



Previous Name: Shell Donax CFD 60

# Shell Spirax S5 CFD M 60

*High performance off-highway final drive & axle oil*

Shell Spirax S5 CFD M 60 is a dedicated final drive and axle oil which offers significantly improved protection for gears and bearings in bevel gears, differentials, final drives and axles. It meets Caterpillar FD-1 final drive axle oil (FDAO) specification. Spirax S5 CFD M 60 has been developed for continuous use in extreme ambient temperatures in off road vehicles.

## DESIGNED TO MEET CHALLENGES

### Performance, Features & Benefits

- Improved bearing life**

Shell Spirax S5 CFD M 60 has proven performance ability to extend gear and bearing life in all relevant laboratory tests, including contact fatigue.

- Improved corrosion protection**

Shell Spirax S5 CFD M 60 provides excellent protection against rust and copper corrosion. Contains inhibitors to control oxidation and deposit formation. Protects both ferrous and non-ferrous metals from corrosion. Suppresses foaming.

- Improved oil life**

Shell Spirax S5 CFD M 60 oxidizes at a low rate, extending oil life and recommended drain intervals. For Off-Highway trucks oil drain intervals can be extended up to 4000 hours, significantly higher than standard Final Drive and Axle Oils. (As prescribed in OEM manuals).

### Main Applications



- Shell Spirax S5 CFD M 50 is recommended for use in all Caterpillar final drive & axles that currently specify the use of Cat FD-1.

### Typical Physical Characteristics

| Properties          |        |                    | Method    | Shell Spirax S5 CFD M 60 |     |
|---------------------|--------|--------------------|-----------|--------------------------|-----|
| SAE Viscosity Grade |        |                    | SAE J 300 | 60                       |     |
| Kinematic Viscosity | @100°C | mm <sup>2</sup> /s | ISO 3104  | 22.8-25.2                |     |
| Density             | @15°C  | kg/m <sup>3</sup>  | ISO 12185 | 904                      |     |
| Flash Point (COC)   |        |                    | °C        | ISO 2592                 | 260 |
| Pour Point          |        |                    | °C        | ISO 3016                 | -15 |

It can also be used in transmissions requiring TO-4 fluids that do not contain friction material. It is not recommended for final drives which contain brakes. It should also not be used in engines, transmissions or hydraulic systems.

- Axles
- Final drives

### Specifications, Approvals & Recommendations

- Caterpillar FD-1 or where CAT FD-1 (FDAO) is specified.

For a full listing of equipment approvals and recommendations, please consult your local Shell Technical Helpdesk.

### Compatibility & Miscibility

- Compatibility**

Shell Spirax S5 CFD M 60 is fully compatible with all seal material employed in CAT equipment; and is also compatible with Shell Spirax S4 CX oils and oils meeting CAT TO-4.

Shell Spirax S5 CFD M 60 should not be used in transmissions also containing friction materials (eg those with wet brakes or clutch materials). Use of Spirax S4 CX oils in those transmissions is recommended.

These characteristics are typical of current production. Whilst future production will conform to Shell's specification, variations in these characteristics may occur.

### Health, Safety & Environment

- **Health and Safety**

Shell Spirax S5 CFD M 60 is unlikely to present any significant health or safety hazard when properly used in the recommended application and good standards of personal hygiene are maintained.

Avoid contact with skin. Use impervious gloves with used oil. After skin contact, wash immediately with soap and water.

Guidance on Health and Safety is available on the appropriate Material Safety Data Sheet, which can be obtained from <http://www.epc.shell.com/>

- **Protect the Environment**

Take used oil to an authorised collection point. Do not discharge into drains, soil or water.

### Additional Information

- **Advice**

Advice on applications not covered here may be obtained from your Shell representative.