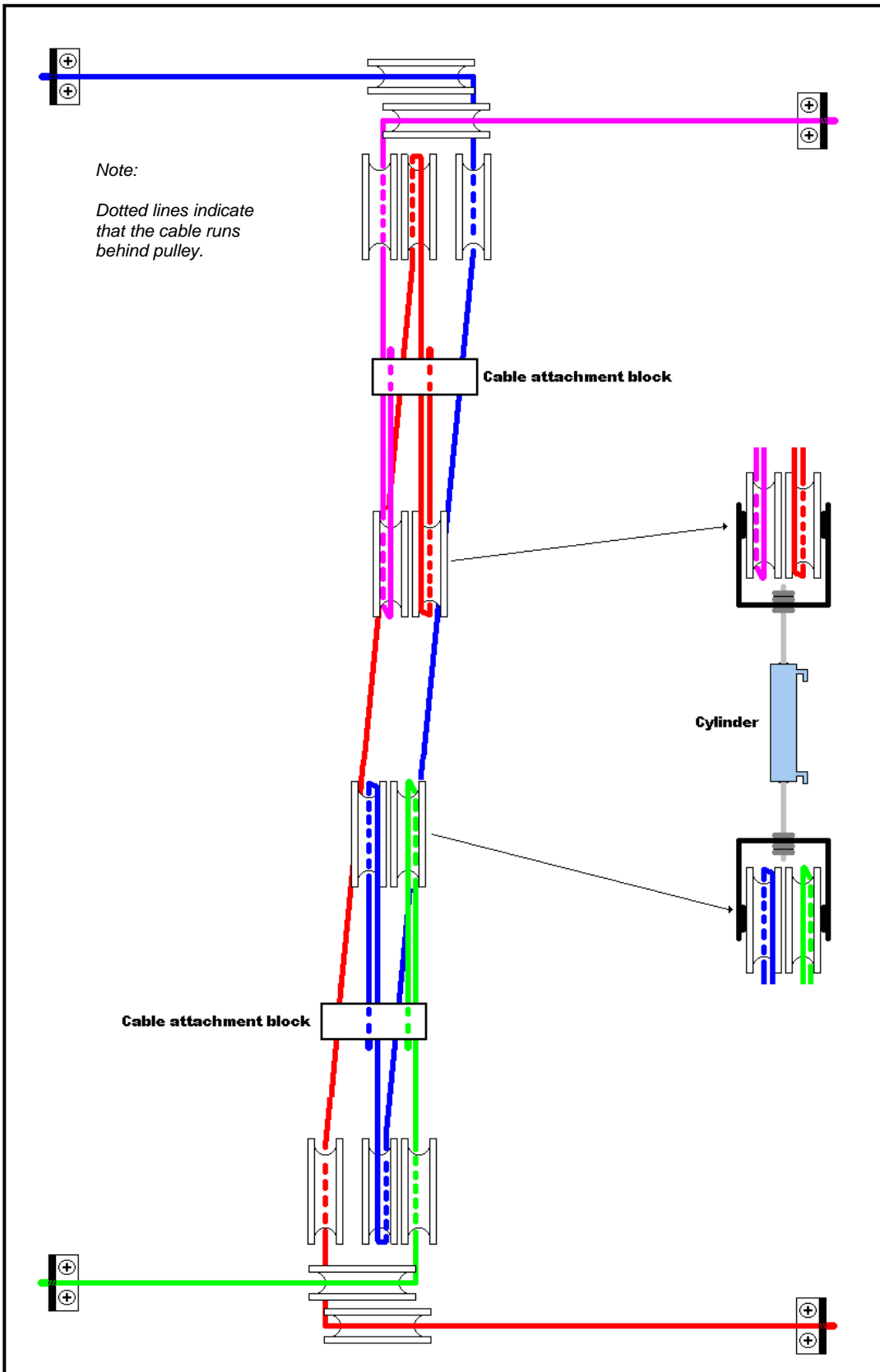
Hydraulic Diagram



The mini-hydraulic pump, hoses, and cylinders are pre-assembled and should not require bleeding after installation. If hoses are disconnected from pump or cylinders at any point other than the quick-disconnect fittings, then the pump should be bled following this procedure:

1. Remove the fill plug on top of the mini-hydraulic reservoir
2. Cycle the cylinders to full extension and retraction 3 times, checking the fluid level inbetween cycles, and add Pentosyn® CHF-11S power steering fluid only up to the center fill line (see page 2) of reservoir if necessary.
3. Replace the fill plug.

CABLE ROUTING



Note

This diagram is meant to assist in the **routing of the cables** should replacement be necessary. This is not a scale drawing, nor are the actual cables color coded in this way.

Room seal adjustment is made at the cable attachment block. Loosening of the jamb nut combination on the end of the cable will allow for the corner of the room that this cable pulls on to be adjusted.

For example: If the lower corner of the room is not sealed as tight as the other corners, identify that cable and trace it back to the cable attach block inside of the min-hydraulic extrusion (removal of the extrusion cover will be necessary). Loosen the jamb nut on that cable and tighten the adjustment nut (this should draw that corner of the room in).

TROUBLESHOOTING/WARRANTY

POWER GEAR LIMITED WARRANTY

Power Gear warrants to the original retail purchaser that the product will be free from defects in material and workmanship for a period of two (2) years following the retail sales date. Power Gear will, at its option, repair or replace any part covered by this limited warranty, which following examination by Power Gear or its authorized distributors or dealers, is found to be defective under normal use and service. No claims under this warranty will be valid unless Power Gear or its authorized distributor or dealer is notified in writing of such claim prior to the expiration of the warranty period. Warranty is transferable pending documentation of original sale date of product.

THIS WARRANTY SHALL NOT APPLY TO:

- Failure due to normal wear and tear, accident, misuse, abuse, or negligence.
- Products that are modified or altered in a manner not authorized by Power Gear in writing.
- Failure due to misapplication of product.
- Telephone or other communication expense
- Living or travel expenses.
- Overtime labor.
- Failures created by improper installation of the product's slideout system or slideout room to include final adjustments made at the plant for proper room extension/retraction; sealing interface between slideout rooms and side walls; synchronization of inner rails; or improper wiring or ground problems.
- Failures created by improper installation of leveling systems, including final adjustments made at the plant, or low fluid level, wiring or ground problems.
- Replacement of normal maintenance items.

There is no other express warranty other than the foregoing warranty. THERE ARE NO IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. IN NO EVENT SHALL POWER GEAR BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES. This warranty gives you specific legal rights, and you may also have other rights, which vary from state to state. Some states do not allow the limitations of implied warranties, or the exclusion of incidental or consequential damages, so the above limitations and exclusions may not apply to you.

For service contact your nearest Power Gear authorized warranty service facility or call 1-800-334-4712. Warranty service can be performed only by a Power Gear authorized service facility. This warranty will not apply to service at any other facility. At the time of requesting warranty service, evidence of original purchase date must be presented.

Power Gear
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800-334-4712 www.powergearus.com

Troubleshooting:

- Pump is slow or lacks power
 - **Low Voltage-** check for 10.5 volt minimum as pump is running. Repair wiring or battery as necessary.
 - **Pinched hose-** replace hose and bleed air out of pump according to instructions on page 6.
- Pump will not operate
 - **No Power-**Check for minimum 10.5 volts to the pump switch or relay battery + terminal.
 - **Bad switch-**check for continuity between switch center terminals and end terminals when switch is operated.
 - **Faulty pump motor-**Replace pump motor and bleed air out of pump according to instructions on page 6.
 - **Bad pump-** Replace pump and bleed air out of pump according to instructions on page 6.
 - Thermal overload protection in pump motor has tripped. Allow motor to cool. Cool down time will vary depending on ambient temperature and air flow to pump.
- Slide comes in misaligned
 - **Obstructions in slides path.** Significant resistance on one side may defeat the pressure compensation built into the system. Repair whatever is obstructing free movement of the slide. Move the slide to full extension and full retraction to re-time the system.
 - **Pinched or obstructed hose-** restriction in fluid movement through a hose could potentially cause misalignment. Make sure hoses are not linked, abraded, or damaged from heat.
 - **Failure of the pressure compensation system within the pump-** Replace pump.