

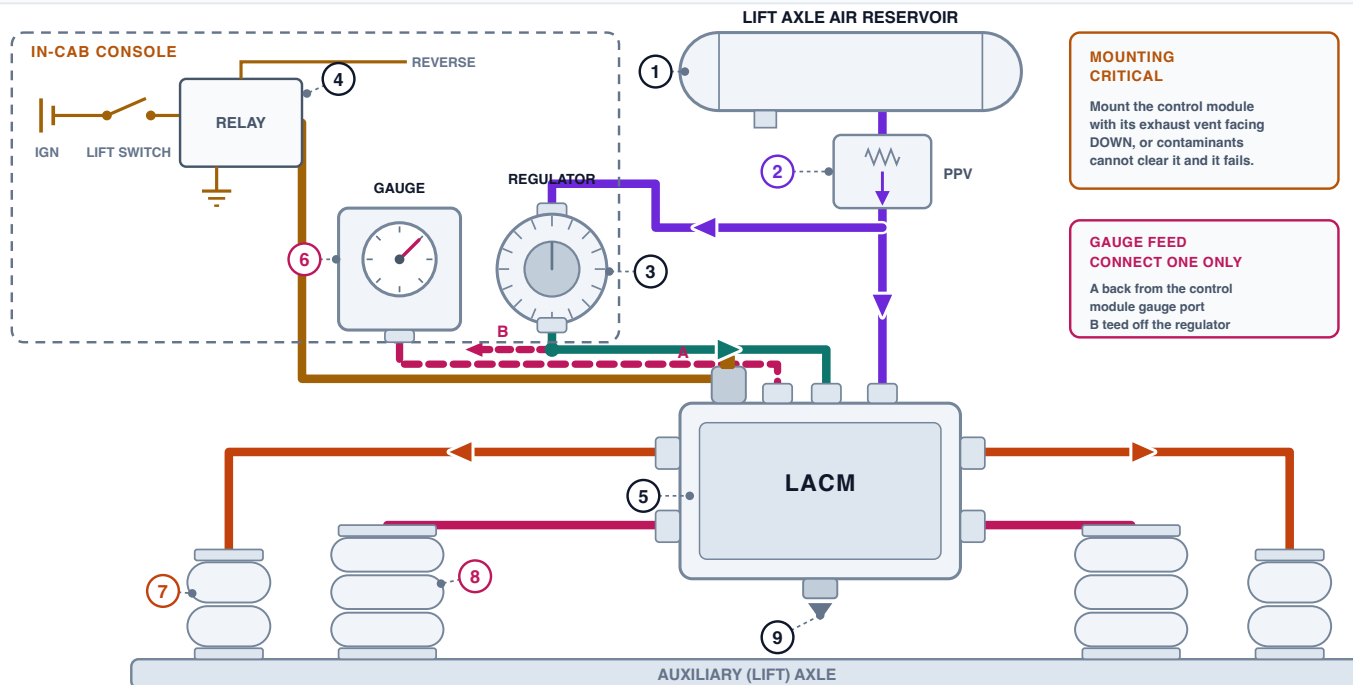


LIFT AXLE CONTROL SCHEMATIC

Normally-closed solenoid control module · cab-mounted regulator, gauge and switch

PETRA TECHNICAL SPEC
DWG LAX-CTL-2026

SUPPLY 1/2 in PILOT 1/4 in LIFT 3/8 in LOAD 1/2 in 12 V



COMPONENT KEY

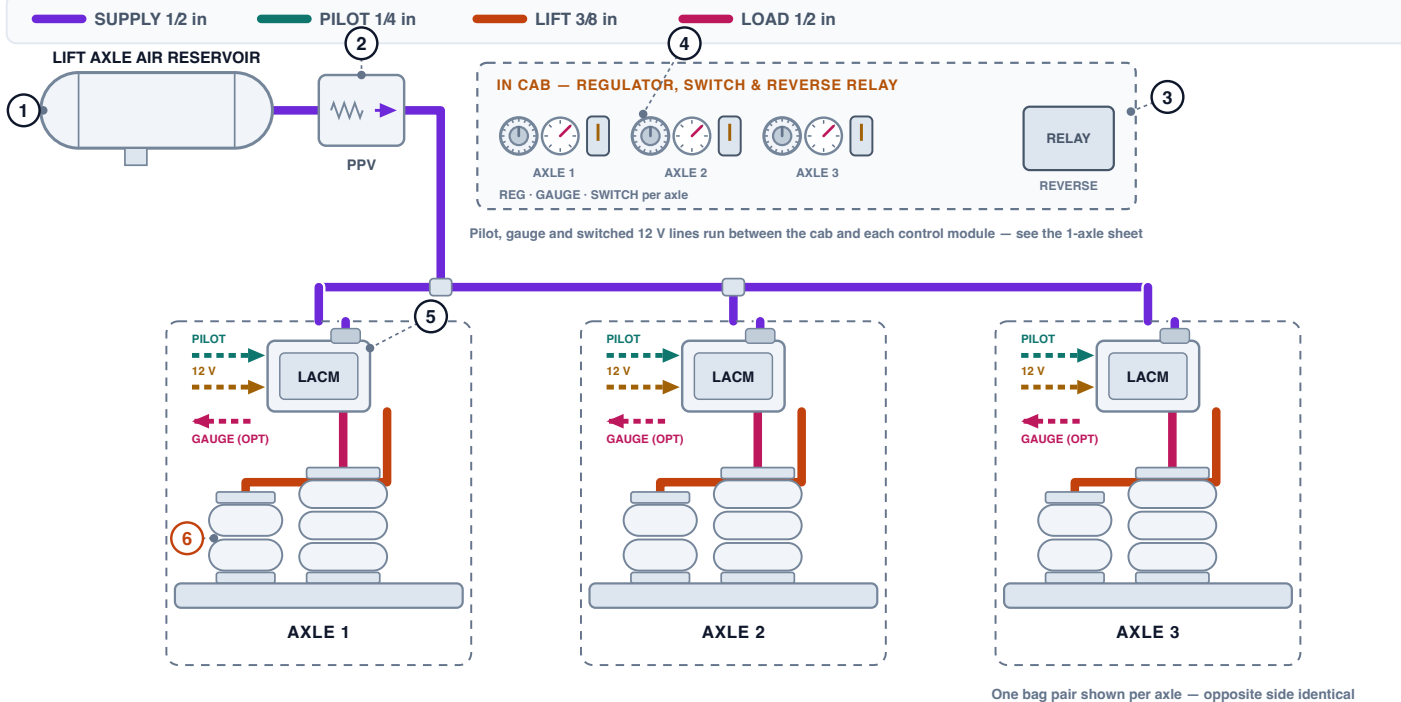
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|---|--|---|
| ① Air reservoir — sized to DOT volume for the axle | ④ Relay — drops the axle out of reverse | ⑦ Lift bags — 3/8 in delivery, one line each |
| ② Pressure protection valve | ⑤ Control module — NC solenoid, cab switched | ⑧ Load (ride) bags — 1/2 in delivery, one line each |
| ③ Regulator — sets load pressure, pilots the module | ⑥ Gauge feed — A or B, connect one only | ⑨ Exhaust vent — must face downward |



3-AXLE LIFT CONTROL SCHEMATIC

Independent control · one regulator, LACM and cab switch per axle

PETRA TECHNICAL SPEC
DWG LAX-CTL-3X-2026



COMPONENT KEY

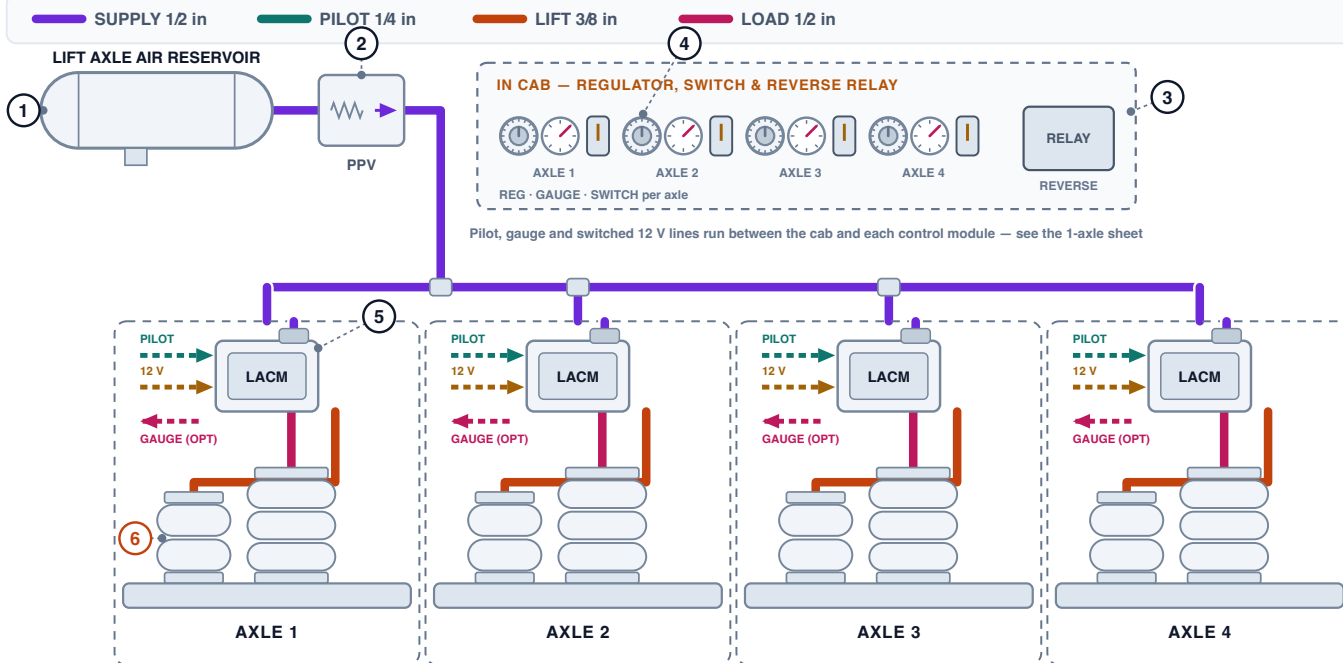
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|---|--|
| ① Air reservoir — sized to DOT volume for the axles | ④ Regulator, gauge and switch — one set per axle |
| ② Pressure protection valve | ⑤ Control module — one per axle, N/C solenoid |
| ③ In-cab console — reverse relay and axle controls | ⑥ Lift and load bags — one pair per side, per axle |



4-AXLE LIFT CONTROL SCHEMATIC

Independent control · one regulator, LACM and cab switch per axle

PETRA TECHNICAL SPEC
DWG LAX-CTL-4X-2026



One bag pair shown per axle — opposite side identical

COMPONENT KEY

- | | |
|---|--|
| ① Air reservoir — sized to DOT volume for the axles | ④ Regulator, gauge and switch — one set per axle |
| ② Pressure protection valve | ⑤ Control module — one per axle, N/C solenoid |
| ③ In-cab console — reverse relay and axle controls | ⑥ Lift and load bags — one pair per side, per axle |

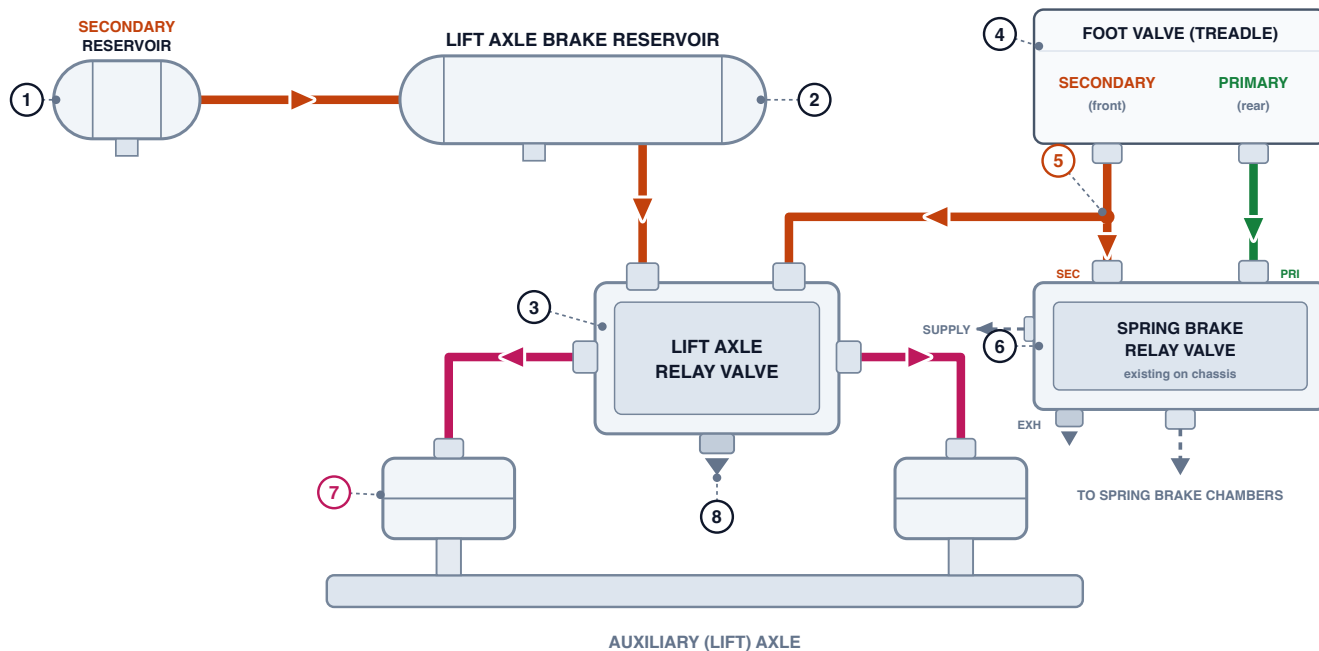


LIFT AXLE SERVICE BRAKE SCHEMATIC

Fed from the secondary tank · signal teed into the secondary foot valve line

PETRA TECHNICAL SPEC
DWG LAX-BRK-2026

SECONDARY CIRCUIT (orange) PRIMARY CIRCUIT (green) BRAKE DELIVERY



COMPONENT KEY

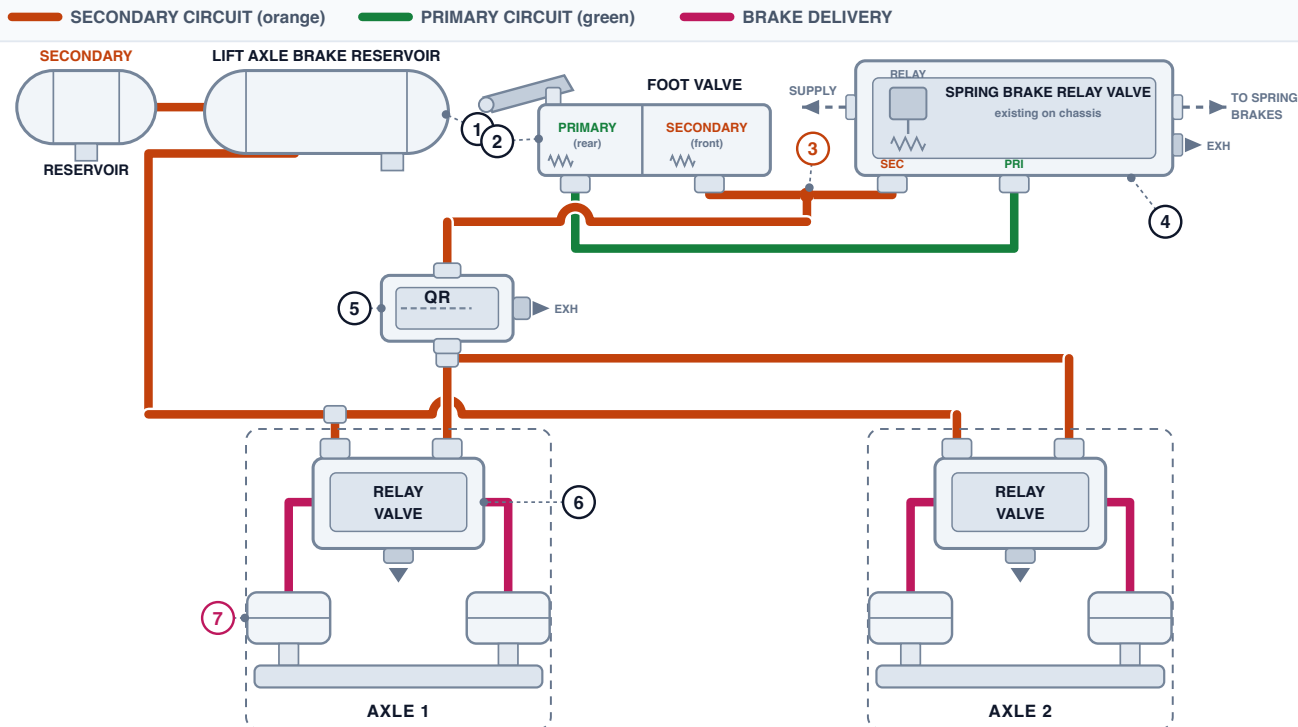
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|---|---|--|
| 1 Secondary reservoir — feeds the lift axle circuit | 4 Foot valve — primary and secondary delivery | 7 Service brake chambers, one per wheel end |
| 2 Dedicated lift axle brake reservoir | 5 Tee into the existing secondary signal line | 8 Lift axle relay valve exhaust — vent to atmosphere |
| 3 Lift axle relay valve — supply, control, deliveries | 6 Spring brake relay valve — takes both signals | |



2-AXLE SERVICE BRAKE SCHEMATIC

Secondary tank feed · teed signal through a quick release valve

PETRA TECHNICAL SPEC
DWG LAX-BRK-2X-2026



COMPONENT KEY

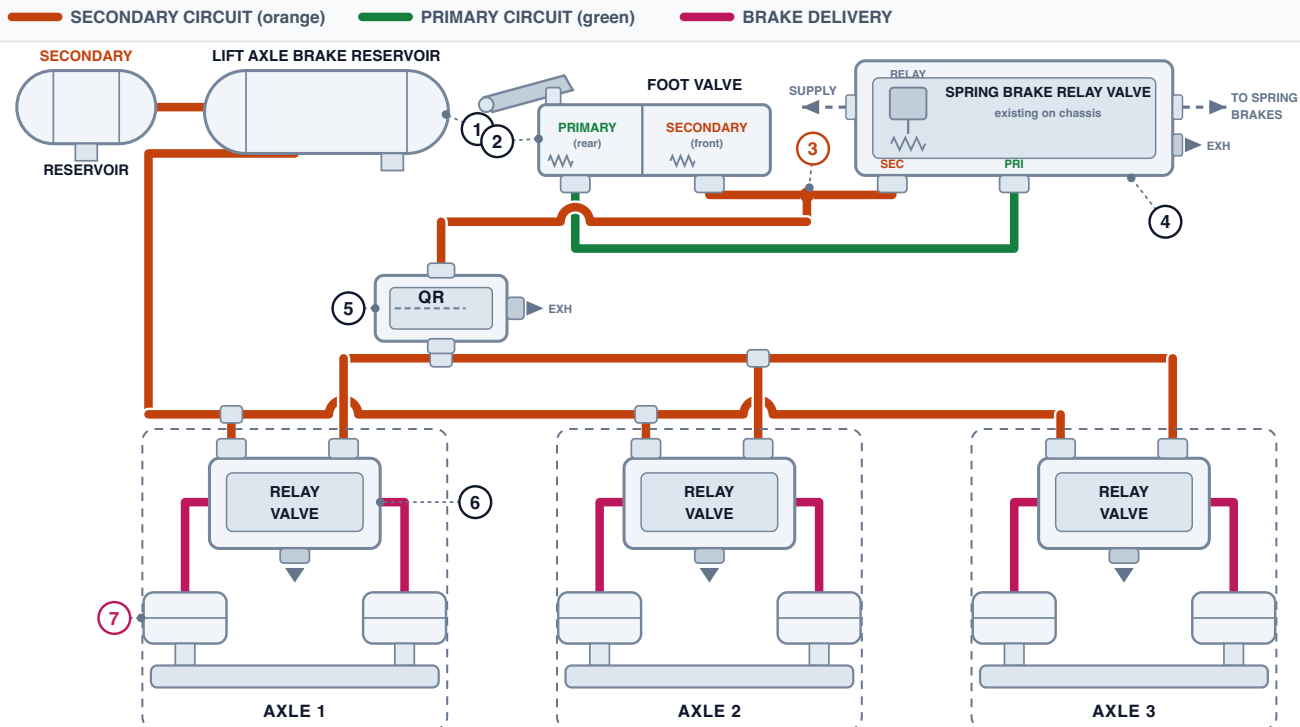
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|---|---|--|
| ① Lift axle brake reservoir — secondary tank feed | ④ Spring brake relay valve — takes both signals | ⑦ Service brake chambers — one pair per axle |
| ② Foot valve — primary and secondary delivery | ⑤ Quick release valve in the teed signal | ⑧ Arched hop — lines cross, not connected |
| ③ Tee into the existing secondary signal line | ⑥ Relay valve — one per lift axle | |



3-AXLE SERVICE BRAKE SCHEMATIC

Secondary tank feed · teed signal through a quick release valve

PETRA TECHNICAL SPEC
DWG LAX-BRK-3X-2026



COMPONENT KEY

- | | | |
|---|---|--|
| ① Lift axle brake reservoir — secondary tank feed | ④ Spring brake relay valve — takes both signals | ⑦ Service brake chambers — one pair per axle |
| ② Foot valve — primary and secondary delivery | ⑤ Quick release valve in the teed signal | ⑧ Arched hop — lines cross, not connected |
| ③ Tee into the existing secondary signal line | ⑥ Relay valve — one per lift axle | |



4-AXLE SERVICE BRAKE SCHEMATIC

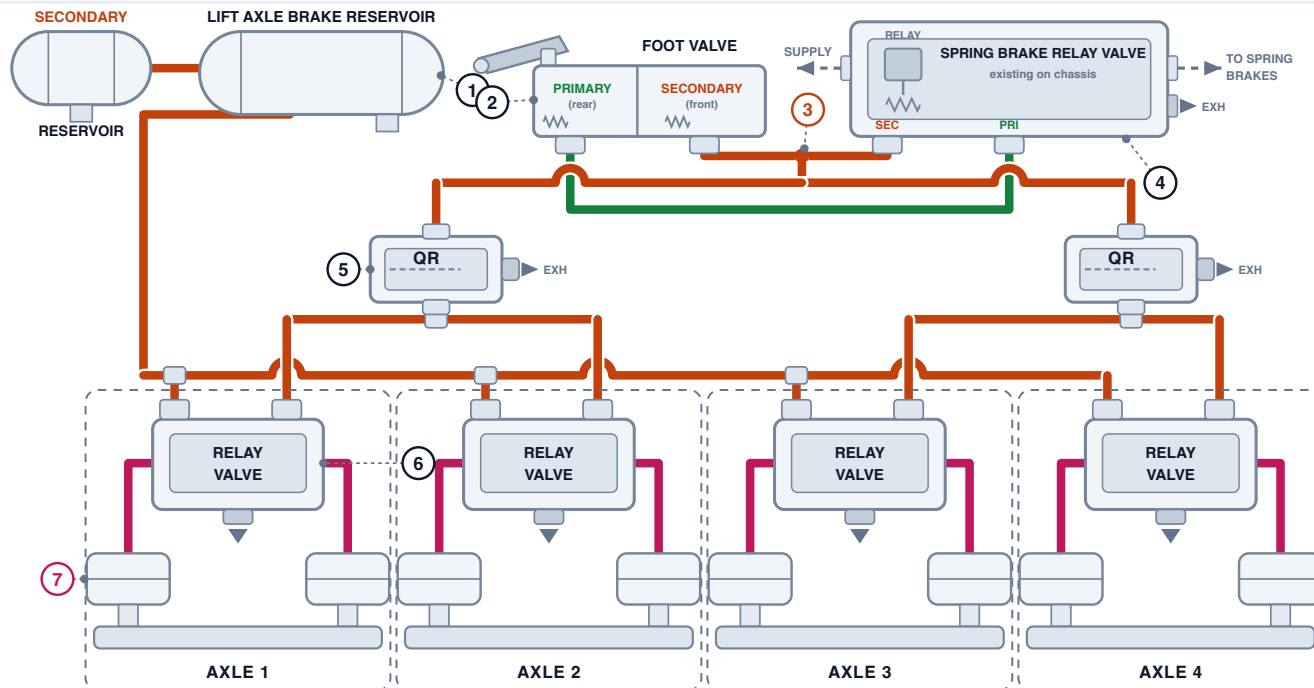
Secondary tank feed · teed signal through two quick release valves

PETRA TECHNICAL SPEC
DWG LAX-BRK-4X-2026

SECONDARY CIRCUIT (orange)

PRIMARY CIRCUIT (green)

BRAKE DELIVERY



COMPONENT KEY

- | | | |
|---|---|--|
| ① Lift axle brake reservoir — secondary tank feed | ④ Spring brake relay valve — takes both signals | ⑦ Service brake chambers — one pair per axle |
| ② Foot valve — primary and secondary delivery | ⑤ Quick release valves — one per pair of axles | ⑧ Arched hop — lines cross, not connected |
| ③ Tee into the existing secondary signal line | ⑥ Relay valve — one per lift axle | |

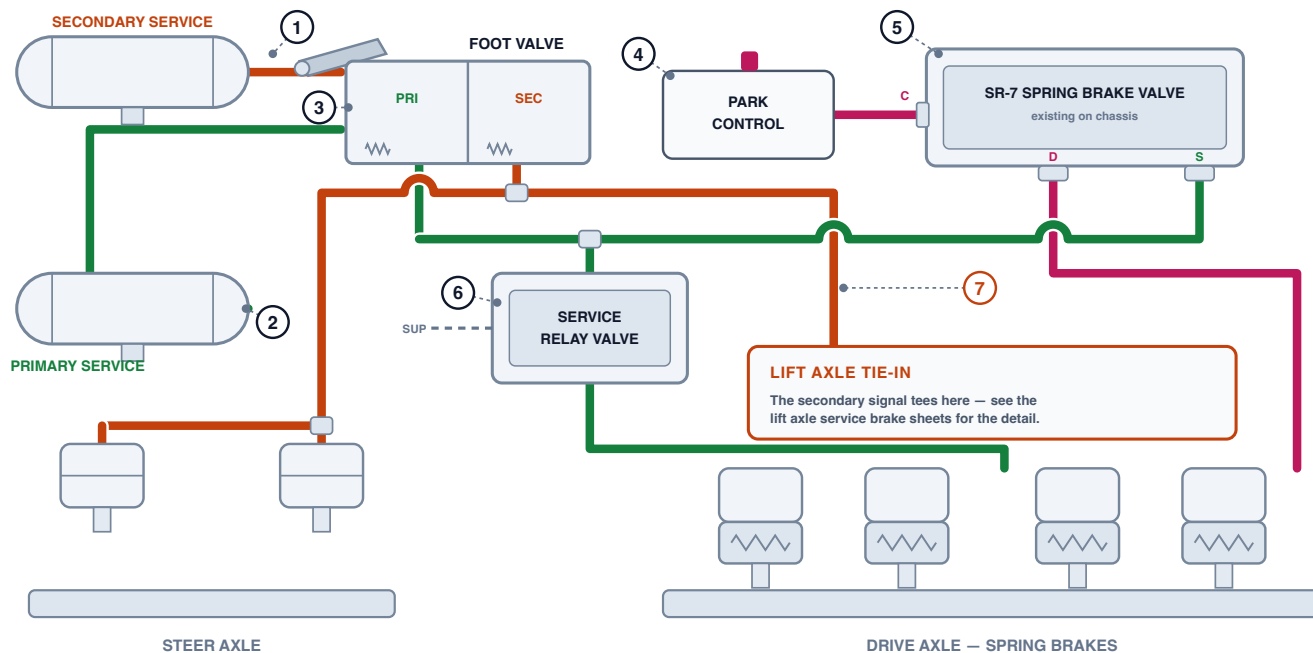


TRUCK BRAKE SYSTEM — LIFT AXLE TIE-IN

Where the auxiliary axle joins the chassis brakes · primary green, secondary orange

PETRA TECHNICAL SPEC
DWG LAX-SYS-2026

PRIMARY (green) SECONDARY (orange) PARK / SPRING



COMPONENT KEY

- | | | |
|---|---|--|
| (1) Secondary service reservoir | (4) Park control valve | (7) Lift axle tie-in on the secondary signal |
| (2) Primary service reservoir | (5) SR-7 spring brake valve — existing on chassis | |
| (3) Foot valve — primary and secondary delivery | (6) Service relay valve — drive axle service brakes | |

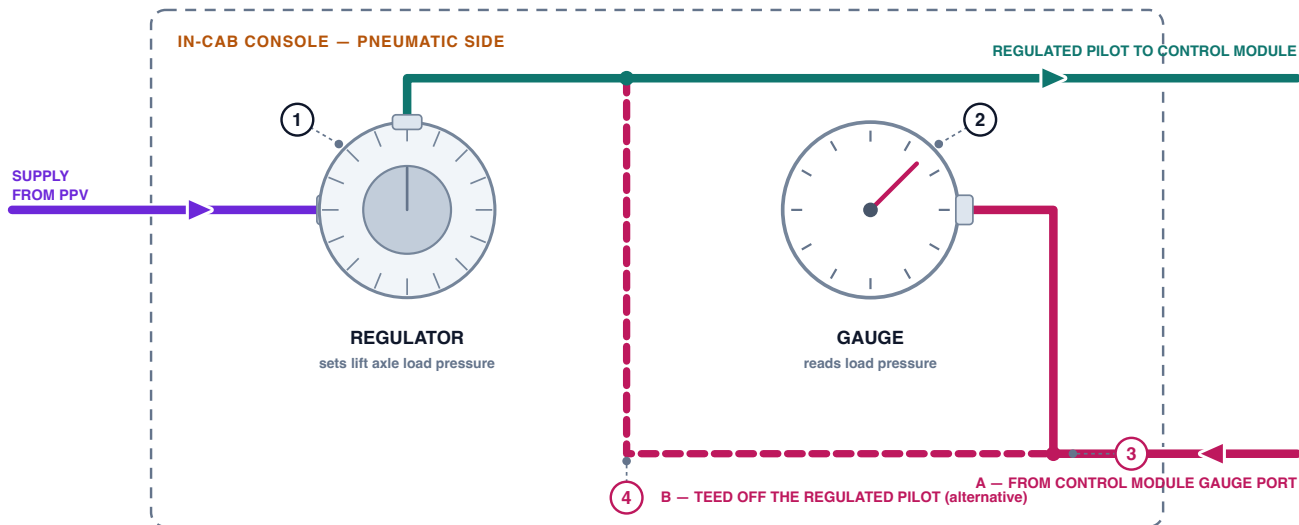


CONSOLE PNEUMATIC SCHEMATIC

In-cab regulator and gauge · one set per lift axle

PETRA TECHNICAL SPEC
DWG LAX-CON-P-2026

SUPPLY 1/4 in REGULATED PILOT 1/4 in GAUGE 1/4 in



GAUGE CONNECTION — CONNECT ONE ONLY

A reads actual load bag pressure back from the control module. B reads regulated pilot pressure instead — simpler to plumb, but it does not show what the bags hold.

COMPONENT KEY

- ① Regulator — sets lift axle load pressure
- ② Gauge — reads load pressure in the cab
- ③ Gauge feed A — from the control module gauge port
- ④ Gauge feed B — teed off the regulated pilot

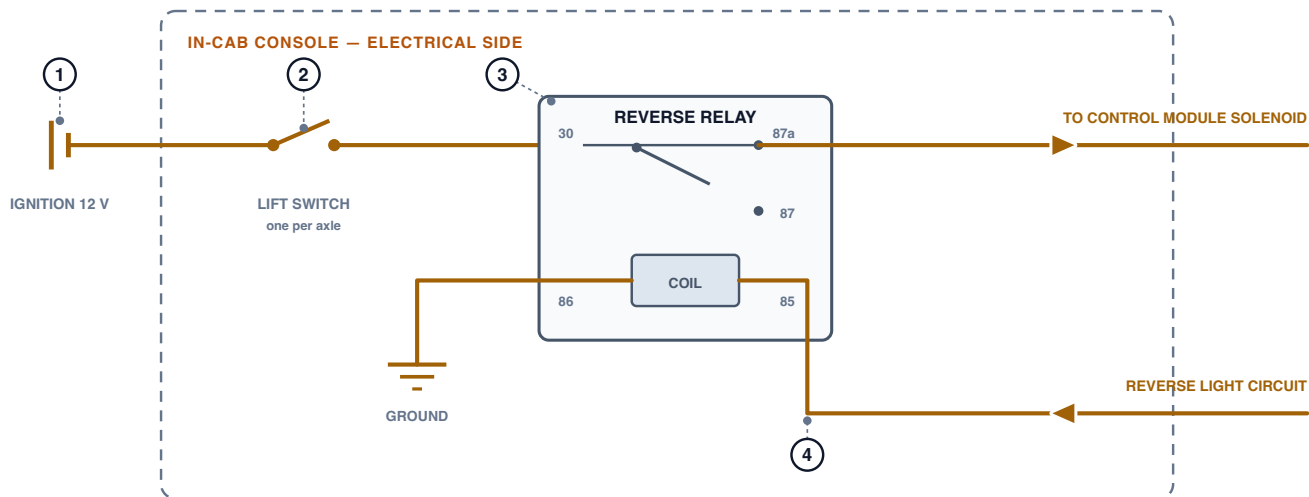


CONSOLE ELECTRICAL SCHEMATIC

Lift switch and reverse relay · one switch per lift axle

PETRA TECHNICAL SPEC
DWG LAX-CON-E-2026

12 V CIRCUIT



REVERSE INTERLOCK

The solenoid is fed through the normally-closed contact. Selecting reverse energises the coil, which breaks that contact and raises the axle. Confirm the relay terminal numbering against the relay actually supplied.

COMPONENT KEY

- ① Ignition 12 V feed
- ② Lift switch — one per axle
- ③ Reverse relay
- ④ Reverse light circuit — energises the relay coil