

TORC®

TORC® Transmission Drive Train Oils are designed to meet the rigid performance requirements and demanding environment for heavy-duty equipment found in the agriculture, commercial, construction and forestry industries. These oils are made to protect powershift/hydrostatic transmissions, final drives, differentials, torque converters, wet brakes, hydraulics and gear boxes. TORC® oils meet the requirements of the Caterpillar TO-4 and, in the appropriate product, the TO-4M performance specification. Choose TORC® for your heavy-duty equipment.

TECHNICAL DATA SHEETS

- 2 | TORC®
- 4 | TORC® PLUS
- 6 TORC® SERIES M SYNTHETIC BLEND
- 8 | TORC° SERIES CW SYNTHETIC
- 10 | TORC° SERIES HXA (HYDRAULIC/HYDROSTATIC)





PRODUCT DESCRIPTION

TORC® is recommended to meet the rigid performance requirements and demands of heavy-duty off-highway equipment.

The unique engineered formula increases component life in Caterpillar transmission and applications calling for the TO-4 performance specification.

PERFORMANCE FEATURES

- Top-quality single season performance
- Excellent performance for gears, bearings and friction disc materials
- Minimizes clutch wear and brake chatter
- Minimizes foaming which can lead to cavitation and overall loss of fluid
- Exceptional transmission shifting
- Excellent load carrying capacity

APPLICATIONS

TORC° protects the major components in Caterpillar powershift transmissions, final drives, wet brake components, hydrostatic transmission and hydraulics. TORC° products are also recommended for Allison powershift transmissions, Komatsu transmissions and final drives.

TECHNICAL PROPERTIES

DDODEDTIES	TEST METHODS	SAE GRADE		
PROPERTIES	1531 METHODS	10W	30	50
Kinematic Viscosity cSt @ 40°C	ASTM D445	37.05	88.0	211.70
Kinematic Viscosity cSt @ 100°C	ASTM D445	6.15	10.72	18.32
Viscosity Index	ASTM D2270	113	106	95
Pour Point, °C	ASTM D97	-42°	-33°	-15°
Flash Point, °C	ASTM D92	230°	232°	280°
Brookfield Viscosity, cP @ °C	ASTM D2983	39,500 @ -35°	20,195 @ -25°	48,110 @ -15°
MRV, cP @ °C	ASTM D4684	<5,000 @ -25°	5,100 @ -15°	14,000 @ -10°
Foaming Sequence 1/2/3	ASTM D892	20/0,40/0,0/0	0/0,50/0,0/0	-



PERFORMANCE SPECIFICATIONS

TORC® is approved and/or recommended and backed by the Federated Co-operatives Limited guarantee for use in the following applications:

INDUSTRY / OEM	TORC® SPECIFICATIONS
ALLISON	C-4
CATERPILLAR	TO-4/TO-2
DANA	*POWERSHIFT
EATON VICKERS	35VQ-25
KOMATSU	KES 07.868.1
KOMAI SU	*DRESSER
ZF	*TE-ML 03C/TE-ML 07F

^{*}Meets the performance requirements of (10W & SAE 30 grades only)

ADDUCATION		TORC®	
APPLICATION	10W	30	50
Powershift Transmission, °C	-20° to +10°	0° to +35°	10° to +50°
Hydrostatic Transmission, °C	-20° to +40°	0° to +50°	N/A
Final Drives, °C	-30° to 0°	-30° to +35°	-15° to +50°
Drive Axles (Large), °C	-30° to 0°	-25° to +25°	-15° to +50°
Drive Axles (Medium), °C	-30° to 0°	-25° to +43°	-15° to +50°
Hydraulic System, °C	-20° to +40°	0° to +32°	N/A

Note: The values quoted are guidelines only. Always refer to Caterpillar Machine Fluids Recommendations service publication or the operators manual for correct fluid application.

PRODUCT SELECTION

Product availability can vary by location. Please contact your local retail Co-op for further details.

PRODUCT CIZES	TORC®		
PRODUCT SIZES	10W	30	50
1 L Bottle			
5 L Bottle			
10 L Bottle			
20 L Pail	√	√	✓
110 L Drum			
205 L Drum	✓	✓	√
1000 L Tote	√	√	

SAFETY DATA SHEETS

Product-specific safety data sheets (SDS) can be obtained by contacting your local retail Co-op or Federated Co-operatives Limited (see contact information below) or by going online at www.fuel.crs.

RECYCLING OF USED LUBRICANTS AND CONTAINERS

Please protect the environment when disposing of petroleum products. All products should be taken to an authorized collection facility or picked up by a qualified organization. This ensures the products will be disposed of in an environmentally sensitive manner. For additional information on used-oil recycling programs, please see the following:

- Saskatchewan www.usedoilrecyclingsk.com
- Alberta www.usedoilrecyclingab.com
- British Columbia www.bcusedoil.com
- Manitoba www.usedoilrecycling.com/en/mb



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TORC® PLUS

PRODUCT DESCRIPTION

TORC® Plus exceeds the rigid performance requirements and demands of heavy-duty off-highway equipment.

The unique engineered formula increases component life in Caterpillar applications calling for the TO-4 performance specification fluid all year round. The multiseason formula eliminates the need for overlapping seasonal changeouts.

PERFORMANCE FEATURES

- Multi-season formula designed for extended season use
- Exceptional transmission shifting
- Improved oxidation stability formulation to assist with increasing fluid life
- Minimizes clutch wear and brake chatter
- Reduces foaming in hydraulic applications
- Excellent performance for gears, bearings and friction disc materials

APPLICATIONS

TORC® Plus protects the major components in Caterpillar powershift/hydrostatic transmissions, final drives, differentials, torque converters, wet brakes, hydraulics and gear boxes. TORC® Plus is also recommended for Allison powershift transmissions, Komatsu transmissions and final drives.

* TORC° Plus Multi-Season is <u>not recommended</u> for equipment or seasonal conditions that require a SAE 40 or SAE 50 grade to be used. Alternatively, TORC° Series M Synthetic Blend would be recommended for use as it has a higher temperature operating range.

TECHNICAL PROPERTIES

PROPERTIES	TEST METHODS	TORC [®] PLUS MULTI-SEASON
Kinematic Viscosity cSt @ 40°C	ASTM D445	58.0
Kinematic Viscosity cSt @ 100°C	ASTM D445	10.60
Viscosity Index	ASTM D2270	176
Pour Point, °C	ASTM D97	-48°
Flash Point, °C	ASTM D92	222°
Brookfield Viscosity cP @ °C	ASTM D2983	6,888 @ -30°
MRV, cP @ °C	ASTM D4684	5,700 @ -30°
Foaming Sequence 1/2/3	ASTM D892	0/0,10/0,0/0

TORC® PLUS

PERFORMANCE SPECIFICATIONS

TORC® Plus is approved and/or recommended and backed by the Federated Co-operatives Limited guarantee for use in the following applications:

INDUSTRY / OEM	TORC® PLUS SPECIFICATIONS
ALLISON	C-4
CATERPILLAR	TO-4/TO-2
DANA	*POWERSHIFT
EATON VICKERS	35VQ-25
VOLANTSII	KES 07.868.1
KOMATSU	*DRESSER
ZF	*TE-ML 03C/TE-ML 07F

^{*}Meets the performance requirements of

APPLICATION	TORC [®] PLUS MULTI-SEASON
Powershift Transmission, °C	-34° to +30°
Hydrostatic Transmission, °C	-34° to+45°
Final Drives, °C	-37° to +15°
Drive Axles (Large), °C	-37° to +15°
Drive Axles (Medium), °C	-37° to +30°
Hydraulic System, °C	-18° to +25°

Note: The values quoted are guidelines only. Always refer to Caterpillar Machine Fluids Recommendations service publication or the operators manual for correct fluid application.

PRODUCT SELECTION

Product availability can vary by location. Please contact your local retail Co-op for further details.

PRODUCT SIZES	TORC [®] PLUS MULTI-SEASON
1 L Bottle	
5 L Bottle	
10 L Bottle	
20 L Pail	✓
110 L Drum	
205 L Drum	✓
1000 L Tote	✓

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- Saskatchewan www.usedoilrecyclingsk.com
- Alberta www.usedoilrecyclingab.com
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- Manitoba www.usedoilrecycling.com/en/mb

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TORC® SERIES M SYNTHETIC BLEND

MUITI-SFASON

PRODUCT DESCRIPTION

TORC® SERIES M SYNTHETIC BLEND is formulated to meet the performance requirements and demands of heavy-duty off-highway equipment.

The unique engineered formula increases component life in Caterpillar applications calling for the performance specification TO-4M.

PERFORMANCE FEATURES

- Vast operating temperature range for multi-season use
- Specialized synthetic blend engineered to optimize protection for OEM equipment
- Extended clutch and bearing life, which reduces maintenance
- Provides shear-stability protection that promotes overall component life extensibility for heavy-duty equipment
- Minimizes foaming which can lead to cavitation and overall loss of fluid

APPLICATIONS

TORC° SERIES M SYNTHETIC BLEND protects the major components in Caterpillar powershift/hydrostatic transmissions, final drives, differentials, torque converters, wet brakes, hydraulics and gear boxes. TORC° SERIES M SYNTHETIC BLEND is also recommended for Allison powershift transmissions, Komatsu transmissions and final drives.

TECHNICAL PROPERTIES

PROPERTIES	TEST METHODS	TORC® SERIES M SYNTHETIC BLEND MULTI-SEASON
Kinematic Viscosity cSt @ 40°C	ASTM D445	112.10
Kinematic Viscosity cSt @ 100°C	ASTM D445	14.54
Viscosity Index	ASTM D2270	133
Pour Point, °C	ASTM D97	-45°
Flash Point, °C	ASTM D92	225°
Brookfield Viscosity cP @ °C	ASTM D2983	33,885 @ -30°
MRV, cP @ °C	ASTM D4684	29,200 @ -30°
Foaming Sequence 1/2/3	ASTM D892	-

TORC® SERIES M SYNTHETIC BLEND

MULTI-SEASON

PERFORMANCE SPECIFICATIONS

TORC® SERIES M SYNTHETIC BLEND is approved and/or recommended and backed by the Federated Co-operatives Limited guarantee for use in the following applications:

INDUSTRY / OEM	TORC® SERIES M SYNTHETIC BLEND SPECIFICATIONS
ALLISON	C-4
CATERPILLAR	TO-4M/TO-4/TO-2
DANA	*POWERSHIFT
EATON VICKERS	35VQ-25
KOMATSU	KES 07.868.1
	*DRESSER
ZF	*TE-ML 03C/TE-ML 07F

^{*}Meets the performance requirements of

APPLICATION	TORC® SERIES M SYNTHETIC BLEND MULTI-SEASON	
Powershift Transmission, °C	-15° to +43°	
Hydrostatic Transmission, °C	N/A	
Final Drives, °C	-30° to +25°	
Drive Axles (Large), °C	-25° to +22°	
Drive Axles (Medium), °C	-25° to +40°	
Hydraulic System, °C	-15° to +50°	

Note: The values quoted are guidelines only. Always refer to Caterpillar Machine Fluids Recommendations service publication or the operators manual for correct fluid application.

PRODUCT SELECTION

Product availability can vary by location. Please contact your local retail Co-op for further details.

PRODUCT SIZES	TORC® SERIES M SYNTHETIC BLEND	
	MULTI-SEASON	
1 L Bottle		
5 L Bottle		
10 L Bottle		
20 L Pail	✓	
110 L Drum		
205 L Drum	✓	
1000 L Tote	✓	

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TORC® SERIES CW SYNTHETIC

0W-20

PRODUCT DESCRIPTION

TORC® SERIES CW SYNTHETIC is specially formulated to meet the performance requirements for off-highway equipment operating in harsh environments with a temperature range of -40°C to 10°C for powershift/hydrostatic transmissions and -40°C to 40°C for hydraulics.

Recommended where rigid demands of the CATTO-4 performance specifications are called for.

PERFORMANCE FEATURES

- Full synthetic multi-grade, specialized winter formulation
- Outstanding thermal stability and oxidation resistance
- Extended drain intervals possible with used oil analysis
- Minimizes clutch wear and brake chatter
- Minimizes foaming which can lead to cavitation and overall loss of fluid
- Top level corrosion inhibitor package
- Excellent load carrying capacity

APPLICATIONS

TORC® SERIES CW SYNTHETIC provides superior performance and protects the major components in Caterpillar powershift/hydrostatic transmissions, final drives, differentials, torque converters, wet brakes, hydraulics and gear boxes at extremely low temperatures. TORC® SERIES CW SYNTHETIC is also recommended for Allison powershift transmissions, Komatsu transmissions and final drives.

TECHNICAL PROPERTIES

PROPERTIES	TEST METHODS	SAE GRADE
		0W-20
Kinematic Viscosity cSt @ 40°C	ASTM D445	39.06
Kinematic Viscosity cSt @ 100°C	ASTM D445	7.93
Viscosity Index	ASTM D2270	181
Pour Point, °C	ASTM D97	-57°
Flash Point, °C	ASTM D92	170°
Brookfield Viscosity cP @ °C	ASTM D2983	7,580 @ -40°
MRV, cP @ °C	ASTM D4684	7,100 @ -40°
Foaming Sequence 1/2/3	ASTM D892	-

TORC® SERIES CW SYNTHETIC

0W-20

PERFORMANCE SPECIFICATIONS

TORC® SERIES CW SYNTHETIC is approved and/or recommended and backed by the Federated Co-operatives Limited guarantee for use in the following applications:

INDUSTRY / OEM	TORC® SERIES CW SYNTHETIC SPECIFICATIONS
ALLISON	C-4
CATERPILLAR	TO-4/TO-2
DANA	*POWERSHIFT
EATON VICKERS	35VQ-25
KOMATSU	KES 07.868.1
	*DRESSER
ZF	*TE-ML 03C/TE-ML 07F

^{*}Meets the performance requirements of

APPLICATION	TORC® SERIES CW SYNTHETIC 0W-20
Powershift Transmission, °C	-40° to +10°
Hydrostatic Transmission, °C	-40° to +40°
Final Drives, °C	-40° to 0°
Drive Axles (Large), °C	-40° to 0°
Drive Axles (Medium), °C	-40° to 0°
Hydraulic System, °C	-40° to +40°

Note: The values quoted are guidelines only. Always refer to Caterpillar Machine Fluids Recommendations service publication or the operators manual for correct fluid application.

PRODUCT SELECTION

Product availability can vary by location. Please contact your local retail Co-op for further details.

PRODUCT SIZES	TORC® SERIES CW SYNTHETIC
	0W-20
1 L Bottle	
5 L Bottle	
10 L Bottle	
20 L Pail	✓
110 L Drum	
205 L Drum	✓
1000 L Tote	√

SAFETY DATA SHEETS

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TORC® SERIES HXA

10W

PRODUCT DESCRIPTION

TORC® SERIES HXA is a hydraulic/hydrostatic fluid designed to meet the performance requirements and protect heavy-duty off-highway equipment hydraulic systems and hydrostatic transmission components from excessive wear.

Contains emulsifier additives specifically designed to hold water in suspension, allowing for proper lubrication in hydraulic/hydrostatic operations.

PERFORMANCE FEATURES

- Extended drain intervals up to 6,000 hours or more possible with Co-op oil analysis, oil must be tested every 500 hours with Co-op oil analysis program
- Improved oxidation stability formulation to provide longer oil and hydraulic system life
- Wide operating temperature range -20°C to 40°C
- Specialized ZDDP (Zinc Dialkyldithiophosphates) formula to provide wear protection to critical hydraulic system pumps and parts
- Minimizes foaming which can lead to cavitation and overall loss of fluid
- Top level corrosion inhibitor package

APPLICATIONS

TORC° SERIES HXA is a long-life emulsifying hydraulic/hydrostatic fluid designed to meet the performance requirements of OEM equipment that requires the fluid to emulsify water (hold in suspension), where a water drain valve is absent from the system.

TECHNICAL PROPERTIES

PROPERTIES	TEST METHODS	SAE GRADE
PROPERTIES	TEST METHODS	10W
Kinematic Viscosity cSt @ 40°C	ASTM D445	42.0
Kinematic Viscosity cSt @ 100°C	ASTM D445	6.70
Viscosity Index	ASTM D2270	114
Pour Point, °C	ASTM D97	-39°
Flash Point, °C	ASTM D92	240°
Brookfield Viscosity cP @ °C	ASTM D2983	39,415 @ -35°
MRV, cP @ °C	ASTM D4684	<5,000 @ -25°
Foaming Sequence 1/2/3	ASTM D892	10/0,0/0,10/0

TORC® SERIES HXA

10W

PERFORMANCE SPECIFICATIONS

TORC® SERIES HXA is recommended and backed by the Federated Co-operatives Limited guarantee for use where Hydraulic/Hydrostatic emulsifying fluid is required in a 10W grade.

TORC° Series HXA is designed to eliminate water dispersion throughout the hydraulic system, falling in line with Caterpillar's recommendations for hydraulic applications in legacy to new models.

APPLICATION	TORC® SERIES HXA
APPLICATION	10W
Powershift Transmission, °C	N/A
Hydrostatic Transmission, °C	-20° to +40°
Final Drives, °C	N/A
Drive Axles (Large), °C	N/A
Drive Axles (Medium), °C	N/A
Hydraulic System, °C	-20° to +40°

Note: The values quoted are guidelines only. Always refer to Caterpillar Machine Fluids Recommendations service publication or the operators manual for correct fluid application.

SAFETY DATA SHEETS

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PRODUCT SELECTION

Product availability can vary by location. Please contact your local retail Co-op for further details.

PRODUCT SIZES	TORC® SERIES HXA
1 L Bottle	
5 L Bottle	
10 L Bottle	
20 L Pail	✓
110 L Drum	
205 L Drum	
1000 L Tote	

RECYCLING OF USED LUBRICANTS AND CONTAINERS

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- Alberta www.usedoilrecyclingab.com
- British Columbia www.bcusedoil.com
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