

TECHNICAL SPECIFICATIONS

DETROITTM

DD13[®]

POWER TAKE-OFF

DETROITTM DD13[®] WITH POWER TAKE-OFF (PTO)

Designed specifically for vocational applications, the DD13 engine offers an incredible combination of power and efficiency, with a broad torque curve that delivers consistent, dependable performance for PTO equipment. And with the latest improvements in engine technology, you use less fuel, making the DD13 an investment that really pays off.

PTOs ARE USED IN MANY APPLICATIONS

- Concrete mixers
- Vacuum trucks
- Brick and block trucks
- Log haulers equipped with loading cranes
- Snow plows
- Other vocational markets

THE DD13 PTO PROVIDES

- Performance and fuel economy advantages at current emissions levels
- Continuous REPTO capacity 650 Nm/479 lb-ft
- REPTO drive ratio of 1.217:1

DD13 PTO provides power while the vehicle is moving or stationary. The REPTO flange is an integral part of the flywheel housing, receives the power through the gear train and does not depend on the transmission to receive its power.

The DD13 is also available with an optional front-engine power take-off (FEPTO).

DD13 REPTO OFFERS IMPORTANT ADVANTAGES TO OPERATORS

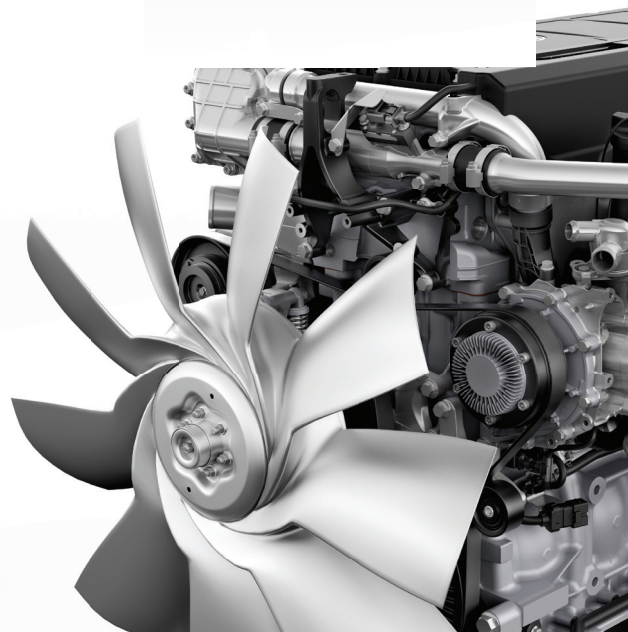
- Eliminates front frame or bumper extensions needed to accommodate FEPTO
- Shortens overall truck length, improving maneuverability
- Operators can spec a longer wheelbase without exceeding bridge laws or other length restrictions, which increases carrying capacity
- Shorter hydraulic lines can be used
- REPTO eliminates modifications to radiators and radiator supports needed for FEPTO shaft clearance. Operators can spec a standard radiator without loss of cooling capacity
- The DD13 REPTO uses the original engine mounts, so engine length stays the same

GHG17

- The DD13 is compliant with 2017 Greenhouse Gas (GHG17) regulations

DD13 SPECIFICATIONS

Configuration	Inline 6 Cylinder
Displacement	781 cu. in. (12.8 L)
Compression Ratio	18.4:1
Bore	5.20 in. (132 mm)
Stroke	6.14 in (156 mm)
Weight (Dry)	2487 lb. (1128 kg)
Electronics	DDEC [®]
Service Fill (Oil & Filter Change) ...	40 qt. (38 L)
Horsepower Range	350-505
Torque Range	1250-1850 lb-ft
Front or Rear-Engine PTO	Optional



DD13 Programmable Functions for use with Power Take-off

- Adjustable minimum/maximum engine speed
- Adjustable ramp rate
- Engine torque limiting
- Preset engine RPM options
- Limiting speed governor or variable speed governor
- Throttle pedal override function
- Vehicle speed limit
- Drop-out for clutch/park or service brake



ACCESSORY/LOCATION	DRIVE RATIO	ROTATION	OUTPUT FLANGE	CAPACITY IN LB-FT @ ENGINE RPM	MAXIMUM PERMISSIBLE JOINT ANGLE	COMMENTS
REPTO						
Accessory Drive (REPTO) RHS of engine @ 1:00 o'clock position on fly wheel housing	1.217:1	CCW (viewed from rear of engine)	Spicer 1350	650 Nm/479 lb-ft @ 1800 RPM	6 degrees	Only available on SAE#1 flywheel housing
FEPTO						
Front Crankshaft Mounted	1:1	CCW (viewed from rear of engine)	Spicer 1350	813 Nm/600 lb-ft @ 1800 RPM	N/A	N/A

Note: A Detroit torsional coupling (p/n A4712370038) is required in the REPTO driveline. Engine Power take-off (REPTO/FEPTO) requires prior Detroit Application Engineering approval.

Maintenance Intervals*

ITEM	MI/KM/HR†	SEVERE DUTY	SHORT-HAUL	LONG-HAUL
Engine Oil and Filter Change**	Miles	35,000	40,000	55,000
	Kilometers	56,000	64,000	89,000
	Hours	750	1000	—
Fuel Filter Change	Miles	35,000	40,000	55,000
	Kilometers	56,000	64,000	89,000
	Hours	750	1000	—
Valve Lash Adjustment	Miles	Adjust at 100,000, at 500,000 and then every 500,000 thereafter.		
	Kilometers	Adjust at 160,000, at 800,000 and then every 800,000 thereafter.		

* Maintenance intervals using Detroit Fluids Specification 93K222 (CK-4) or 93K223 (FA-4) Approved Oils.

** Recommended based on using Detroit's lube oil and oil analysis program.

Severe duty is up to 30,000 annual miles (48,000 kilometers) and a vehicle that averages less than 5 miles per gallon (mpg). Short-haul is between 30,000 and 60,000 annual miles (48,000-96,000 kilometers) and a vehicle that averages between 5.1 and 5.9 mpg.

Long-haul is over 60,000 annual miles (96,000 kilometers) and a vehicle that averages between 6.0 and 6.9 mpg. Fuel economy represents overall fuel economy (including idle time).

† Miles/Kilometers or Hours, whichever occurs first.

Standard Warranty

DD13	WARRANTY LIMITS (WHICHEVER OCCURS FIRST)		REPAIR CHARGE (PAID BY OWNER)	
	MONTHS	MILES / KILOMETERS	PARTS	LABOR
Engine	0-24	Unlimited	No charge	No charge
Injectors	0-24	200,000 mi 320,000 km	No charge	No charge
Upon expiration of the 24-month warranty coverage, but within 500,000 mi / 800,000 km of use, the warranty continues to apply as follows:				
Major Components	25-60	500,000 mi 800,000 km	No charge	Not covered

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