

Welker Powered Slide



Construction

- Two hard chrome plated shafts and self lubricated bearings.
- Expansion plugs on shafts for secure retention and ease of service.
- Manual Lockout option
- Lubrication free cylinder
- Shocks for both extend and retract strokes.

Lubrication

Welker slides are lubricated for life. No subsequent lubrication is required.

Maintenance

Steam cleaning or wiping contamination off during the course of normal machine maintenance is desirable.

Instructions for changing cylinders shafts and bearings are provided on the following pages.

Safety Considerations

- Avoid operating slides where workers may place hands or limbs and cause injury.
- Ensure that all air is removed and that there are no “trapped air” conditions before removing cylinder or drive plate.

Directions for replacing bearings and/or shafts

1. Use manual lockout to prevent motion of the carriage. Carriage is to be locked in a position leaving access to the bearing to be replaced.
2. If bearing fasteners are not accessible, tooling may need to be removed from the carriage plate.
3. If the tooling is still on the carriage, block up the carriage so it will not drop when the bearing is removed.
4. Remove Socket Head Cap Screws from the ends of the shaft.
5. Remove the taper plugs from the ends of the shaft
 - √ Taper plugs have internal threads for pulling the plug.
 - √ Place a thick washer (min. 3/8") over the end of the shaft.
 - √ Insert a bolt through the washer and into the taper plug.
 - √ Tighten the bolt to pull the plug towards the washer. The washer may need additional spacing to fully disengage the taper plug.
6. Pull or push the shaft back disengaging it from the end plate and leaving enough room to remove the bearing. (If there is a load on the carriage, the carriage **MUST** be supported.) If the shaft is to be replaced, pull it fully out of the slide.
7. If a bearing is to be replaced, remove four Socket Head Cap Screws securing the bearings and slide the bearing off of the shaft.
8. Slide the new bearing onto the shaft.
9. Replace the bearing fasteners but do not tighten.
10. Push the shaft back into place, equally supported in the end plates.
11. Tighten the bearing fasteners
12. Reinstall the taper plugs using anti-seize compound to prevent galling.

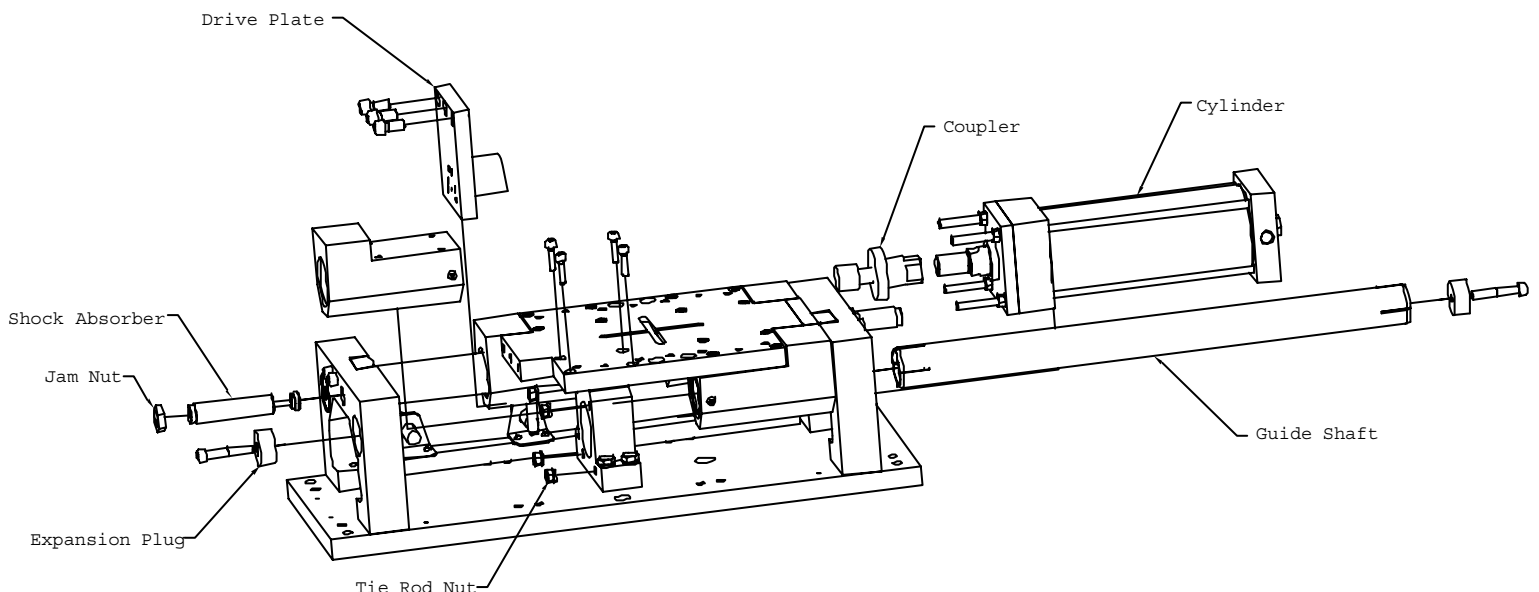
Directions for replacing the cylinder

1. Fully retract the slide assembly and lockout the slide to prevent motion
2. Remove air lines from the cylinder.
3. Remove Socket Head Cap Screws securing the drive plate to the carriage plate.
4. Extend the Cylinder with the drive plate
5. Lift the drive plate, disengaging the cylinder coupler.
6. Remove (4) four tie rod nuts securing the cylinder to the cylinder mount.
7. Pull the cylinder out. Caution: With the tie rod nuts removed, the cylinder must be removed carefully to prevent cylinder disassembly.
8. Replace the tie rod nuts on the cylinder.
9. Install coupler on new cylinder using thread locking adhesive. If the old coupler is to be removed from the cylinder, apply heat to the coupler to soften the thread locker. Use caution so as not to overheat the cylinder rod seals.
10. Remove tie rod nuts from the rod end of the replacement cylinder and carefully install.
11. Reinstall tie rod nuts.
12. Lower drive plate onto the cylinder coupler and reinstall fasteners.
13. Reinstall air lines.

Directions for replacing shock absorbers

1. Lockout slide to prevent motion.
2. Remove jam nut from shock absorber.
3. Unscrew shock absorber from installation.
4. Install new shock absorber. Set the shock absorber so that it is fully compressed when the slide is against it then back it off 1/32"

Welker Powered Slide Maintenance Video can be viewed at
www.welkerbearing.com



Slide Cylinder Option	Ports	Cyl Type	Brake	R2 & PWS-50 Cylinder Model No.			PWS-75 Cylinder Model No.				HDS-75 Cylinder Model No.				
				Cylinder Model Number	A	B	Min	Cylinder Model Number	A	B	Min	Cylinder Model Number	A	B	Min
01 (WEL1)	NPT	Standard	Non-Locking	WC-2018-Stroke	25mm	N/A	225mm	WC-2022-Stroke	25mm	N/A	350mm	WC-2026-Stroke	25mm	N/A	350mm
02 (WEL2)	SAE	Standard	Non-Locking	WC-2019-Stroke	25mm	N/A	225mm	WC-2023-Stroke	25mm	N/A	350mm	WC-2027-Stroke	25mm	N/A	350mm
03 (WEL3)	G	Standard	Non-Locking	WC-2036-Stroke	25mm	N/A	225mm	WC-2038-Stroke	25mm	N/A	350mm	WC-2040-Stroke	25mm	N/A	350mm
04 (WEL4)	NPT	Standard	Locking	WC-2020-Stroke	25mm	N/A	125mm	WC-2024-Stroke	25mm	N/A	225mm	Not Available	N/A	N/A	N/A
05 (WEL5)	SAE	Standard	Locking	WC-2021-Stroke	25mm	N/A	125mm	WC-2025-Stroke	25mm	N/A	225mm	Not Available	N/A	N/A	N/A
06 (WEL6)	G	Standard	Locking	WC-2037-Stroke	25mm	N/A	125mm	WC-2039-Stroke	25mm	N/A	225mm	Not Available	N/A	N/A	N/A
07 (WEL7)	NPT	Duplex	Non-Locking	WC-2042-Total Stroke-Sub Stroke	13mm	7.5mm	N/A	WC-2048-Total Stroke-Sub Stroke	25mm	17.5mm	N/A	WC-2054-Stroke	25mm	7.5mm	N/A
08 (WEL8)	SAE	Duplex	Non-Locking	WC-2043-Total Stroke-Sub Stroke	13mm	7.5mm	N/A	WC-2049-Total Stroke-Sub Stroke	25mm	17.5mm	N/A	WC-2055-Stroke	25mm	7.5mm	N/A
09 (WEL9)	G	Duplex	Non-Locking	WC-2044-Total Stroke-Sub Stroke	13mm	7.5mm	N/A	WC-2050-Total Stroke-Sub Stroke	25mm	17.5mm	N/A	WC-2056-Stroke	25mm	7.5mm	N/A
10 (WEL10)	NPT	Duplex	Locking	WC-2045-Total Stroke-Sub Stroke	13mm	7.5mm	N/A	WC-2051-Total Stroke-Sub Stroke	25mm	17.5mm	N/A	Not Available	N/A	N/A	N/A
11 (WEL11)	SAE	Duplex	Locking	WC-2046-Total Stroke-Sub Stroke	13mm	7.5mm	N/A	WC-2052-Total Stroke-Sub Stroke	25mm	17.5mm	N/A	Not Available	N/A	N/A	N/A
12 (WEL12)	G	Duplex	Locking	WC-2047-Total Stroke-Sub Stroke	13mm	7.5mm	N/A	WC-2053-Total Stroke-Sub Stroke	25mm	17.5mm	N/A	Not Available	N/A	N/A	N/A
13 (WEL13)	NPT	Double Force	Non-Locking	WC-2061-Stroke	25mm	N/A	225mm	WC-2064-Stroke	25mm	N/A	350mm	Not Available	N/A	N/A	N/A
14 (WEL14)	SAE	Double Force	Non-Locking	WC-2062-Stroke	25mm	N/A	225mm	WC-2065-Stroke	25mm	N/A	350mm	Not Available	N/A	N/A	N/A
15 (WEL15)	G	Double Force	Non-Locking	WC-2063-Stroke	25mm	N/A	225mm	WC-2066-Stroke	25mm	N/A	350mm	Not Available	N/A	N/A	N/A

Stroke Notes

For Duplex Cylinder Type WC-####-{Total Stroke + A}-{Sub Stroke +B}.

Note That The First Stroke In The Slide Part # Is The Sub Stroke While The Total Stroke Is The Sum Of The Two Strokes In The Slide Part #.

Example: Slide Model Number HDS75-25-125-WEL7; Total Stroke is 25+125=150mm, Cylinder strokes are: {150+25=175} and {25+17.5=32.5}

Order Cylinder As WC-2054-175-32.5

Some cylinders have a minimum stroke. For shorter stroke slides order the Min stroke cylinder.

P5 (PWS-50) Recommended Spare Parts

QTY Used Per Slide	Part Number:	Description	Manufacturer
4	PWS50E14-Assy	Bearing Assembly	Welker
1	See Cylinder Options	Pneumatic Cylinder	Welker
2	SC650M-9	Shock Absorber	Ace
4	OR-568-034BN70	O-Ring	Martin Fluid Power

P7 (PWS-75) Recommended Spare Parts

QTY Used Per Slide	Part Number:	Description	Manufacturer
4	PWS75E14-Assy	Bearing Assembly	Welker
1	See Cylinder Options	Pneumatic Cylinder	Welker
4	SC650M-9	Shock Absorber	Ace
2	OR-339BN70	O-Ring	Martin Fluid Power

H7 (HDS-75) Recommended Spare Parts

QTY Used Per Slide	Part Number:	Description	Manufacturer
4	PWS75E14-Assy	Bearing Assembly	Welker
1	See Cylinder Options	Pneumatic Cylinder	Welker
4	MC4525-M4	Shock Absorber	Ace
2	OR-339BN70	O-Ring	Martin Fluid Power

R2 (PRS25) Recommended Spare Parts

QTY Used Per Slide	Part Number:	Description	Manufacturer
4	See R2 Bearing Note	Bearing carriage	See Bearing Note
2	See R2 Bearing Note	Rail	See Bearing Note
1	See Cylinder Options	Pneumatic Cylinder	Welker
4	SC650M-9	Shock Absorber	Ace
2	PRS25E19-OAL; OAL=500+STROKE	Shroud	Welker

R2 Bearing Note: Square rail bearing assemblies come from multiple suppliers and are interchangeable.

The part numbers per manufacturer are:

	Bearing Carriage; (2) per Rail:	Rail; (2) per slide:	OAL
THK	HSR25R1SS	HSR25+{OAL}L; G=20mm	330+stroke
INA	F-394037	TKVD25-G3-HJ/ {OAL}-20	330+stroke
Schneeberger	BMC25-G3-V1	BM25-C2-{OAL}-20-G3-V1	330+stroke

CS2 Recommended Spare Parts

QTY Used Per Slide	Part Number:	Description	Manufacturer
4	See CS2 Bearing Note	Bearing carriage	See Bearing Note
2	See CS2 Bearing Note	Rail	See Bearing Note
1	See CS2 Actuator Options	Pneumatic Cylinder	Welker
1	91054 (Actuator opt 10 only)	Lead Nut	Roton
1	CS2E10 (Actuator opt 10 only)	Lead Screw	Welker