



Supporting the Workforce with the Evolution of HDD Technology

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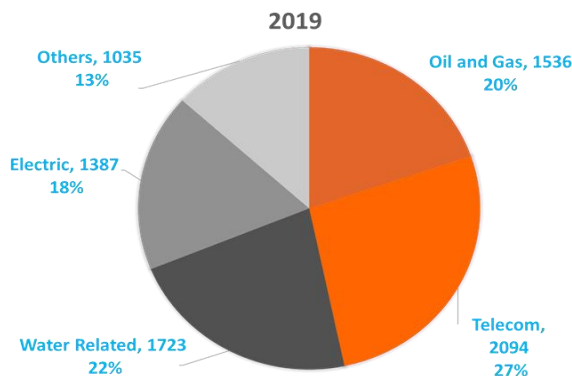


Intro

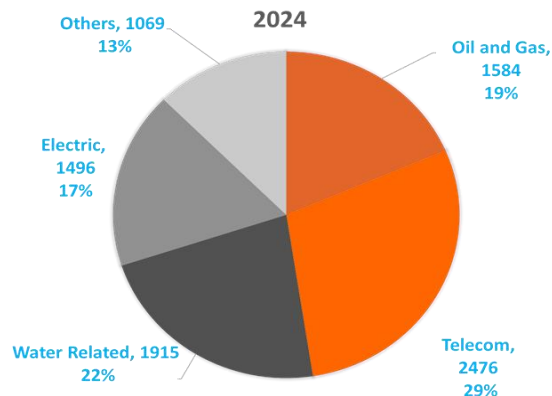
- The underground construction industry is facing a workforce shortage.
- Historically, OEMs have focused innovations on machine power. Today, advancements are focused on jobsite efficiency to combat the workforce shortage.



HDD Market Growth- Pre vs Post Covid



| 2019-2024 CAGR | |
|----------------|-------|
| Oil and Gas | 0.62% |
| Telecom | 3.41% |
| Water Related | 2.14% |
| Electric | 1.52% |
| Others | 0.65% |





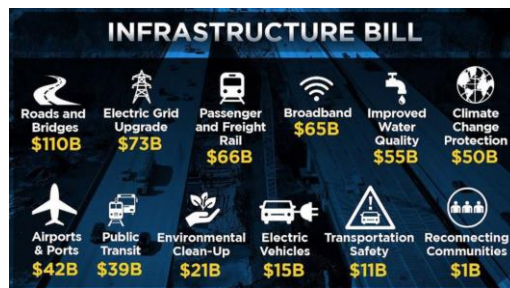
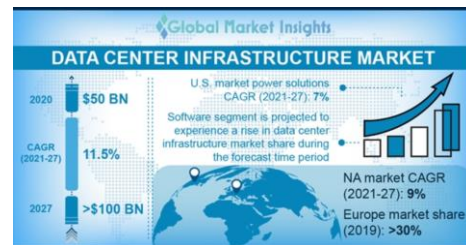
HDD Market Growth- Pre vs Post Covid

2022-2027 est CAGR's

- Telecom 6%-9%
- Data Centers 9%- 30% (EU)
- Water/Sewer 5%-7%
- Electric >6% (non EV)
- Renewables 8%
- Oil & Gas 3%-4%



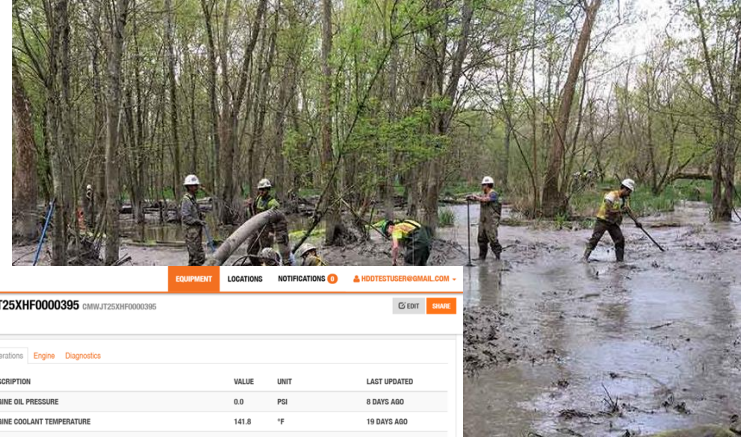
Our Nation's
DRINKING WATER INFRASTRUCTURE
is composed of
2.2 MILLION
miles of pipe





Industry Issues and Needs

- Cross Bore
- Labor Force
- IR - Inadvertent Returns
- Mud Disposal/Management
- Crowded Easements
- Obstacle Avoidance
- Abandoned Infrastructure
- Critical Utility Strikes
- Data Management



Ditch Witch | ORANGE INTEL™

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| DESCRIPTION | VALUE | UNIT | LAST UPDATED |
|--|-------|---------------|--------------|
| ENGINE OIL PRESSURE | 0.0 | PSI | 8 DAYS AGO |
| ENGINE COOLANT TEMPERATURE | 141.8 | °F | 19 DAYS AGO |
| ENGINE TURBO CHARGER 1 INLET TEMPERATURE | 103.4 | °F | 19 DAYS AGO |
| BATTERY POTENTIAL / POWER INPUT 1 | 12.5 | VOLTS | 19 DAYS AGO |
| DEF TANK LEVEL | 58.0 | % | 19 DAYS AGO |
| ENGINE FUEL RATE | 0.0 | GAL/H | 8 DAYS AGO |
| ENGINE SPEED | 0.0 | RPM | 8 DAYS AGO |
| ENGINE TOTAL HOURS OF OPERATION | 76.95 | HR | 19 DAYS AGO |
| DRILL FLUID FLOW RATE | 0.0 | GAL/MIN | 8 DAYS AGO |
| OUTER ROTATION SPEED | 0.0 | RPM | 8 DAYS AGO |
| ENGINE PERCENT LOAD AT CURRENT SPEED | 0.0 | % ENGINE LOAD | 8 DAYS AGO |

DEALER INFORMATION [SHOW CLOSEST DEALER](#)

DITCH WITCH OF OKLAHOMA

STORE CONTACT INFORMATION

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ACTIVATION INFORMATION

Service Type: Telematics

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Enhance Productivity with Modern HDD Technology

- Horizontal directional drills
 - CAN BUS
 - Telematics
 - Wireless controls
- Mud systems/Reclaimers
 - Remote technology
 - Mud Disposal
- Tooling/Dill pipe
 - Dual pipe technology (Rock drilling)
 - Bits, Reamers, Housings





Enhance Productivity with Modern HDD Technology



- Improve and simplify maintenance activities
- Understand and optimize the performance of their workforce
- Improve planning and purchasing decisions



Summary

- The underground construction industry is facing rapidly growing demand for work with a smaller workforce – more than ever before.
- Fixing this problem will require many different tactics, and manufacturers are doing their part by evolving machines to meet the needs of the workforce.
- HDD manufacturers are developing technology in drilling, mud systems and tooling to enhance effectiveness, efficiency and safety.