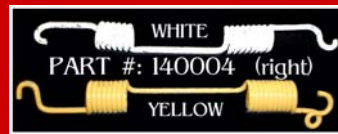


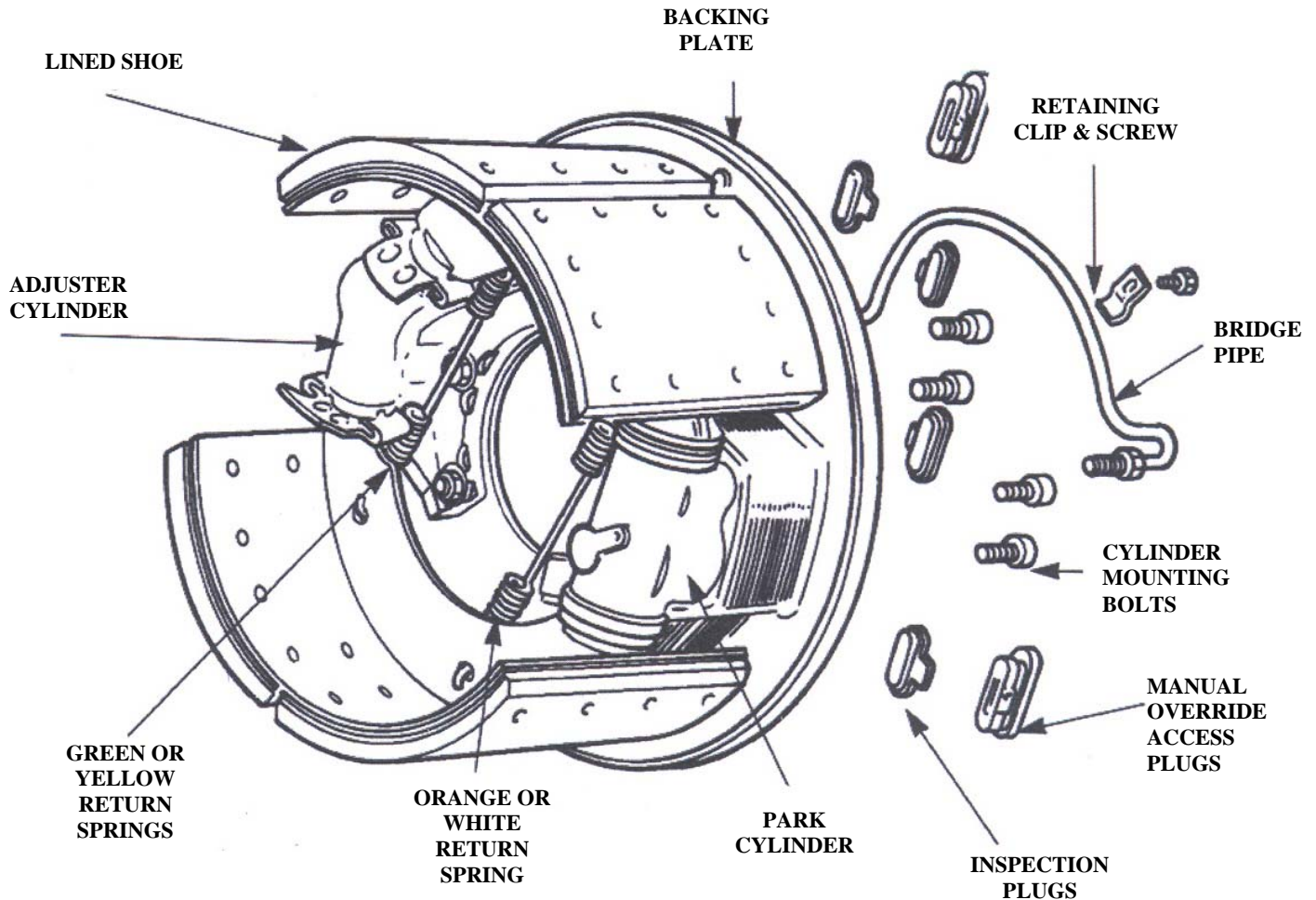
LUCAS GIRLING SYSTEM COMPONENTS and INFORMATION



HYDRAULIC BRAKE DRUMS

CONSIST OF:

BACKING PLATE
TWO BRAKE SHOES & LINING ASSEMBLIES
ADJUSTER CYLINDER
PARK CYLINDER



BACKING PLATE CONTAINS

- **TWO LINING INSPECTION HOLES**
(measurement of shoe to drum clearance)
- **TWO ADJUSTER SIGHT HOLES**
- **TWO ADJUSTMENT SLOTS**
(manual override to increase or decrease the shoe to drum clearance)

202262X
PICTURED



LEFT HAND
LOADED

ADJUSTING CYL
201183X

PARK CYLINDER
201179X

SHOES
6"

BRIDGEPORT
140016

SPRING KIT
SP7896S (140003)

BRAKE CYLINDER
OVERHAUL #
L5489



LEFT SIDE		
BACKING PLATE #	BORE SIZE	SHOES
202250X	1.625	5"
202252X	1.75	5"
202262X	1.75	6"
202272X	1.75	7"
203250X	1.625	NO SHOES
203252X	1.75 (for 5" Shoes)	NO SHOES
203262X	1.75 (for 6" & 7" Shoes)	NO SHOES



203252X

RIGHT SIDE		
BACKING PLATE #	BORE SIZE	SHOES
202249X	1.625	5"
202251X	1.75	5"
202261X	1.75	6"
202271X	1.75	7"
203249X	1.625	NO SHOES
203251X	1.75 (for 5" Shoes)	NO SHOES
203261X	1.75 (for 6" & 7" Shoes)	NO SHOES



202261X



PARK CYLINDER INSTALLATION



INSTALLATION

- Put on the new gasket, 3)nuts, bolts & washers. Torque per manufacturers' specs.
- Connect bridge pipe to cylinder (torque 10-15 ft. lbs) Put in bridge pipe retainer.
- Reinstall Spring Brake Chamber.
- Put on shoes, drum, tires, wheels and hub via vehicle manufacturers' recommendations.



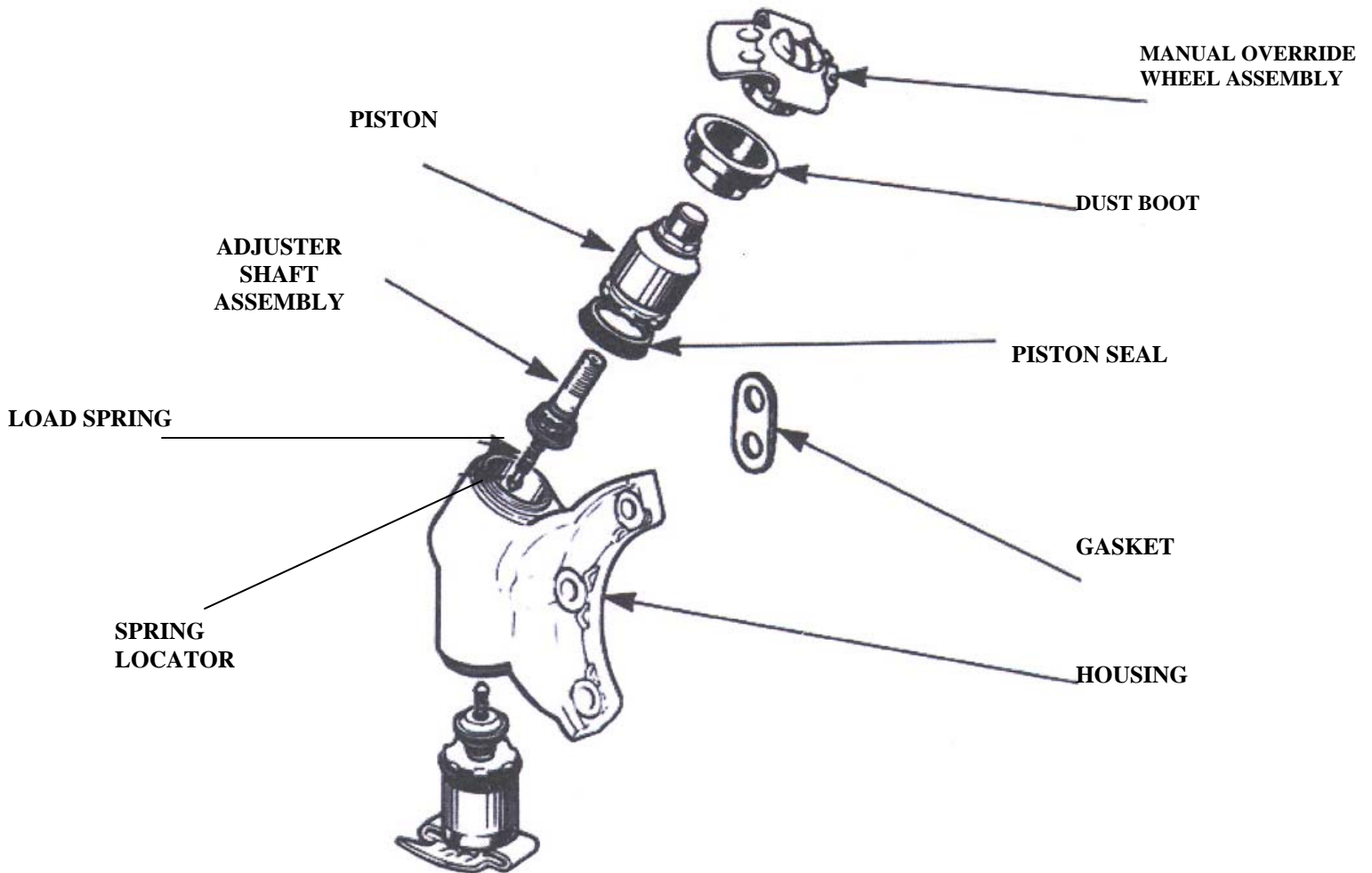
ADJUSTING CYLINDER INSTALLATION



INSTALLATION

- Put on the new gasket, 3)nuts, bolts & washers. Torque per manufacturers' specs.
- Connect bridge pipe to cylinder (torque 10-15 ft. lbs) Put in bridge pipe retainer.
- Put on shoes, drum, tires, wheels and hub via vehicle manufacturers' recommendations.

ADJUSTER CYLINDER BREAKDOWN



REMOVAL

- Remove and Discard Brake Fluid.
Attach tube to bleeder screw, and place other end of tube in container...Unscrew bleeder screw with one turn...pump brake pedal to remove brake fluid.
- Remove: Wheels, Tires, Drums, Shoes & Lining
- Remove and clean bridge pipe retainer from packing plate. Disconnect and clean bridge pipe from adjuster cylinder
- Remove: Bolts (3), Nuts & Washers from the adjuster Cylinder to Backing Plate and Axle Flange
- Remove: Allen Bolts (holding Adjusting Cylinder to Backing Plate) Now remove Adjuster Cylinder from Backing Plate. *Gasket cannot be used again.*
- Remove: Any corrosion or rust that may have accumulated on the Backing Plate with a wire brush

**ADJUSTER
Cylinder**

CASTING #
Can be foud
here



A number ("5")
Stamped in this
area identifies a
1.625" cylinder

A number ("6")
Stamped in this
area identifies a
1.75" cylinder

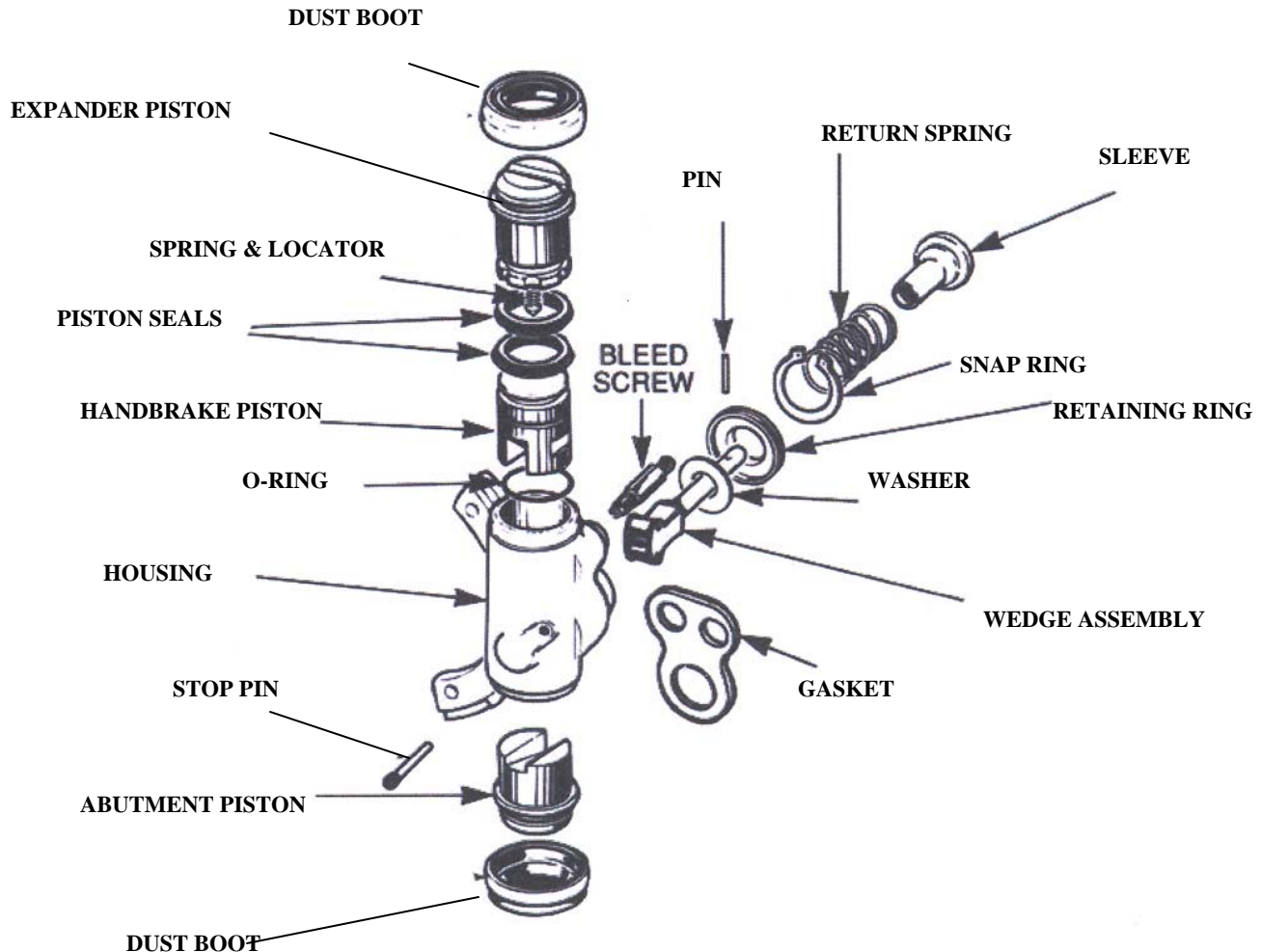
<u>ADJUSTER CLYLINDER</u>	<u>CASTING NUMBER</u>	<u>BORE SIZE</u>
1)Adjuster Cylinder Assembly 2)Manual Override Wheels 1)Gasket 2)Bolts		
201183X	68919071	1.75" LH
201184X	68919072	1.75" RH
201185X	68919065	1.625" LH
201186X	68919066	1.625" RH

1.625"
Has a
Groove
in the
Expander
& the
Abutment
Pistons



1.75"
Does not
Have a
Groove

PARK CYLINDER BREAKDOWN



REMOVAL

- REMOVE & discard brake fluid.
- Attach a tube to the bleeder screw. Place other end of tube into container to catch brake fluid. Carefully pump brake pedal to eliminate brake fluid. (Dispose of brake fluid properly)
- Remove wheels, tires, drums, shoes and lining.
- Remove parking brake spring chamber
- Remove bridge pipe from backing plate. Clean & disconnect bridge pipe from cylinder
- Remove bolts (3), washers & nuts, careful to retain the park cylinder to the backing plate & axle flange
- Remove Allen head bolts. Remove park cylinder & gasket. Do not reuse gasket.
- Remove any corrosion or rust that may have formed with a wire brush.

Park Cylinder



<u>PARK CYLINDER</u> 1)Park Cylinder Assembly 1)Gasket 2)Bolts	<u>CASTING #</u>	<u>BORE SIZE</u>
201179X	68919067	1.75" LH
201180X	68919068	1.75" RH
201181X	68919061	1.625" LH
201182X	68919062	1.625" RH

1.625"
Expanders
for Park Cylinders
have a
Groove

1.75"
Expanders
for Park Cylinders
do not have a
Groove



LUCAS SYSTEM COMPONENTS



LEFT HAND SPRING KIT

PART #
140003

(ORANGE & GREEN)



RIGHT HAND SPRING KIT

PART #
140004

(WHITE & YELLOW)



291000
VERRIDE WHEEL
ASSEMBLY



140016
BRIDGEPORT
LEFT HAND



140015
BRIDGEPORT
RIGHT HAND

LUCAS SYSTEM COMPONENTS



065147X
**HYDRAULIC RELAY
VALVE**



065316X
CONTROL VALVE



**ADJUSTER
CYLINDER
GASKET**

***Always use a New Gasket
When Overhauling the
Cylinders***

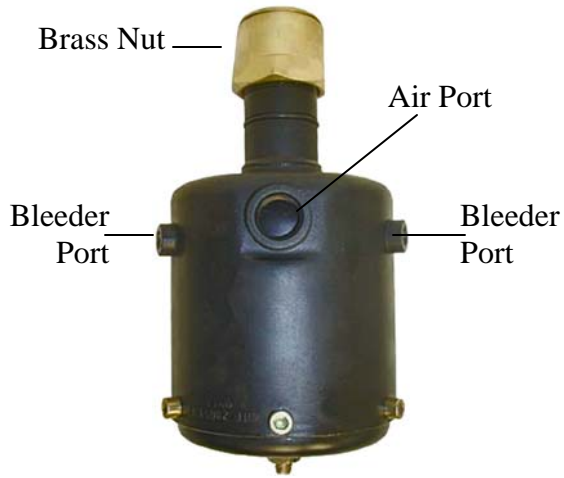
**PARK
CYLINDER
GASKET**



RC01

Applies 3-10 psi in the brake line to keep pressure on the seals in the adjuster and cylinder to help prevent leakage. Valve is working whether vehicle is running or parked.
(This will not prevent all leakage, as some leakage in this system is acceptable)

LUCAS SYSTEM COMPONENTS



KSH101AX
SPRING BRAKE
Contains 1 Air Port &
2 Bleeder Ports
AIR & HYDRAULIC



KSH202CX
SPRING BRAKE
Contains 1 Air Port
AIR ONLY



MQ5200180
BLEEDER SCREW

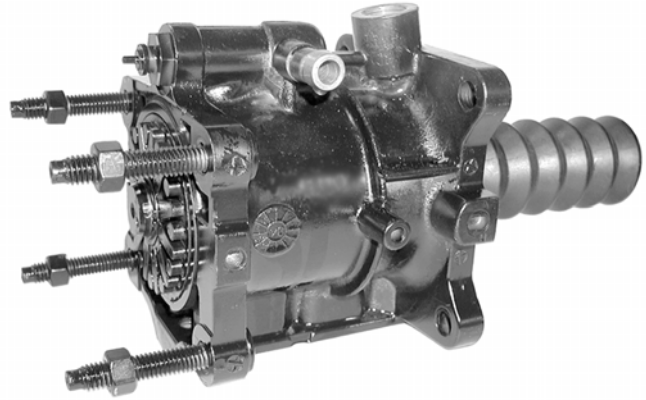


KSH5200099
Elbow Fitting with Plug

LUCAS SYSTEM COMPONENTS



2771320X
Pump & Motor



2771558X
Hydromax



BP1X
Brake Pump



12379X
Mini Master Cylinder

LUCAS SYSTEM COMPONENTS

L5489

**LUCAS DURAPARK™
Brake Cylinder Overhaul Kit**



SP7871S

ADJUSTER CYLINDER KIT



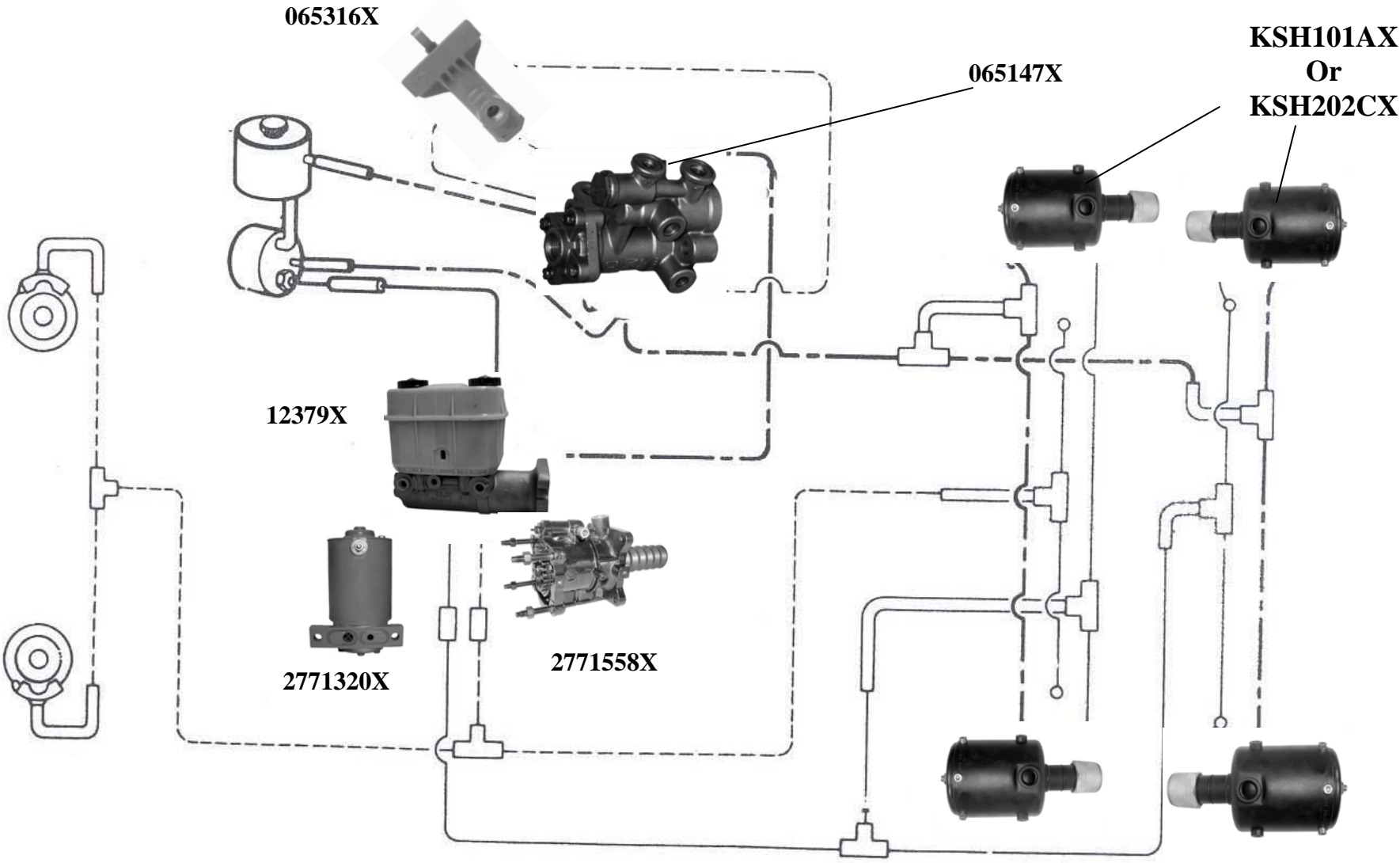
SP7872S

PARK CYLINDER KIT

LUCAS GIRLING DRUM BRAKE ASSEMBLY TROUBLESHOOTING

SYMPTOM	POSSIBLE CAUSES ARE BUT NOT LIMITED TO	CORRECTION
<i>Fluid Leakage At the Wheel Cylinders</i>	If the dust boot is damaged it will allow contaminants into the cylinder, causing scoring of the piston seal.	<i>Replace all affected adjuster cylinders and flush the system</i>
	The brake fluid is designed to absorb water caused by condensation. The fluid should be changed every two years to avoid water contamination. Three percent contamination can lower the boiling point by 50%. As the fluid becomes contaminated with water condensation, the fluid loses the ability to protect the metal parts in the system and rust will begin to form. Rust and/or overheating due to boiling fluid will damage the piston seals causing the seals to leak. Note: Rust tends to turn black when introduced to brake fluid and heat thus resulting in black fluid.	<i>Replace all leaking components & all brake lines, flush the system thoroughly.</i>
	Distortion to the piston seals can be caused as the brake system cools and the fluid returns to the master cylinder. As the fluid returns to the master cylinder reverse force can be applied to the piston seals resulting in distortion and leakage.	<i>Replace all affected adjusted cylinders. Install an RC01 check valve.</i>
	If the KSH parking brake chamber leaks fluid into the park cylinder, the fluid will cause the park cylinder seals to swell, resulting in leakage and fluid contamination. Note: Some KSH parking brake chambers are air operated.	<i>Replace the affected backing plates, The KSH parking chambers and flush the system</i>

**Hydraulic Brake System
w/ Tandem Rear Axle**



Primary Hydraulic System Light Dotted Line	Secondary Hydraulic System Straight Line	Parking Brake System Dark Dotted Line
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