



ROUTINE JACK MAINTENANCE BULLETIN

RJM 191

1 OF 3

TO PROVIDE COMPLETE INFORMATION ON SERVICING ColumbusJACK/REGENT QUALITY GROUND HANDLING EQUIPMENT

PROCEDURE FOR REMOVING / INSTALLING AXLE JACK RAMS DOUBLE ACTING AXLE JACKS ONLY

When removing rams from double acting axle jacks during maintenance operations, the following procedure is recommended: (Refer to jack maintenance manual)

I. Procedure if jack is operational:

- 1) Connect air source to air pump on jack and close jack release valve.
- 2) Operate jack and extend first stage (largest) ram approximately one inch.
- 3) Install cylinder bushing spanner wrench.
- 4) Unscrew cylinder bushing. Note: Block jack frame to prevent it from turning while removing bushing.
- 5) Extend screw extension until cup adapter setscrew is visible. Loosen setscrew, remove adapter and install ram removal tool. Tighten setscrew.

NOTE: PLACE CYLINDER ASSEMBLY OVER / IN A DRIP PAN TO CATCH HYDRAULIC FLUID LEAKAGE.

DO NOT OPEN JACK RELEASE VALVE WITH HOSES DISCONNECTED.

- 6) Vent cylinder assembly by disconnecting both hoses attached to the cylinder.
- 7) Connect ram removal tool to an overhead lifting device.

WARNING: KEEP CLEAR WHILE LIFTING RAM(S).

- 8) Using the overhead lifting device, carefully remove the rams and cylinder bushing together as a unit.

II. Procedure if jack is not operational:

- 1) Close jack release valve.



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RJM 191

2 OF 3

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PROCEDURE FOR REMOVING / INSTALLING AXLE JACK RAMS (CONTINUED) DOUBLE ACTING AXLE JACKS ONLY

**NOTE: PLACE CYLINDER ASSEMBLY OVER / IN A DRIP PAN TO
CATCH HYDRAULIC FLUID LEAKAGE.**

**DO NOT OPEN JACK RELEASE VALVE WITH HOSES
DISCONNECTED.**

- 2) Vent cylinder assembly by disconnecting both hoses attached to the cylinder.
- 3) Extend screw extension until cup adapter setscrew is visible. Loosen setscrew, remove adapter and install ram removal tool. Tighten setscrew.
- 4) Install cylinder bushing spanner wrench.
- 5) Connect ram removal tool to an overhead lifting device.

WARNING: KEEP CLEAR WHILE LIFTING RAM(S).

- 6) Using the overhead lifting device, carefully extend the rams and cylinder bushing together as a unit until the first stage is extended approximately one inch.
- 7) Unscrew cylinder bushing. Note: Block jack frame to prevent it from turning while removing bushing.
- 8) Using the overhead lifting device, carefully remove the rams and cylinder bushing together as a unit.

When installing jack rams during maintenance operations, the following procedure is recommended: (Refer to jack maintenance manual)

- 1) Install new seals (Quad Ring, O-Rings and Backup Rings) on rams and bushing. (Reference RJM 149)
- 2) Apply seal lubricant (Dow Corning #55 or equal) to all seals, ram pistons, the inside diameter of the cylinder, including the O-Ring groove in the inside diameter of the cylinder, and the O-Ring step on the bottom of the cylinder bushing.



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RJM 191

3 OF 3

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PROCEDURE FOR REMOVING / INSTALLING AXLE JACK RAMS (CONTINUED) DOUBLE ACTING AXLE JACKS ONLY

- 3) Install cylinder bushing onto first stage ram, approximately two inches from the top of the ram.
- 4) Install new O-Ring seal into groove on the inside diameter of the cylinder.
- 5) Install cylinder bushing spanner wrench.
- 6) Connect ram removal tool to an overhead lifting device.

WARNING: KEEP CLEAR WHILE LIFTING RAMS AND KEEP HANDS AND FINGERS CLEAR WHILE LOWERING THE RAMS INTO THE CYLINDER.

- 7) Using an overhead lifting device, carefully lower the rams and bushing into the cylinder as a unit, until the bushing contacts the top of the cylinder.
- 8) Block frame to prevent it from turning while tightening cylinder bushing.
- 9) Tighten bushing until it contacts the O-Ring, located in the inside diameter of the cylinder. Tighten bushing approximately 1/2 turn, then loosen bushing approximately 1/4 turn to relax and seat the o-ring. Repeat tightening 1/2 turn, then loosening 1/4 turn until the bushing is completely installed.
- 10) Using the overhead lifting device, lower ram assembly completely into the cylinder.
- 11) Remove the lifting device from the ram removal tool. Remove ram removal tool, install adapter and tighten setscrew.
- 12) Connect both hydraulic hoses to the cylinder.
- 13) Check hydraulic fluid reservoir and fill as required.
- 14) Operate jack and cycle rams several times to bleed any entrapped air from the hydraulic system.
- 15) Perform "Recommended Annual Jack Certification Procedure" per RJM 147.
- 16) Jack is now ready for service.