TenarisHydril Wedge 563® Connection

Scope

These guidelines apply specifically to the use of TenarisHydril Wedge 563® connections. In the specific cases of connections with Tenaris dope-free technologies, this document addresses products sold and marked as Dopeless® and does not address the use of versions identified as Dopeless® 3.0 or Dopeless® 3.1. If the product has been procured with Dopeless® 3.0 technology refer to document GDL39217. If the product has been procured with Dopeless® 3.1 technology please contact our regional Technical Sales team.

This document should be used in conjunction with the TenarisHydril Running Manual, which is the main document applicable to the running of all TenarisHydril premium connections.

Tenaris Field Service Representatives can modify these guidelines when circumstances dictate. Implementation will only occur if the representative deems the modification to be non-detrimental to product integrity. All modifications need to be clearly explained and agreed with the client representative prior to implementation and fully documented in the running report.

References

- TenarisHydril Running Manual.
- Premium Connection Approved Thread Compounds FTD29356.

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- Recommended guidelines for the field inspection of TenrisHydril connections, GDL31457.

Equipment, Material & Documents

1. Verify the appropriate thread compound is available.

2. Refer to document FTD29356 for a list of compounds approved by Tenaris.

3. Latest version of the specific Product Data Sheet can be obtained from Tenaris website. In case this is not available, request the data sheet from the local Technical Sales representative or contact-tenarishydril@tenaris.com.

Pre-Running

1. Never move or handle pipe without the correct thread protectors securely in place.

2. Ensure connections are clean and free of all debris and / or contaminants, cleaning methods employed should conform to the recommendations contained within the TenarisHydril Running Manual.

3. Verify all pipe and accessories have genuine TenarisHydril manufactured connections.

4. Visually inspect thread and seal areas prior to running, ensuring no damage is evident.

5. On Dopeless® Technology connections, check condition of both pin and box coating ensuring no peel off or degradation has occurred.

6. Verify the compatibility of the Wedge 563® connection with accessories such as cement heads, safety valves, cross overs, etc.

7. Verify material grade of all accessories ensuring compatibility with main string.

Inspection

1. Inspection criteria for all Wedge Series 500™ connections is as outlined in the Field Service Operative Guideline GDL31457.

2. Pay particular attention to seal areas.

3. Ensure the pin nose has no raised metal.

4. For CB variant ensure seal ring groove is clear of debris or damage which may preclude correct installation of the CB ring.

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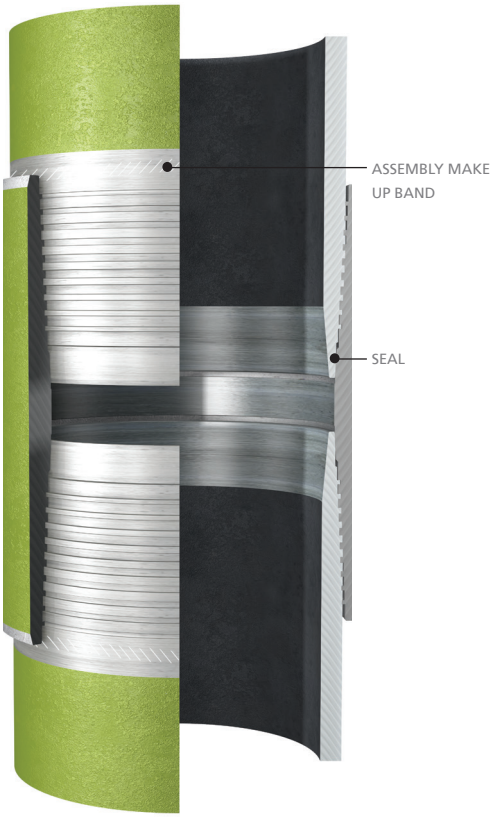
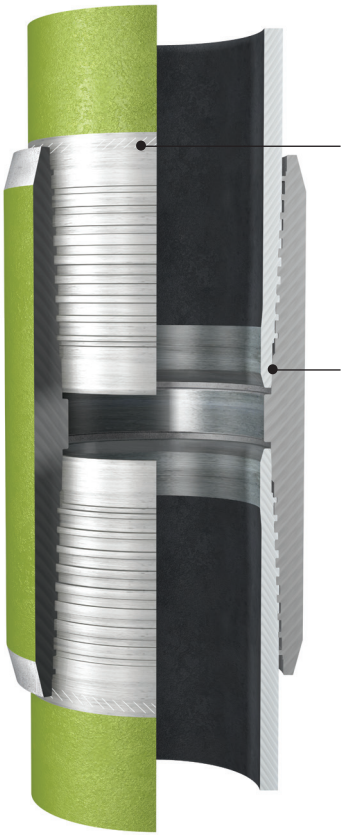
Wedge 563® Casing Configuration



Wedge 563® Tubing Configuration

Recess Free Bore (RFB).



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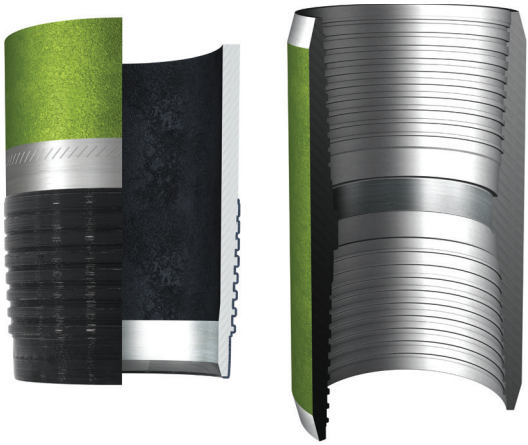
Thread Compound Application

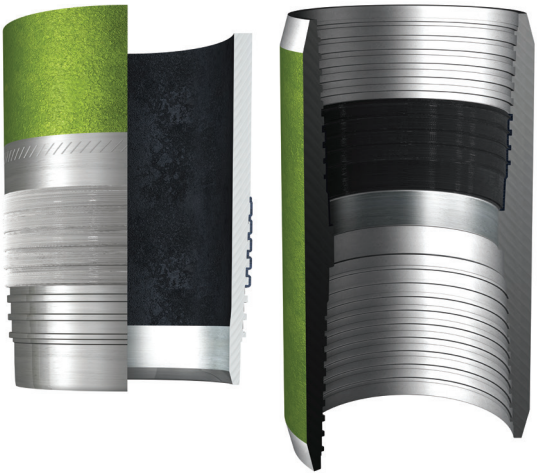


1. Apply a thin coating of thread compound on the full pin end only, threads, seal and pin nose, the thread form should be clearly visible.

2. Do not apply running compound to the box end.

3. Thread compound should be cleaned from the box if received 'rig ready'.

Thread Lock Application



Connections must be clean and dry when applying thread lock.

1. Thread lock should be applied to 50% of the threads at the back of the pin connection.

2. Running compound should then be applied to the threads and seal at the back of the box connection.

3. When assembling standard non Dopeless® Technology connections with thread lock use standard non Dopeless® Technology torque values +20%.

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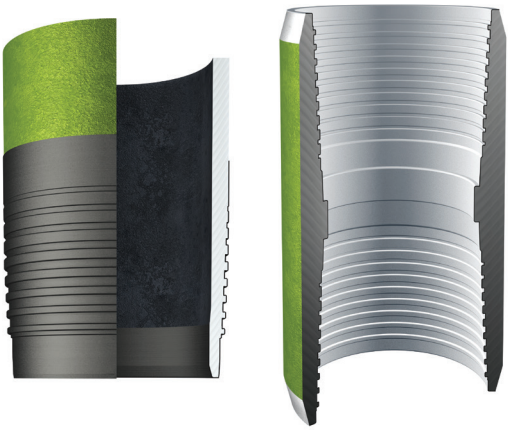
Wedge 563® Dopeless® Technology



1. Minor rust or discolouring of the pin connection can be removed with the use of a clean dry rag ensuring the Dopeless® Technology coating remains intact.

2. Minor rust or discolouring of the box connection can be removed with the use of a non abrasive plastic scouring pad and a clean dry rag ensuring the Dopeless® Technology coating remains intact.

3. Dopeless® Technology connections do not require the application of thread compound for make up.

4. If for whatever reason dope has to be applied to Dopeless® Technology connections, whether both pin and box are Dopeless® Technology or when mixing a standard connection with Dopeless® Technology, proceed as indicated below:

- Apply a very thin coating of thread compound on the full pin end, threads and seal.

- Do not dope any part of the box connection.

Wedge 563® Dopeless® Technology Thread Lock

1. Ideally when running a Dopeless® Technology string the connections to be thread locked should be the non Dopeless® Technology option with the connections cleaned of thread compound and completely dried, then thread lock applied as per page 7.

2. When thread locking Dopeless® Technology connections remove the Dopeless® Technology coating from the threads on the pin connection where the thread lock is to be applied prior to the application of thread lock.

3. Use a hand or rotary brass wire wheel to remove the Dopeless® Technology coating from the threads, ensuring no contact is made with the seal.

4. Leave the Dopeless® Technology coating on the pin seal and threads where no thread lock is to be applied.

5. Dopeless® Technology boxes should be washed with hot water then dried prior to thread locking.

6. Thread lock should be applied to 50% of the pin threads furthest from the pin nose as per the diagram on page 7.

7. The application of thread compound is not required.

8. Do not apply thread lock to seal area.

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Torque Application

1. Set tong dump valve at optimum torque then test on pipe body.

2. For Dopeless® Technology connections apply the specified torques as indicated on the TenarisHydril Dopeless® Technology data sheet.

3. For doped connections, apply the specified torques indicated on the TenarisHydril standard variant data sheet.

4. Do not apply thread compound manufacturer's friction factor.

5. Standard 'Doped' variant, first connection make up;

- Once optimum torque has been attained relax the tong and re-apply optimum torque.
- If movement over ½" of the field pin end is witnessed re-apply optimum torque +20%.
- Repeat process, checking to ensure no other factors are absorbing the applied torque.
- Often the issue is caused by excessive application of thread compound.
- Continue making up further joints applying higher torque if required.
- Refer to the TenarisHydril Running Manual torque application section.

6. Double bump (as above) every connection with an OD of 10 ¾" or larger.

7. If the coupling of TSH Wedge 563® rotates during make up / double bump allow the assembly to complete then check both ends of the coupling are within the make up bands, if so accept the make up.

8. For Dopeless® Technology connections, applying optimum torque twice (double bump) is not necessary.

9. When applying thread lock to standard doped connections, doped version torque values +20% should be used then double bump the connection.

10. When applying thread lock to Dopeless® Technology connections, Dopeless® Technology torque values +20% should be used then double bump the connection.

11. When any doped variant is made up to a Dopeless® Technology connection apply the doped variant torque values. Double bump the connection as point 5.

12. Wedge 563® has limited same size / weight interchange capability, if mixing weight / grade ensure compatibility of design and apply the higher torque value of the two connections.

13. Wedge 563® is compatible with Wedge 563®-CB variant in the same size / weight, apply standard optimum torque.

14. Computer make up equipment is not mandatory for Wedge 563® connections in carbon steel, but is recommended.

15. Computer make up equipment is strongly recommended for Wedge 563® connections in chrome steel.

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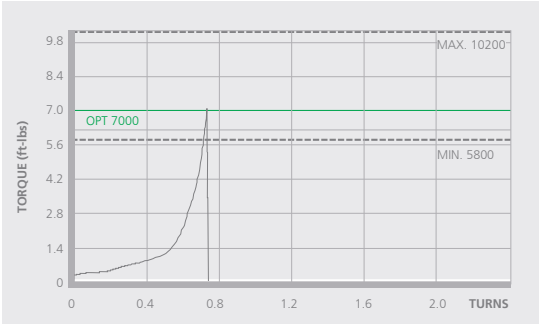
16. Graph analysis for Wedge 563® is similar to that for all Wedge Series 500™, refer to the TenarisHydril running manual make up acceptance section for further explanation.

17. When computer equipment is used, reference torque should be initially set at 5% of optimum torque.

18. The dump valve should be set at optimum torque, verify correct operation on the pipe body prior to first make up.

19. Set the computer turns to 2 initially, then adjust as necessary to attain good graph depiction.

20. Graph profile should be similar to the one below.



21. The make up band can be used as an additional verification of correct final position after assembly, visually checking that box face finishes within the make up band lines.

22. Frequency of the visual check of make up band should be agreed with Tenaris Field Services representative and documented in running report. It is suggested to visually check the first 5 joints, then every 20 joints during the job.

Running

1. The use of a stabbing guide is strongly recommended.

2. The use of slip type elevators is strongly recommended.

3. The use of a weight compensator is strongly recommended for chrome, large OD or heavy weight pipe.

4. For CB variant a new CB ring should be installed prior to every make up.

5. To avoid cross threading stab pipe in a smooth controlled fashion ensuring the pipe is vertical when doing so, continue to support and stabilise the pipe throughout the make up operation.

6. Upon commencement of initial rotation use low RPM (5 RPM or below) in order to ensure the pipe has not cross threaded during stabbing.

7. If cross threading is evident, immediately reverse rotate the pipe, completely disassemble, clean and inspect both connections.

8. Maximum assembly speeds are indicated in the table below. These are applicable for running in singles with tong or CRT and assuming ideal conditions.

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9. Conditions may dictate lower assembly speeds than the maximums indicated. High winds or excessive pipe movement among other variables will necessitate a lower RPM to be used.

TSH W563		OD	SPIN IN RPM	FINAL M/U RPM
Carbon Steel	Standard Product	4 1/2" - 7 5/8"	40	15
		Above 7 5/8"	25	10
	Dopeless® Technology	4 1/2" - 7 5/8"	40	15
		Above 7 5/8"	30	10

10. Walk chrome pipe all the way in to hand tight, then apply tong only for final make up.

11. Never apply back up tong over the coupling.

12. A factor which may preclude complete assembly is excessive thread compound applied to the connection, reduce the quantity applied if this is found to be the case.

Pulling

1. The use of a stabbing guide is strongly recommended to prevent hang up.

2. A single joint compensator is strongly recommended for chrome, large OD or heavy pipe.

3. Apply the back up tong on the pipe body below the coupling.

4. Apply power tong in low RPM (3-5 RPM) to break out the connection, ensuring the pipe is stabilized during the break out process.

5. Maximum spin out speed should not exceed 15 RPM.

6. Walk chrome pipe all the way out by hand after initial break out.

7. Visual inspection is recommended to classify the thread condition, any rejected connections should be clearly marked and segregated for further investigation.

8. Apply clean, dry thread protectors after applying storage compound on clean, dry connections.

9. Storage / thread compound should always be applied to connections post job, even rejects.

10. Do not apply storage compound to Dopeless® Technology connections.

11. For long term storage of Dopeless® Technology connections, refurbishment by qualified personnel is recommended.

12. Ensure clean, dry, Dopeless® Technology protectors with seal rings correctly in place are installed.

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