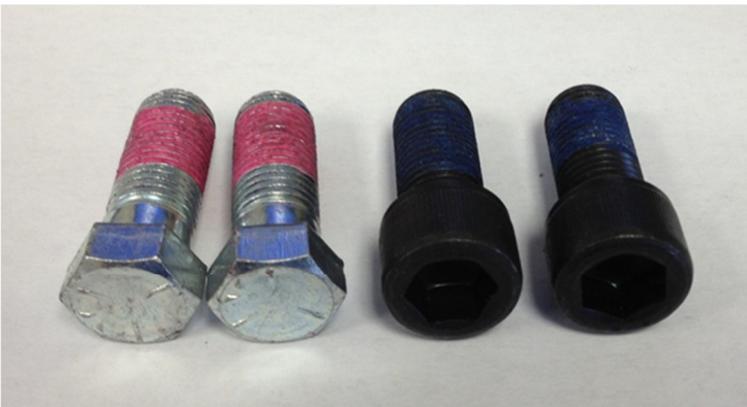


**UFP DB35 Caliper General Information:** DB-35 calipers are essentially two subassemblies, which are the caliper “body” (which contains the piston/hydraulic mechanism/pads) and the “anchor bracket” mount on which it slides in/out. The caliper is designed so that the “body” only provides the clamping effect, and the braking torque is carried directly from the two brake pads through the “anchor bracket” to the trailer axle. Generally, there is no need to separate the caliper “body” from the caliper “anchor bracket” as the calipers are serviced as a complete unit.

**Brake Lines:** In order to properly apply and release, the caliper bodies need to be able to slide in and out freely about ½” on the integral caliper slider pins. UFP suggests the hydraulic brake line connection to the caliper inlet be made with a flexible brake hose, or a very flexible metal brake line. Flexible hoses are recommended any time relative line movement is expected or on lines less than 24” long going directly to calipers. Metal brake lines can be used if they have a generous “Z” or a corkscrew spiral in the line to make them spring in and out easily about ½” at the caliper end. Where brake line flexibility issues are seen are most typically where metal lines are run very neatly and tight against a leaf spring axle tube. It is extremely difficult to get sufficient flexibility in a short (18” or less) metal line, or one run with a tight diameter (less than 3”) expansion loop, or a line run very tightly to the axle with small radius bends.

**Brake Line Fittings:** With the exception of the parking brake version, the UFP DB-35 calipers are “universal,” with left hand and right hand versions only differing in how the brake line inlet and bleeder screw fittings are installed. There are a wide variety of those fittings and possible hydraulic brake line arrangements. It is perfectly acceptable to reverse bleeder screw and brake inlet fittings to convert a “left” hand caliper to a “right” hand caliper. It is a good practice to replace the soft copper washers when swapping fittings, but not specifically necessary if the original washers reseal when retightened. The key point is that the calipers must be installed on the axle in a relatively vertical orientation so that the bleeder screw is “up” so that air can be vented from the highest point on the caliper to bleed the brakes effectively. If the banjo bolt has to be removed to address the brass inlet fitting, retighten to 38-45 foot pounds.

**Caliper Installation:** All DB-35 caliper versions are installed using 7/16”-20 thread bolts to attach the caliper “anchor bracket” directly to the rear two holes of a four hole brake flange provided on an axle. UFP currently supplies two styles of bolt, part number 33090, which is a hex head bolt; and part number 33092, which is a socket head bolt.

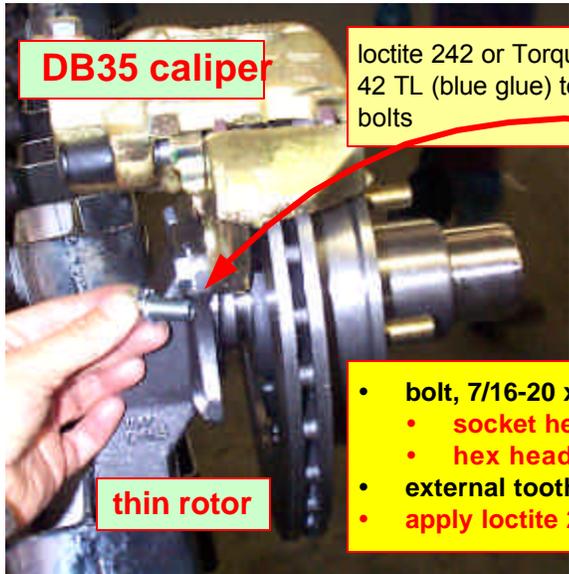


Lock washers are not normally used in production, but are optional. The socket head screws are used where there is limited area for a wrench, most typically on “straight” 2x3 leaf spring axles. Properly torquing these bolts to 55 foot pounds and using Loctite 242 or equivalent thread locking compound on the threads is extremely important. The bolts come pre-patched with locking compound on them, but UFP strongly recommends liquid Loctite be applied to them (and all reused fasteners) immediately prior to their installation. Start the two bolts by hand to be sure they are not cross threaded, then tighten them fairly quickly to the 55 foot pound torque. Don’t stop too long in the middle of tightening, or alternate tightening the bolts little by little, because if there is a long delay in seating the bolts, the locktite will cure prematurely and you will hit the 55 foot pounds torque setting before the bolt head is solidly seated against the brake flange.

**Final Check:** At time of wheel installation: Visually verify that both brake pads were installed with their friction material towards the rotor. DB-35 calipers are designed to fit inside a 13” wheel, and there is a special size designed to fit inside a 10” wheel. Because wheels are occasionally found with undersize diameter, or excessive runout, after installing and torquing a new 13” or 10” wheel, always rotate the wheel one rotation to verify wheel/caliper clearance.

# ASSEMBLY PROCEDURE

Description	<b>INSTALL DB-35 CALIPER FOR THIN ROTOR</b>	1/1
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loctite 242 or Torque 42 TL (blue glue) to bolts

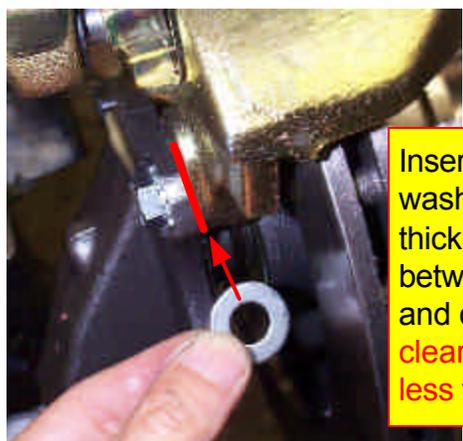


air wrench

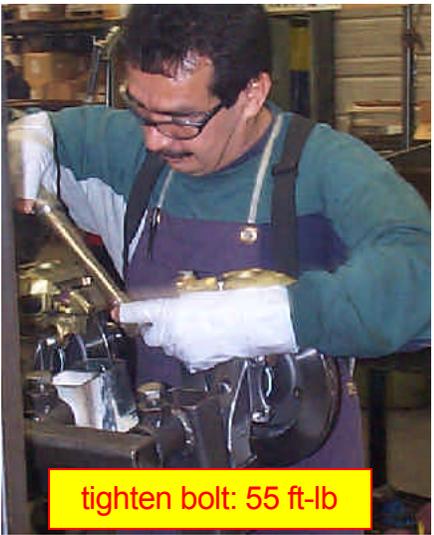
- bolt, 7/16-20 x1"
  - socket head for drop axle only.
  - hex head for all other axles.
- external tooth washer (Optional).
- apply loctite 242 and torq to 55 ft-lb.



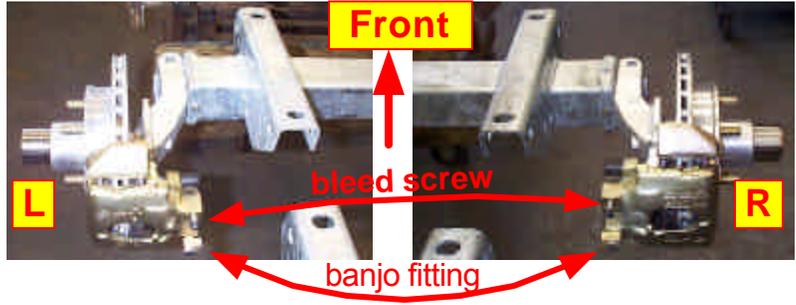
check rotor clearance. (front only)  
spec.: > .065



Insert a flat washer (.07" thickness) between flange and caliper if clearance is less than .065.



tighten bolt: 55 ft-lb



# Example Flexible Loop

Loop Turned 90 degrees so it acts like  
a spring

