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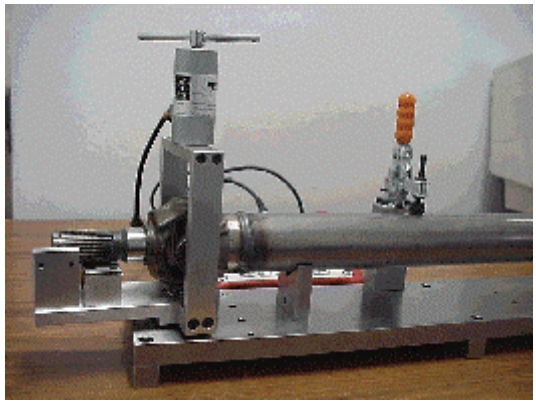
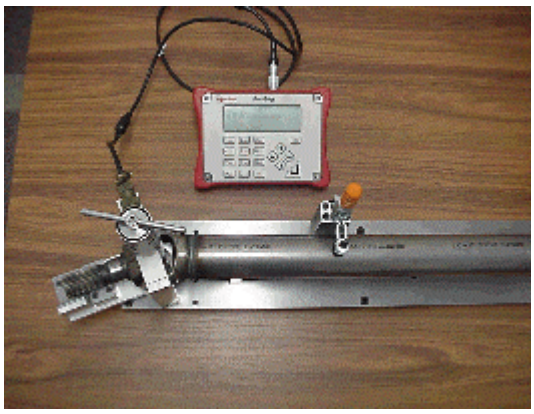
UNIVERSAL JOINT TEST FIXTURE

Norbar Torque Tools Australia have designed and built a Universal Joint Test fixture to be used with a Norbar 2.5 N.m static torque transducer and Pro-Log display instrument.



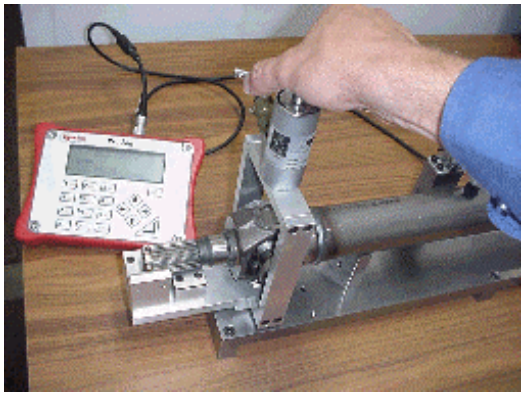
The design originated from a customer inquiry for a test unit which could accurately measure the torque to rotate assembled universal joints. This is important so that they maintain process control on the skating operation which will affect the joint stiffness in the final product.

The Test fixture consists of V – blocks to support the tail shaft and a clamp to hold it in position during testing. A swivel plate supports the stub yoke while the jig positions the spider precisely over the axis of the swivel plate. This allows a measurement to be taken of the torque required to rotate the universal joint stub yoke.



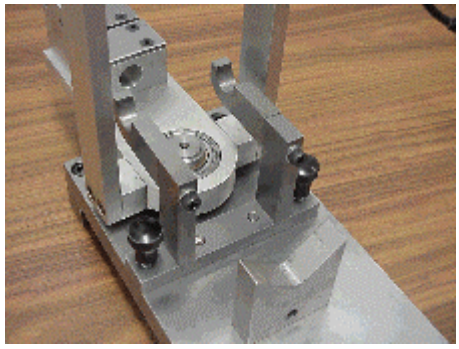
A 2.5 N.m static transducer is situated in line on the axis of the yoke bearing. By rotating the swivel plate by hand through the transducer a torque reading is obtained and recorded on the Pro-Log.

The Pro-Log is ideal for this application as upper and lower limits can be set and data stored for statistical analysis. An RS232 serial data output allows the down loading of readings.



A further feature of the test fixture is the detachable cradle for supporting the spider. This is so the torque can be checked on the stub yoke before it is finally assembled to the tail shaft assembly.

The fixture has been designed so as to have negligible frictional effects from the swivel plate bearings. This is so that the torque readings of the universal joint are not affected by the bearing friction in the fixture. The Pro-Log has the added ability to be able to zero out any fixture error, however small it may be. The swivel plate is made of aluminium to reduce weight and inertia.



The same principal could be applied to other applications and the testing of other components where an accurate torque measurement is required for statistical analysis or storage.

For further details contact your nearest Norbar branch.