



*OCS owned Denjet pump is skid mounted pumping unit, which is used for hydro static testing of subsea pipelines and also for the high pressure water blasting cleaning purposes. This pump is a normally used for hydrostatic testing of pipelines with high pressure requirements. OCS's owns two CD50 series Denjet pump skids. One pump skids is CD50-500 series with an operating pressure of 500bar (7250psi) and the other one is a CD50-1250 series with an operating pressure of 1250bar (18130psi).*

*The power train used for one of the pump skids is an Isuzu 50HP diesel engine and the other one is a Toyota 50HP water cooled engine. Both engines are 4 cylinder engines with inline application. Isuzu 50HP engine and Toyota 50HP engine has a 4 cylinder engine with a displacement of 2.771L producing around 37kW @ 1800 RPM. The fuel consumption rate varies from 10-12 L/hour with an RPM ranging from 1800 – 2100.*

*The fluid end of this high pressure pump skid is a positive displacement pump. Maximum volumetric flow rate of CD50-500 series pump is 33Lpm (10gpm) at a pump speed of 1160RPM and the maximum volumetric flow rate of CD50-1250 series pump is 15Lpm (4gpm) at a pump speed of 1160RPM.*

*OCS is progressing with the design of pump skid to comply with DNV criteria (DNV 2.7-3) for offshore portable equipment lifting operations. The skid status for each individual skid needs to be reviewed before each project. The aim is for all OCS offshore skids to be DNV compliant for offshore operations and before each project the status should be reviewed.*

| <b>DEN-JET HIGH WATER PRESSURE DIESEL DRIVEN PUMP TOYOTA ENGINE</b> |                      |
|---|----------------------|
| Pump Model  | CD 50 -1250          |
| Maximum Operating Pressure  | 1250 bar (18130 psi) |
| Maximum Volumetric Flow Rate  | 15 LPM / 4GPM        |
| Rated Pump Speed  | 1160 RPM             |
| Engine Model  | TOYOTA Diesel (1DZ)  |
| No. of Cylinder   | 4 cylinder           |
| Maximum Rated RPM   | 1800 rpm             |
| Maximum Rated Horse Power   | 50 Hp / 37 kw        |
| Fuel Tank Capacity  | 90 L                 |
| Fuel Consumption  | 10.00 L/hr           |
| Noise Level   | 80 dba               |
| Noise Distance  | 1 m                  |
| Dimension(L X W X H)  | 1550x920x1250 mm     |
| Weight  | 1 tons               |
| No of Unit  | 1                    |

*OCS has Equipment passports for individual Engines, Skids and Fluid Ends which must be reviewed before each project to assess the status. The equipment passport gives the working history, maintenance and certification history for Engines, Fluid Ends and Pump skids.*

*It is important to regularly review the list of critical spare parts of the equipment before each project. Common problems occur in these units during the operation include:*

- *Problem with Drive coupling between Engine and Fluid End.*
- *Pump impellers and internals.*
- *Pump Seals and Bearings.*

*Where failures occur during operations Equipment bulletins will be issued to document the problem and the remediation solutions applied. The equipment bulletin will be circulated to all field engineers to be informed about the possible failure that can occur during the operation and thereby avoid future failure.*

*This equipment file remains a live document and will be constantly updated by the equipment department.*