OPERATOR'S MANUAL

Norbar Torque Tools

Power Tool Test Fixture and Annular Transducer Kit - 80036

Part Number 34530 | Issue 1 | Original Instructions (English)

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INTRODUCTION

This manual covers the setup and use of the Norbar Power Tool Test Fixture and Annular Transducer Kit - 80036. The Power Tool Test Fixture and Annular Transducer Kit is a simple, robust device that allows non-impacting power tools up to 6,000 lbf·ft / 8,100 N·m to be tested. A system comprises:

1 x Power Tool Test Fixture
1 x Socket & Adaptor Kit
1 x Annular Transducer – Calibrated from 100 – 6,000 N·m, extrapolation to 8,100 N·m
1 x Transducer Lead

IMPORTANT: THE TEST FIXTURE NEEDS TO BE CONNECTED TO AN APPROPRIATE NORBAR MEASURING INSTRUMENT – T-BOX™ 2, TTT OR TST – SOLD SEPRARATELY

SAFETY

IMPORTANT: DO NOT OPERATE THE SYSTEM BEFORE READING THESE INSTRUCTIONS. FAILURE TO DO SO MAY RESULT IN PERSONAL INJURY OR DAMAGE TO THE TOOL UNDER TEST.

IMPORTANT: NEVER USE THIS FIXTURE WITH AN IMPACT OR IMPULSE TOOL! DOING SO CAN RESULT IN DAMAGE TO THE KIT COMPONENTS AND/OR INACCURATE RESULTS

WARNING: DO NOT PLACE HANDS NEAR REACTION PINCH POINTS WHEN PLACING TOOL ON FIXTURE

Always use fixture mounted to a secure surface.

Tool reactions should always be between reaction points, keeping the reaction captive.

Safety glasses and gloves should be worn.

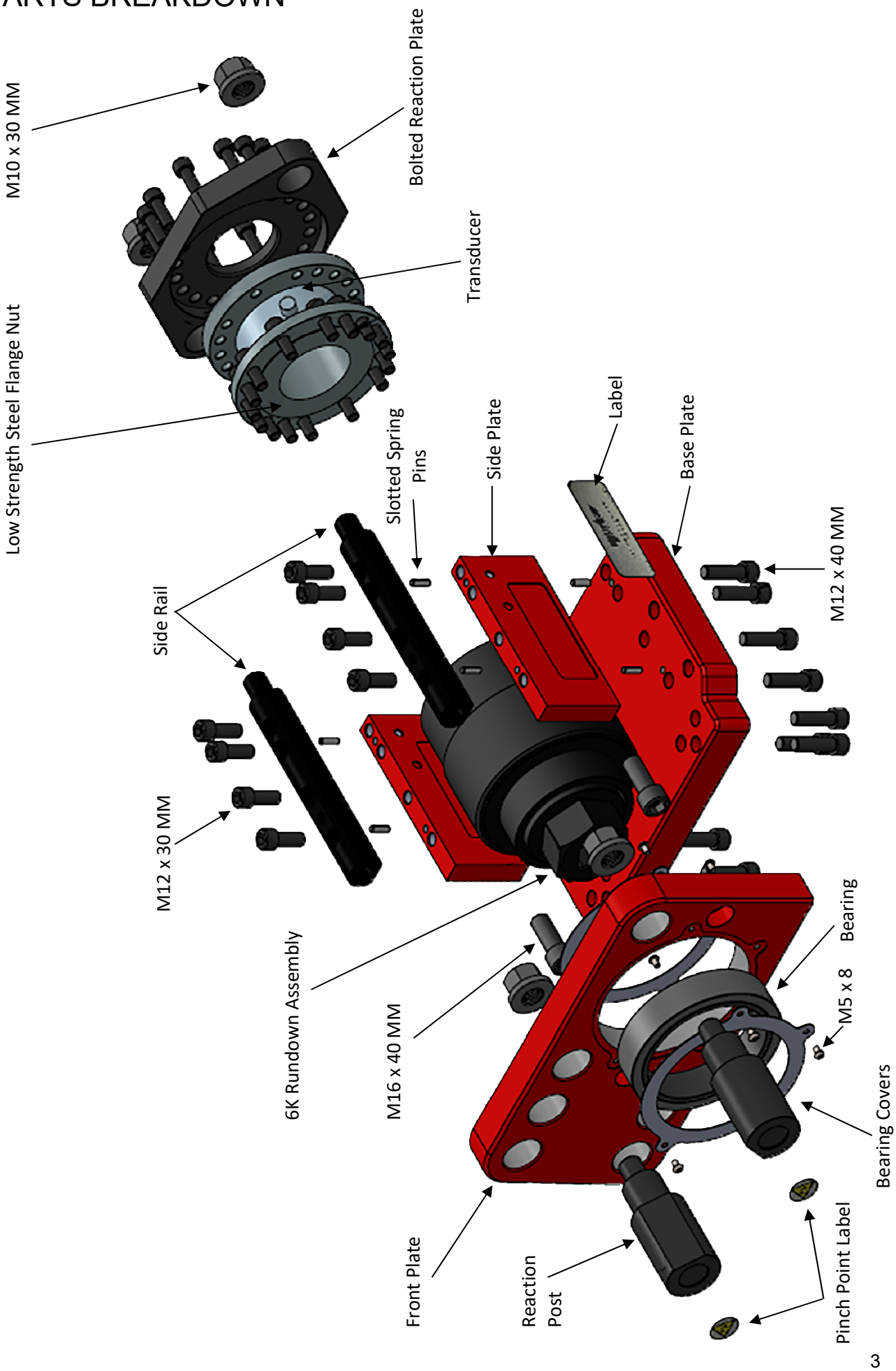
INSTALLATION INSTRUCTIONS

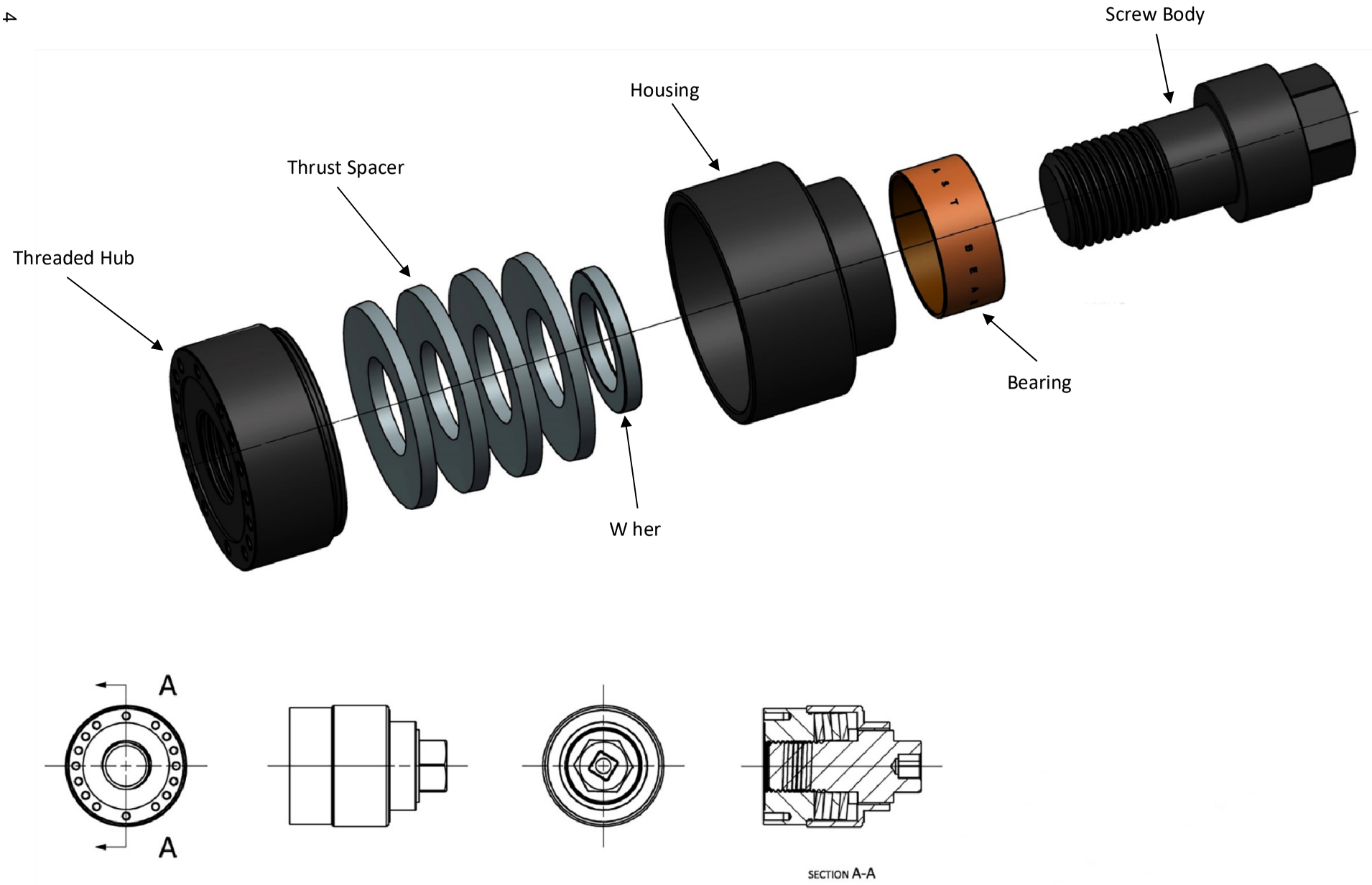
1. Unpack fixture, inspect and mount to a fixed, secure, heavy-duty surface using (6) ½” (or 12 mm) bolts (not included).

2. Back 2 ½” drive screw out. Bolt should be able to be turned by hand with ease when not tightened down.

3. Connect transducer to desired Norbar instrument (T-Box™ 2, TTT or TST). Refer to instrument manual for operation instructions.

PARTS BREAKDOWN




Screw Body
Housing
Thrust Spacer
Threaded Hub
Bearing
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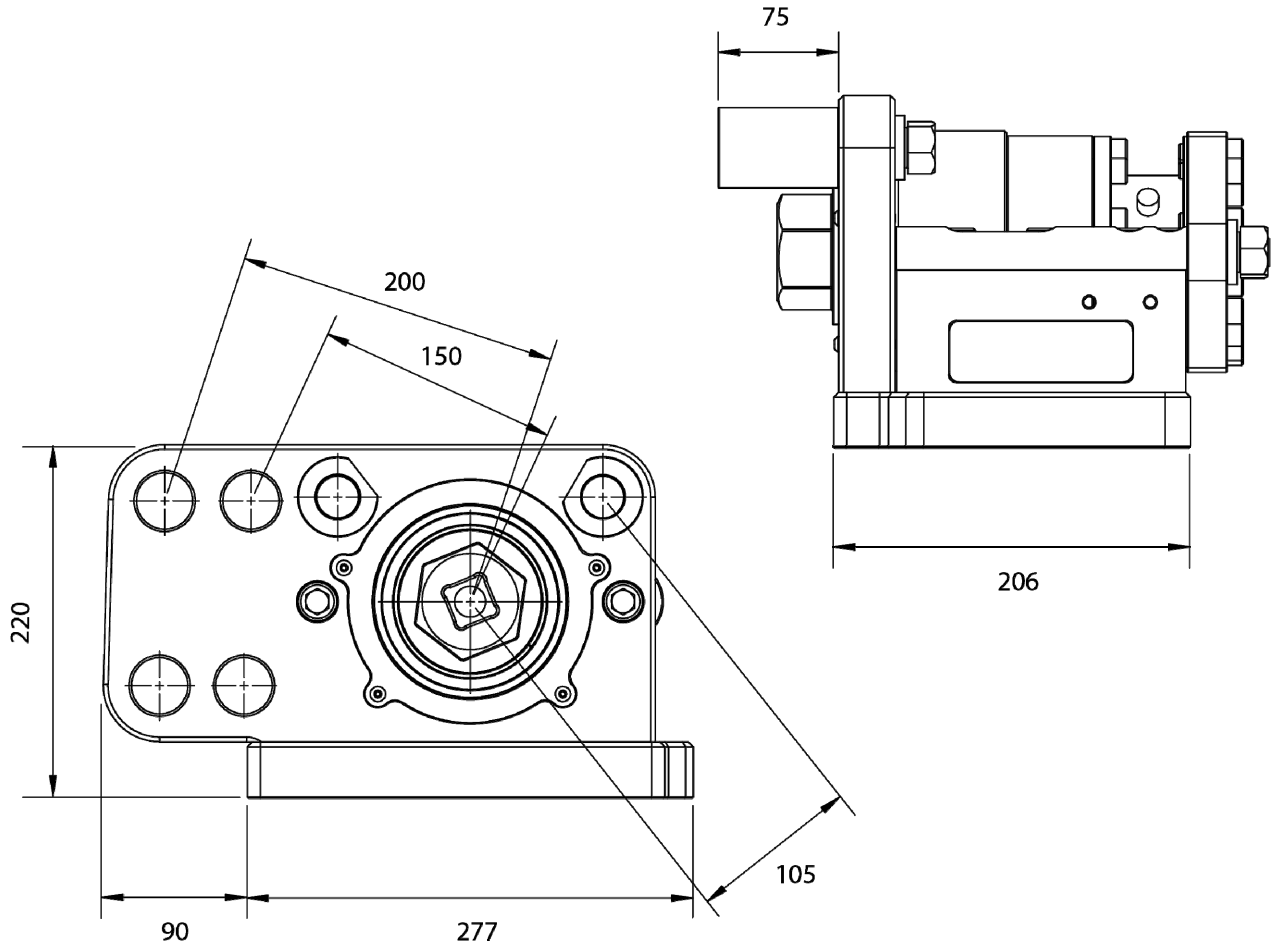
SECTION A-A

OUTLINE DRAWING



OPERATION

1. Set Norbar measuring instrument to the dial mode and zero (reset) readings. Refer to operator's manual supplied with the instrument for operating instructions.

2. Install reaction posts in desired position using mounting holes provided in the front plate. Tighten nut on back reaction post using a 30 mm box wrench or socket. Post should be set to the furthest point from the drive where the reaction still extends past the center of the post.

3. Verify that reaction is securely hitting a reaction post or a surrounding secure surface. Set tool and run the drive screw into the rundown.

4. After shutoff or stall, record reading.

5. Back off screw. Verify that once backed out, the screw turns freely. If the screw becomes difficult to turn, the thread may be damaged and the Threaded Hub and Screw Body components should be replaced.

6. Clear reading from display and repeat test as needed.

MAINTENANCE

Periodically the rundown should be carefully disassembled, inspected, and re-greased.

1. Remove drive screw from front of assembly.
2. Back off nuts on rear of fixture and slide the transducer off the back.
3. Remove the washer stack.

NOTE: Take note of the orientation of the washers

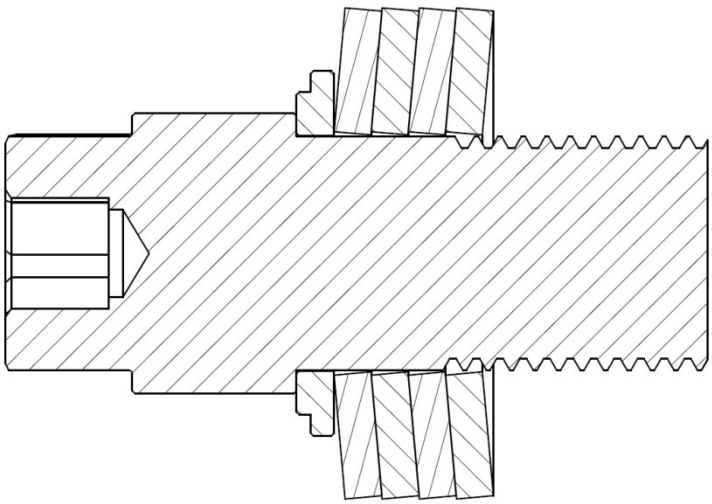
4. Clean and inspect all parts. Check threads on main screw and hub for galling or damage.
5. Lightly grease washers with a thick, high pressure, molybdenum grease, with a graphite additive.
6. Liberally coat the threads with a thick, high pressure, molybdenum grease, with a graphite additive.
7. Select a washer stack configuration from one of the options provided.
8. Reassemble and clean exterior of fixture.

WASHER STACK OPTIONS

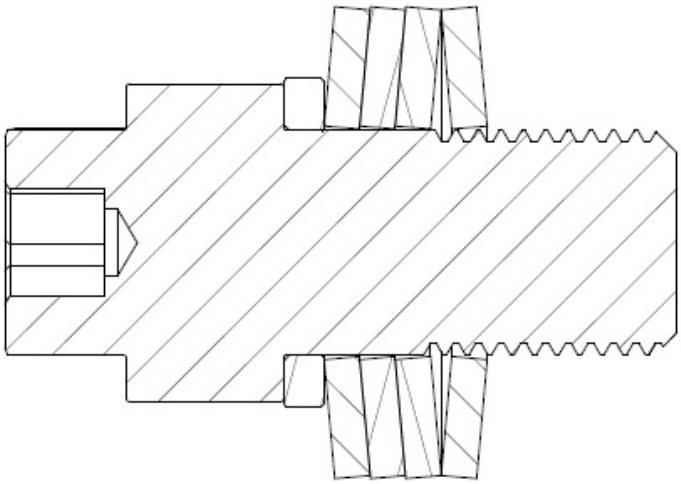
The spring washers included with the 80036 Power Tool Test Fixture and Annular Transducer Kit can be arranged in various combinations to produce different joint simulations. The kit is shipped with the washers configured to option #1.

IMPORTANT: EXCEEDING THE MAXIMUM TORQUE VALUE FOR ANY OF THESE WASHER STACK CONFIGURATIONS CAN RESULT IN PERMENANT DAMAGE TO THE WASHERS, BOLT, AND/OR RUNDOWN HOUSING

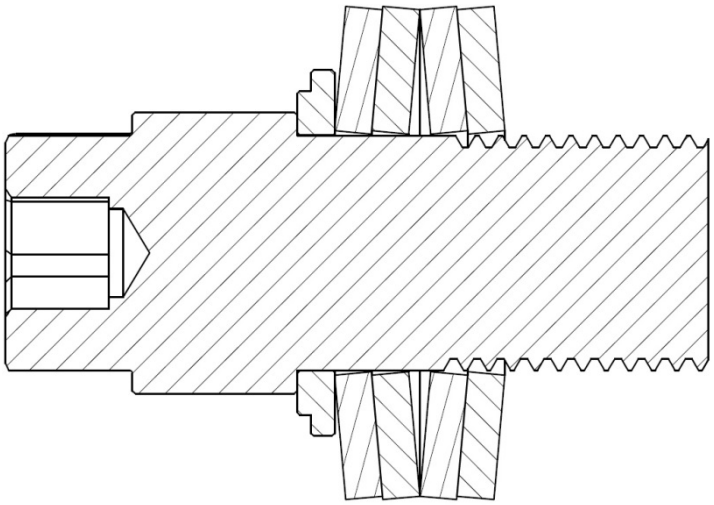
#1: 6,000 lbf·ft max. / 8,100 N·m max. 4 x 1 washer stack, 4 washers in the same direction.



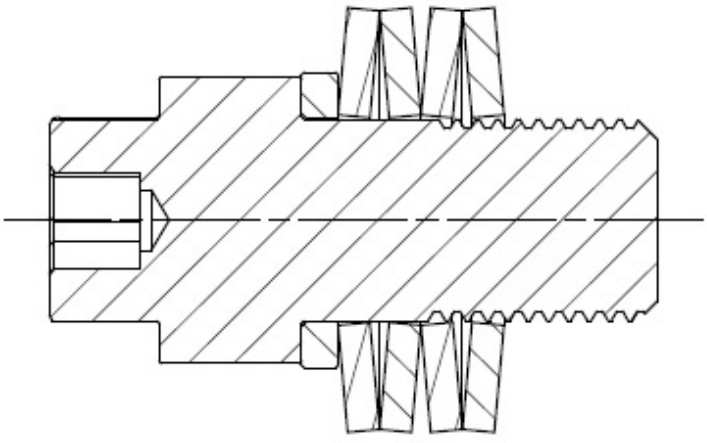
#2: 3,000 lbf·ft max. / 4,000 N·m max. 3 x 1 washer stack, 1 stack of 3 washers, opposing a single washer.

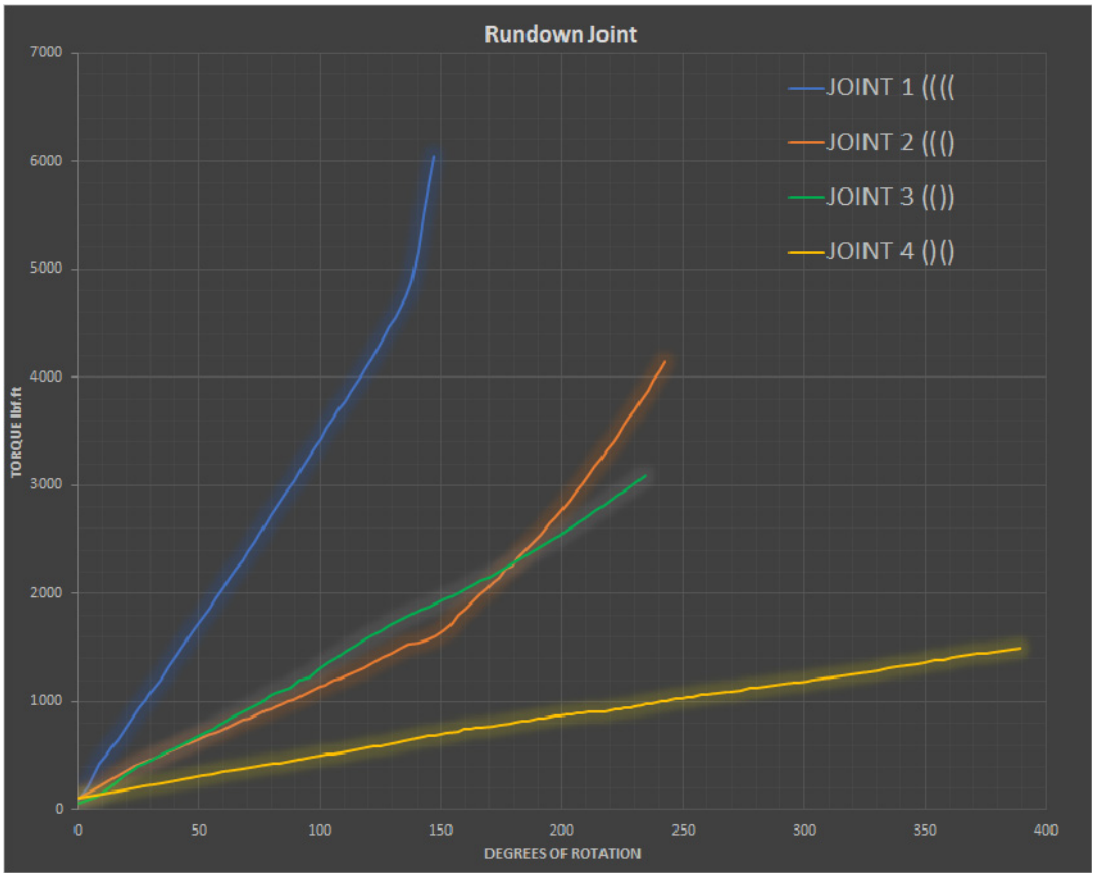


#3: 2,500 lbf·ft max. / 3,300 N·m max. 2 x 2 washer stack, 2 stacks of 2 washers each, opposing.

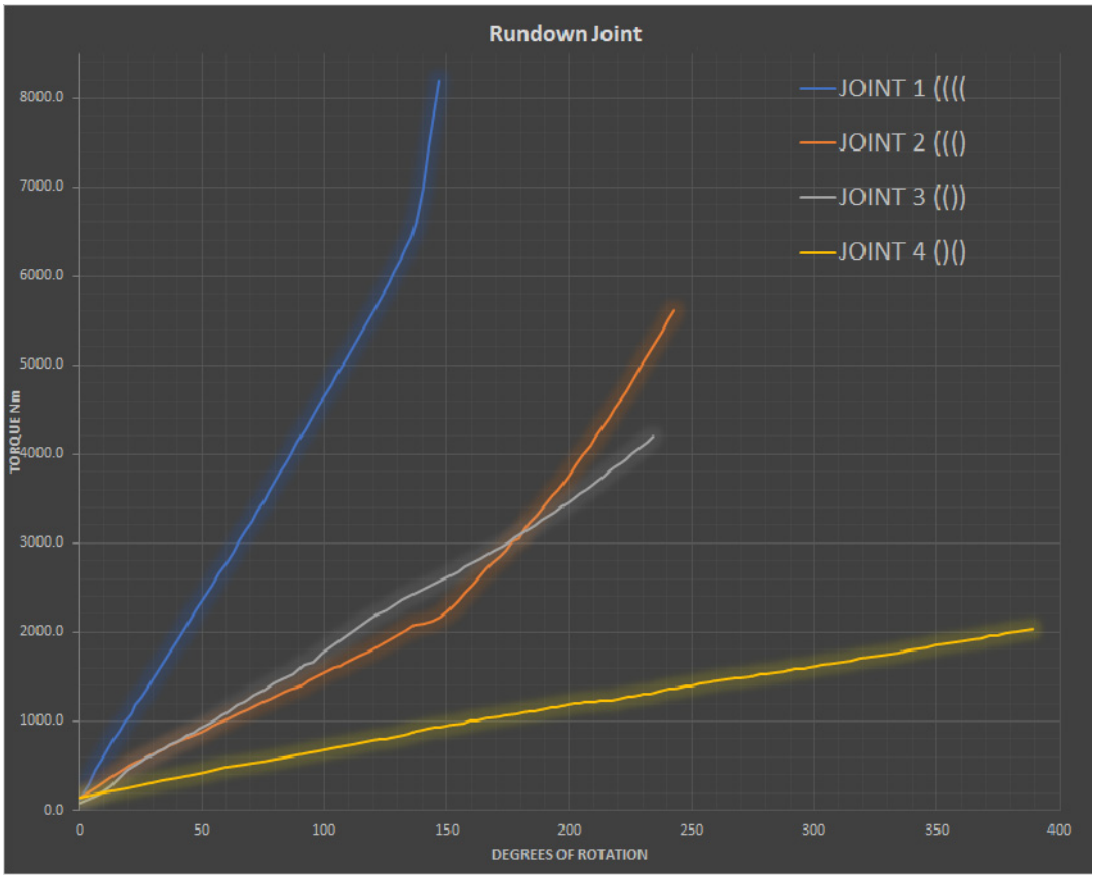


#4: 1,250 lbf·ft max. / 1,500 N·m max. 1 x 4 washer stack, 4 stacks of 1 washer each, opposing.





Rundown Joint lbf·ft



Rundown Joint N·m

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