

Heavy Duty Jackscrew Overrides

Jackscrew manual overrides for Automax heavy-duty actuators provide a low-cost, dependable method for manually operating the actuator. The jackscrew override consists of either one or two acme threaded jackscrew pushers to manually stroke the actuator. Double acting actuators require two jackscrew pushers to manually override the actuator in both directions. Spring return actuators require one jackscrew to operate the actuator against the spring.

Note: The Automax jackscrew override must **not** be used as a travel stop.

INSTALLATION

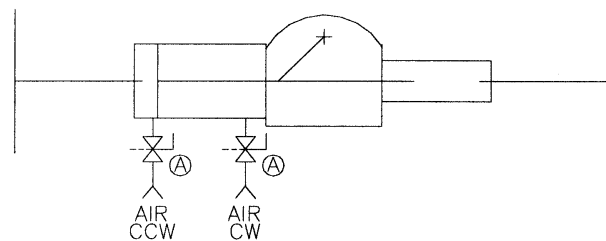
Automax jackscrew overrides are supplied as a complete integral component of the heavy duty actuator. No additional customer installation is required. See Automax Heavy Duty bulletin B00032 for instructions on installing Heavy Duty actuator into service.

OPERATION

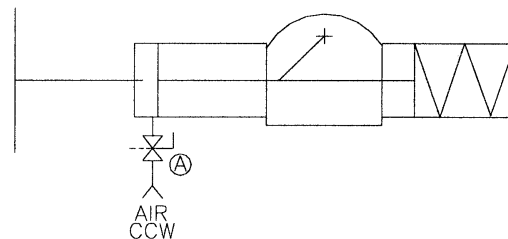
Pneumatic Operation:

1. Back jackscrews completely out by rotating handwheel counter clockwise. *Note: failure to return jackscrews to stored position before operating actuator will damage actuator.*
2. Seal jackscrew on pneumatic cylinder by applying a thin coat of Loctite #59231 Pipe Sealant (or equivalent) to tapered portion of teflon thread seal and to threads. Tighten thread seal 1/8 turn past hand tight.
3. Lock thread seal in place by tightening steel lock nut 1/8 turn past hand tight.
4. Open dump valves 'A' on pneumatic cylinder.
5. Connect air supply to actuator and operate.

Double Acting Jackscrew Operation



Spring Return Jackscrew Operation

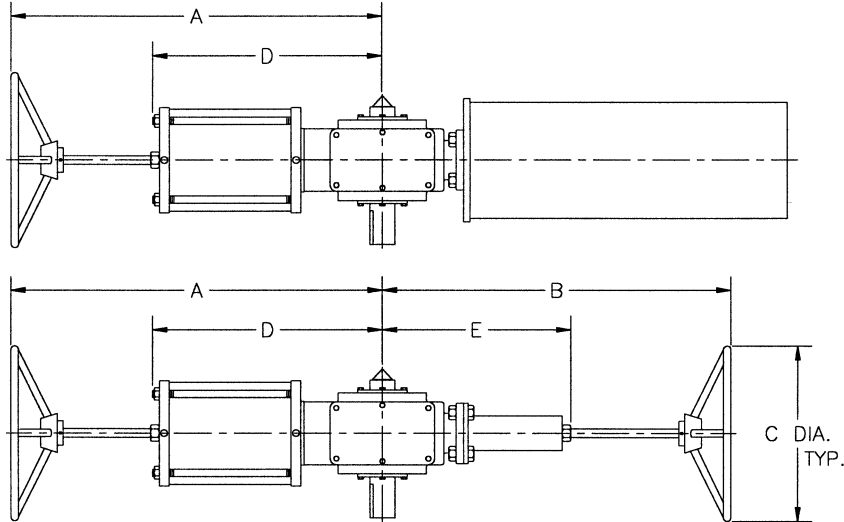


Manual Operation:

For double acting actuator, determine which jackscrew to operate to override actuator. On a standard DA unit, the pressure group jackscrew overrides the counter-clockwise direction. Make sure both jackscrews are completely backed out (handwheel counter-clockwise) before attempting to override.

1. Close dump valves 'A' on pneumatic cylinder clockwise to block supply air pressure and vent cylinder.
2. Loosen jackscrew locknut and thread seal. Turn jackscrew locknut and thread seal back the length of the jackscrew.
3. Turn handwheel clockwise to override actuator.
4. Back jackscrews completely out before resuming pneumatic operation.

JACKSCREW OVERRIDE DIMENSIONAL DATA



**SR/DA Jackscrew Manual Override
Overall and Handwheel Dimensions**

Dim.	R2	R310	R312	R314 R316	R414 R416
A	33.88	37.19	37.19	41.50	50.63
B	33.00	35.19	35.19	37.75	44.38
C	14.00	18.00	24.00	30.00	30.00
D	19.82	24.00	24.00	24.75	32.12
E	17.01	22.00	22.00	22.00	29.50

Note: Jackscrew shown in fully retracted position (hand-wheel full counter-clockwise). For complete actuator dimensions, see Heavy Duty Actuator Bulletin.

MAINTENANCE

Disassembly Procedures

1. Disconnect air and electric supply from actuator.
2. Remove all accessories from actuator and dismount from valve.

Note: See Heavy Duty Actuator Bulletin B00032 for complete instructions on actuator disassembly.

Jackscrew Components

Cylinder Side

1. Remove cylinder endcap from actuator.
2. Remove jackscrew pusher bolt (11) and washers (9)(10) from jackscrew (17).
3. Pull off jackscrew pusher (12).
4. Thrust bearing (8) is sandwiched between two thrust washers (7). Remove thrust washers (7) and thrust bearing (8).
5. Remove thrust washer collar (13) (R3 and R4 only). Back jackscrew (17) out of cylinder head, by turning hand-wheel counter-clockwise.
6. Remove thread collar retaining bolts (6) and washers (5). Remove thread collar (14). Remove o-ring (4) from endcap.
7. Remove thread seal (15) from jackscrew (17).

Rod Cover Side

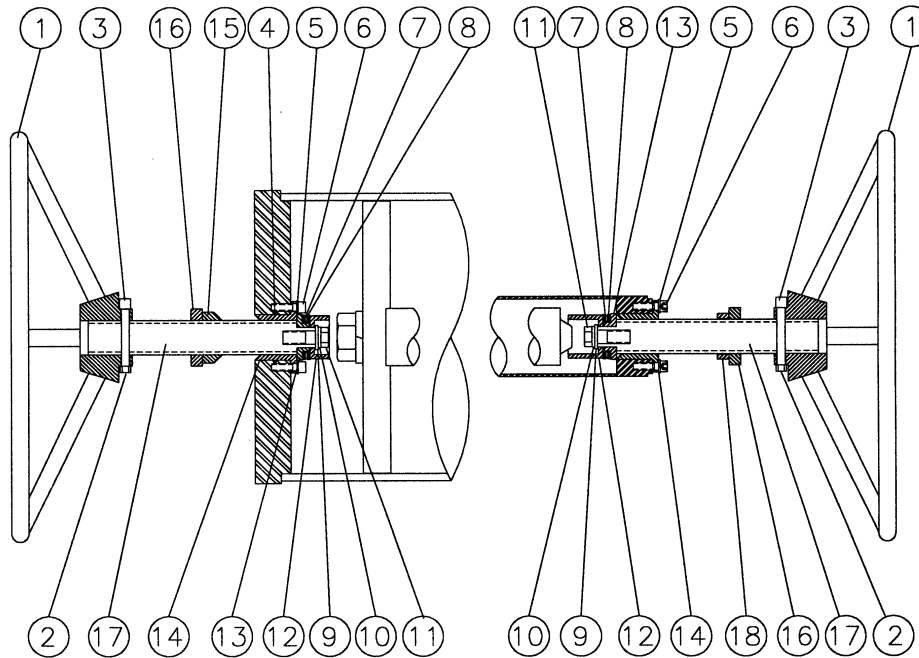
1. Remove rod cover assembly.
2. Thread jackscrew (17) completely into rod cover (turn handwheel clockwise) to allow access to jackscrew pusher (12).
3. Remove jackscrew pusher bolt (11) and washers (9)(10) from jackscrew (17).
4. Pull off jackscrew pusher (12).
5. Thrust bearing (8) is sandwiched between two thrust washers (7). Remove thrust washers (7) and thrust bearing (8).
6. Remove thrust washer collar (13) (R3 and R4 only). Back jackscrew (17) out of rod cover, by turning hand-wheel counter-clockwise.
7. Remove thread collar retaining bolts (6) and washers (5). Remove thread collar (14).

Reassembly Procedures

1. Inspect all parts for wear and replace any worn parts as needed. Normally, all seals and gaskets should be replaced when reassembling an actuator.
2. Clean and grease all components with a multi-purpose "polymer" fortified grease, such as DuBois Chemical MPG-2.
3. Reverse the disassembly procedures to reassemble. See

Heavy Duty Actuator IOM (Bulletin B00032) for additional information.

4. Recommended spare parts are shown in Parts and Materials section below.
5. Before operation, back jackscrews completely out. Test the actuator for smooth operation and absence of air leakage before re-installing.



Item	Description	Material	DA Qty	SR Qty
1	Handwheel	Steel	2	1
2	Nut	Steel	2	1
3	Bolt	Steel	2	1
4	O-ring	Nitrile	1*	1*
5	Washer	Steel	12	6
6	Bolt	Steel	12	6
7	Thrust Washer	Steel	4*	2*
8	Thrust Bearing	Steel	2*	1*
9	Washer	Steel	2	1
10	Washer	Steel	2	1
11	Bolt	Steel	2	1
12	Jackscrew Pusher	Steel	2	1
13	Thrust Washer Collar	Steel	2†	1†
14	Jackscrew Thread Collar	Bronze	2	1
15	Thread Seal	Teflon‡	1*	1*
16	Locknut	Steel	2	1
17	ACME Jackscrew	Steel	2	1
18	Spacer	Steel	1	0

Seal Kits

Buna - R(Actuator Base Model)J-SKB
 Viton - R(Actuator Base Model)J-SKV
 i.e.: Buna Seal kit for R208SR60J is
 R208SRJ-SKB

† Not required for R2 models
 ‡ R2 model Material is Steel/Nitrile
 * Recommended Spare Parts



Automax Valve Automation Systems

Installation, Operation and Maintenance Instructions

Flowserve Corporation
Flow Control Division

765 South 100 East
Provo, Utah 84606
www.flowserve.com

Phone: 801 373 3028
Facsimile: 801 489 2228
Email: actuators@flowserve.com

THIS PAGE INTENTIONALLY LEFT BLANK