

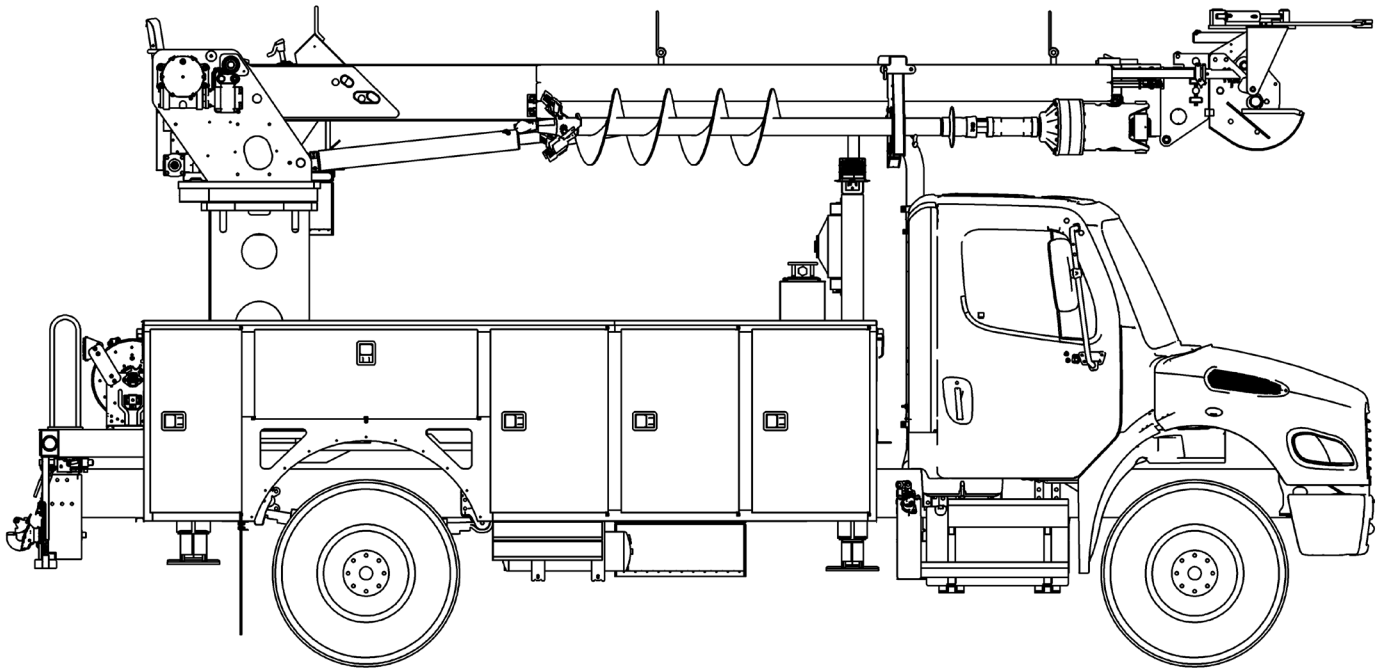


TEREX®

TECH TIPS

REMOVING BROKEN FASTENERS

NO. 201



**SERVICE CALL:
REMOVING BROKEN FASTENERS**



**MODEL(S):
ALL TEREX UTILITIES EQUIPMENT**



TOOLS NEEDED:
DRILL
LEFT-HAND DRILL BITS
TAP
PUNCH
HAMMER

TEREX UTILITIES TECHNICAL SUPPORT TEAM

PHONE: 1-844-TEREX4U (1-844-837-3948) | EMAIL: UTILITIES.SERVICE@TEREX.COM



DANGER

Failure to obey the instructions and safety rules in the appropriate Operator's Manual and Service Manual for your machine will result in death or serious injury.

Many of the hazards identified in the Operator's Manual are also safety hazards when maintenance and repair procedures are performed.

DO NOT PERFORM MAINTENANCE UNLESS:

- ✓ You are trained and qualified to perform maintenance on this machine.
- ✓ You read, understand and obey:
 - manufacturer's instructions and safety rules
 - employer's safety rules and worksite regulations
 - applicable governmental regulations
- ✓ You have the appropriate tools, lifting equipment and a suitable workshop.

The information contained in this Tech Tip is a supplement to the Service Manual. Consult the appropriate Service Manual of your machine for safety rules and hazards.



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Fastener extends above surface

Try to loosen with a pick or a punch. If that doesn't work, use a locking pliers (vise-grip) to clamp on the fastener, turning both in and out to loosen.

Use penetrating oil to aid in loosening the fastener.

Fastener is below the surface

STEP 1

If the fastener is below the surface or doesn't extend out enough to grip, it will need to be drilled out.

Flatten the broken surface and center punch. Using a left-hand drill bit, drill a small pilot hole through the fastener. Do not drill beyond the broken threads.

Once the hole has been drilled through, apply penetrating oil. Enlarge the hole in increments using left hand drill bits. The heat from drilling and oil will often spin the broken fastener out.

STEP 2

Apply penetrating oil onto the fastener. Continue enlarging the hole in increments, using left hand drill bits. The combination of heat from drill and the oil may spin the fastener out.

STEP 3

If the left-hand drill bit doesn't remove the fastener, drill to a size smaller than the threaded hole.

For a 3/8" bolt, do not go above 1/4" drill bit size.

Using an easy out, tap it into the hole. Continue tapping it as the wrench is gently turned.

STEP 4

Finally, drill the hole out re-thread it.

If the original drilled hole is centered on the threads, drill it out until the thread becomes visible and then use a tap to clean out the fastener threads. Turn the tap in and out and remove frequently to clean chips and prevent the tap from breaking.

If the hole is not centered, drill until the threads are visible and then use a punch to collapse the remaining part into the hole until it can be pryed out.

STEP 5

As a last resort, contact Terex Utilities to determine if a Heli-coil is allowed in the application.

STEP 6

Determine what caused the fastener to fail and take any necessary steps to correct.

Tips

Penetrating oil does not act instantly, best results achieved with giving the oil ample time to penetrate.

If the fastener was installed with Loctite, heat may need to be applied to soften the Loctite.



FOR FURTHER ASSISTANCE,
CONTACT THE TEREX UTILITIES TECHNICAL SUPPORT TEAM
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