



CT525 Circle Track Crate Engine (19271821) Instructions and Specifications Specifications Part Number 19244554

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This publication provides general information on components and procedures which may be useful when installing or servicing a CT525 Circle Track Crate engine. Please read this entire publication before starting work.

This CT525 Circle Track Crate engine is assembled using brand new, premium quality components and is based off of the Gen IV LS Series architecture. There is a wide range of small block applications, if you are retrofitting a previous small block application, you may encounter installation differences between the CT525 Circle Track Crate engine assembly and the previous version. These differences may require modifications or additional components not included with the CT525 Circle Track Crate engine, including cooling, fuel, electrical, and exhaust systems. Some fabrication work may be required.

The CT525 Circle Track Crate engine has individual ignition coils per cylinder and requires an ignition control system and harness. Chevrolet Performance part number 19171130 is recommended for this application and is available from your Performance dealer.

It is not the intent of these specifications to replace the comprehensive and detailed service practices explained in the GM service manuals. For information about warranty coverage, please contact your local Chevrolet Performance dealer.

Observe all safety precautions and warnings in the service manuals when installing this CT525 Circle Track Crate engine in any vehicle. Wear eye protection and appropriate protective clothing. When working under or around the vehicle, support it securely with jackstands. Use only the proper tools. Exercise extreme caution when working with flammable, corrosive, and hazardous liquids and materials. Some procedures require special equipment and skills. If you do not have the appropriate training, expertise, and tools to perform any part of this conversion safely, this work should be done by a professional.

Legal and Emissions Information

This publication is intended to provide information about the CT525 Circle Track Crate engine and related components. This manual also describes procedures and modifications that may be useful during the installation of a CT525 Circle Track Crate engine. It is not intended to replace the comprehensive service manuals and parts catalogs which cover General Motors engines and components. Rather, it is designed to provide supplemental information in areas of interest to "do-it-yourself" enthusiasts and mechanics.

This publication pertains to engines and vehicles which are used off the public highways except where specifically noted otherwise. Federal law restricts the removal of any part of a federally required emission control system on motor vehicles. Further, many states have enacted laws which prohibit tampering with or modifying any required emission or noise control system. Vehicles which are not operated on public highways are generally exempt from most regulations, as are some special interest and pre-emission vehicles. The reader is strongly urged to check all applicable local and state laws.

Many of the parts described or listed in this manual are merchandised for off-highway application only, and are tagged with the "Special Parts Notice" reproduced here:

Special Parts Notice

This part has been specifically designed for Off-Highway application only. Since the installation of this part may either impair your vehicle's emission control performance or be uncertified under current Motor Vehicle Safety Standards, it should not be installed in a vehicle used on any street or highway. Additionally, any such application could adversely affect the warranty coverage of such an on-street or highway vehicle.

The information contained in this publication is presented without any warranty. All the risk for its use is entirely assumed by the user. Specific component design, mechanical procedures, and the qualifications of individual readers are beyond the control of the publisher, and therefore the publisher disclaims all liability incurred in connection with the use of the information provided in this publication.

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ALL INFORMATION WITHIN ABOVE BORDER TO BE PRINTED EXACTLY AS SHOWN ON 8 1/2 x 11 WHITE 16 POUND BOND PAPER. PRINT ON BOTH SIDES, EXCLUDING TEMPLATES. TO BE UNITIZED IN ACCORDANCE WITH GM SPECIFICATIONS.	DATE	REVISION	AUTH
	31JA13	Initial Release - Rocko Parker	N/A



Package Contents:

<u>Item</u>	<u>Description</u>	<u>Quantity</u>	<u>Part Number</u>
1	Engine Assembly	1	19244553
2	Engine Instructions	1	19244554

Component Information and Additional Requirements

The CT525 Circle Track Crate engine uses stock LS3 components except as noted below. Additional service information not included in this document can be found from your Performance dealer under the LS3 (Corvette) RPO for all components except those noted below. Information for these items are included in this documentation, or if additional information is needed for the camshaft system components, reference a manual for a 2006 LS2 (Corvette) which uses the same camshaft system design.

Intake Manifold

Chevrolet Performance Intake Manifold part number 25534401 and 19172114 (qty 2) gaskets are installed on the CT525 Circle Track Crate engine.

Camshaft

The CT525 Circle Track Crate engine uses Chevrolet Performance camshaft 88958770, which has a 3-bolt sprocket mounting.

Camshaft Sprocket and Bolts

Camshaft sprocket 12586481 and bolts 12556127 (Qty 3) are used in conjunction with the 3-bolt camshaft design.

Timing Chain Dampener

The timing chain dampener part number 12588670 comes with bolts and is used in conjunction with this design instead of the LS3-style chain tensioner.

Oil Pan

The CT525 Circle Track Crate engine comes complete with Chevrolet Performance circle track oil pan (P/N 19172376) installed, which is only available in kit # 19243065. The pan capacity is 6 quarts of oil (not including filter, cooler, or lines). The pan has a right-hand side kick-out with 5 integral trap doors and uses a 7/8" pickup tube.

Oil Filter Requirements

A remote oil filter is required with the CT525 Circle Track engine. Two -10 AN fittings are located on the left rear of the pan. The front fitting is the feed from the engine oil pump (route this into the oil filter), the rear pan fitting feeds the engine (route the outlet side of the oil filter/cooler line to this fitting). Use as large of an oil filter as possible, ensuring a minimum of 10 GPH flow capacity and 25 micron filtration rating.

Oil Cooler Requirements

A remote oil cooler is required on the CT525 Circle Track engine. The cooler should be mounted after the filter, and should be a minimum of 7" x 14" with a minimum flow capability of 10 GPM (-10 AN inlet size recommended).

Oil Level

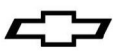
Check the oil level once the entire system has been filled, including the filter, cooler, and lines (the pan alone has a capacity of 6 quarts). Check the oil level by removing the oil plug on the top of the right hand side kickout. The oil is full when the level just touches the bottom of this plug.

Oil Temperature Sensor Fitting

A 1/2" NPT oil temperature sensor fitting is provided on the left side of the pan. If a temperature sensor is not used, install a plug into this fitting (use Teflon sealer tape on the plug).

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Crankshaft Harmonic Dampener

The CT525 Circle Track Crate engine comes complete with Chevrolet Performance circle track dampener (part number 19242906), the dampener bolt (part number 19242907) and dampener washer (part number 19242908) installed. Additional support has been added to the crankshaft dampener by adding a 3/16 inch dowel pin to retain the dampener in position. Note that the timing marks on the dampener are not indexed to any reference on the engine.

Cooling System

Use a radiator with enough capacity to ensure the engine coolant temperature is between 180 F to 210 F. A surge or expansion tank is also required, attach the bottom of the tank to the front heater hose outlet. An air bleed is also required from the left hand upper head bleed line to the top of the surge tank. Failure to install this air bleed will result in air lock and can cause overheating.

Water Pump Restrictors

The CT525 Circle Track engine does not have a thermostat, instead 2 restrictor plugs are installed in the water pump housing. One (3/16" hole) is installed in place of the thermostat, and the other (3/4" hole) is installed in the water pump outlet fitting. These sizes were determined based on Chevrolet development testing, however the hole sizes may need to be adjusted based on your radiator and cooling setup.

Valve Cover (Left Hand Side) / Breathers

Adequate ventilation and breathing are critical on the CT525 Circle Track engine. The LH valve cover comes equipped with two -16 AN male fittings welded into the cover. The rear fitting utilizes the valve cover baffle, while the front fitting is not baffled. It is critical to set up the ventilation tube routings and heights to allow for drain back in the front fitting. Chevrolet recommends a minimum of 2 breathers for adequate capacity of venting (Chevrolet Performance part number 25534355 includes 2 breathers). Shown below is a configuration that has been successful in Chevrolet development testing.



Sealed (Anti-Tamper) Bolt Covers

The CT525 Circle Track engine is equipped with sealed bolt covers on the intake manifold, front cover, and oil pan. These are specially designed to deter access to internal engine components.

Additional parts that may be needed

Carburetor

A Holley 4150 series carburetor Model 80541-1 (650 cubic feet / minute HP series) is recommended for competition use. (Note: Catalog Dyno numbers were derived using a 80528-1 750 HP carburetor)

Ignition Control System

As indicated above, the CT525 Circle Track Crate engine has individual ignition coils per cylinder and requires an ignition control system and harness. Chevrolet Performance part number 19171130 is recommended for this application and is available from your Chevrolet Performance dealer. (Chevrolet recommends a maximum of 28 degrees of total advance.)

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Flywheel

The CT525 Circle Track Crate engine includes an original equipment flexplate (12582437) used on Corvette applications. Flywheel 12571611 is also available from your Chevrolet Performance dealer for manual transmission applications, but circle track applications may require a smaller flywheel available from aftermarket sources.

Pilot Bearing

You must install a pilot bearing in the rear of the crankshaft if the engine will be used with a manual transmission. The pilot bearing aligns the transmission input shaft with the crankshaft centerline. A worn or misaligned pilot bearing can cause shifting problems and rapid wear on the clutch. There are two pilot bearing that will fit the LS series crankshaft. Part number 12557583 is used with a short input shaft transmission and part number 14061685 is used with a long input shaft transmission.

Starter

The CT525 Circle Track Crate engine does not include a starter. Chevrolet Performance part number 10465385 is matched to this application and is recommended. See your Chevrolet Performance dealer for details.

Air Induction

A foam or paper element, low restriction air cleaner should be used to protect the engine from excessive wear and diffuse the air entering the carburetor. The fuel mixture distribution can be upset if no diffuser is used, causing poor power and misfiring at high engine speeds. Always check for adequate hood clearance when installing a new air cleaner. Chevrolet Performance has two chrome 14" air cleaner assemblies for single 4 barrel engines. 12342071 is the Classic design and 12342080 is the high performance design.

Fuel Pump

The CT525 engine does not include a fuel pump or pressure regulator. The fuel system must be capable of supplying a minimum of 50 gph at a minimum of 6 psi pressure when the engine is operating at wide open throttle (WOT). A high volume in-line electric fuel pump is available from Chevrolet Performance (part number 25115899). This heavy duty pump flows 72 gallons per hour at 6-8 psi outlet pressure. **NOTE: A minimum of 12 gauge wire is recommended for the fuel pump electrical supply in order to maintain pump performance due to electrical line loss.**

Accessory Drive Brackets

Accessory Drive Kit part 19299070 is available from Chevrolet Performance to fit the CT525 engine. This contains all components and hardware necessary for installation (includes power steering pump, and alternator). Please see your Chevrolet Performance dealer or visit us on the web at www.chevroletperformance.com.

Recommended Break-In Procedure

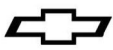
Start-up is critical to ensure engine life. This procedure was written with the intent to provide a quick reference and guideline to starting a new or rebuilt engine if a dynamometer (dyno.) is not available. If you are using a dyno., refer to the dyno. operator's guidelines for start up and initial break in of the engine.

1. Safety First! Make sure you have proper tools as well as eye protection. If the car is on the ground, be sure the wheels are chocked and the transmission is in neutral.
2. Be sure to check the oil level in the engine and prime the oil system then recheck the oil level. It should be at the bottom of the oil level plug when the plug is threaded in the pan.
- 2a. This engine assembly needs to be filled with oil. After installing the engine, ensure the crankcase has been filled with the appropriate motor oil to the recommended oil fill level.

Correct oil level with this circle track oil pan is achieved when the oil just touches the bottom of the indicator plug with the plug fully threaded into the oil pan bung. [The pan alone holds 6 qts] the remote oil filter and cooler will be additional oil. A BRAND NEW ENGINE OIL COOLER MUST BE USED, WITH A MIN FLOW OF 10 GPM. It is recommended that Mobil 1 5W-30 motor oil or equivalent be used (engine oil must meet GM4718M specification which will be indicated on the oil label, Mobil 1 meets this specification). Also check and fill as required any other necessary fluids such as coolant, power steering fluid, etc.

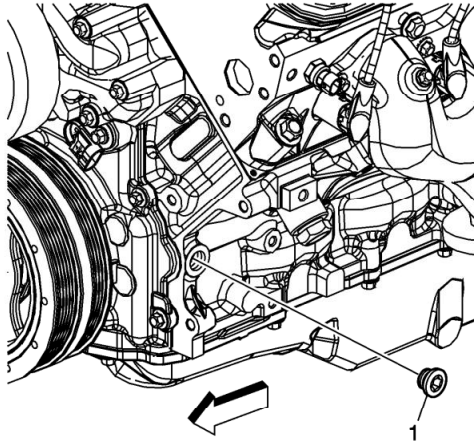
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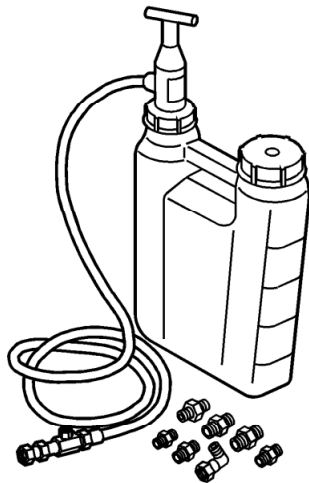
2b. This engine **MUST** be primed with oil before starting. The use of Kent-Moore engine preluber kit J45299 is the preferred process for priming.

NOTE: A constant and continuous flow of clean engine oil is required in order to properly prime the engine. Be sure to use approved engine oil, as specified



1. Remove the engine oil filter, and fill with clean engine oil.
2. Install the oil filter and tighten.
3. Locate and remove the engine block left front oil gallery plug (1).
4. Install the M16 x 1.5 adapter P/N 509375.

J 45299 Engine Preluber



5. Install the flexible hose to the adapter and open the valve.
6. Pump the handle on the J45299 preluber in order to flow a minimum of 1-1.9 liters (1-2 quarts) engine oil. Observe the flow of engine oil through the flexible hose and into the engine assembly. The engine will be primed after a small amount of pressure change is seen on the in car oil pressure gauge while pumping J45299
7. Close the valve and remove the flexible hose and adapter from the engine.
8. Apply approved thread sealer and Install the oil gallery plug to the engine and tighten to 60 N•m (44 lb ft). Top-off the engine oil to the proper level.

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Due to the empty hoses, oil filter, and oil cooler it is much more important to prime this set up vs. a street driven or OEM engine.

In the absence of a preluber kit, the following process can be used. Install an oil pressure gauge (the existing oil pressure sensor location at the upper rear of the engine may be used). Disconnect fuel and the ignition control system (removing power from the ignition control module is recommended). Note: Make sure that no fuel or ignition power can be provided to the engine. Remove all of the spark plugs which will reduce the load on the engine bearings and starter motor during the oil priming sequence.

2c. Once, the fuel and ignition control systems have been disconnected, crank the engine using the starter for 10 seconds and check for oil pressure. If no pressure is indicated, wait 30 seconds and crank again for 10 seconds. Repeat this process until oil pressure is indicated on the gauge.

3. Reconnect the fuel and ignition control systems. Start the engine and listen for any unusual noises. If no unusual noises are noted, run the engine from idle to approximately 1800 RPM, then 0% throttle back to idle. Perform this sequence continuously up and down until normal operating temperature is reached.

**DO NOT RUN THE ENGINE AT A CONSTANT HIGH RPM WITH NO LOAD.
VARYING RPM, IDLE TO 1800 RPM UP AND DOWN IS ALL THAT IS NEEDED.**

4. When possible, you should always allow the engine to warm up prior to driving. It is a good practice to allow the oil sump and water temperature to reach 180°F before applying heavy loads or performing hard acceleration runs.

5. Adjust Carburetor (carb.) settings. Idle mixture screws, base idle, floats, Etc.

6. After first 30 minutes of the engine running, re-set carb. adjustments.

7. Drive the vehicle at varying speeds and loads for first 30 laps. Be sure to avoid Wide Open Throttle (WOT) and sustained high RPM accelerations

8. Run 5-6 medium-throttle accelerations to about 4500 rpm and let off in gear and coast back down to 2000 rpm, after each acceleration.

9. Perform several (WOT) accelerations to 5000 rpm. Allow the engine to return to idle, with the throttle blade shut. This procedure will assist in seating the rings properly.

10. Change the oil and filter. Replace the oil following the procedure in step 2a. from above. Use as large of an oil filter as possible, ensuring a minimum of 10 Gallons Per Hour (GPH) flow capacity and 25 micron filtration rating. Inspect the oil and oil filter for any foreign particles to ensure that the engine is functioning properly.

11. Drive the next 25 laps without high rpm's (below 5000 rpm), hard use, or extended periods of high loading.

12. Change the oil and filter again.

13. Your engine is now ready for racing.

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CT525 Circle Track Crate Engine Specifications

Type	6.2L Gen IV Small Block V8
Displacement	376 cubic inches
Bore x Stroke	4.065 inch x 3.62 inch
Compression	10.7:1
Block	Cast aluminum, six bolt cross-bolted main caps
Cylinder Head	Cast aluminum rectangle port
Valve Diameter (Intake/Exhaust)	2.165"/1.590"
Chamber Volume	68cc
Crankshaft	Nodular iron, internally balanced
Connecting Rods	Powdered metal
Pistons	Hypereutectic aluminum
Camshaft	Hydraulic roller tappet
Lift525" intake, .525" exhaust
Duration	226° intake, 236° exhaust @.050" tappet lift
Centerline	110° LSA
Rocker Arm Ratio	1.7:1
Oil Capacity	6 quarts without filter
Oil Pressure (Minimum, with hot oil)	6 psig @ 1000 RPM
.....	18 psig @ 2000 RPM
.....	24 psig @ 4000 RPM
Recommended Oil	5w30 Mobil 1 motor oil or equivalent (must meet GM4718M specification)
Fuel	Premium unleaded - 92 (R+M/2)
Maximum Engine Speed	6700 RPM
Spark Plugs	12571164
.....	AC Delco # 41-985
Spark Plug Gap040"
Firing Order	1-8-7-2-6-5-4-3

Information may vary with application. All specifications listed are based on the latest production information available at the time of printing.

CT525 Circle Track Crate Engine Torque Specifications

<u>Application</u>	<u>Specification</u>	
	<u>Metric</u>	<u>English</u>
Camshaft Position (CMP) Sensor Bolt	10 N•m.....	89 lb in
CMP Sensor Wire Harness Bolt	10 N-m.....	89 lb in
Camshaft Retainer Bolts – Hex Head Bolts.....	25 N•m.....	18 lb ft
Camshaft Retainer Bolts - TORX® Head Bolts	15 N•m.....	11 lb ft
Camshaft Sprocket Bolts	25 N•m.....	18 lb ft
Connecting Rod Bolts - First Pass.....	20 N•m.....	15 lb ft
Connecting Rod Bolts - Final Pass.....	85 degrees	
Coolant Air Bleed Pipe and Cover Bolts	12 N•m.....	106 lb in
Coolant Temperature Sensor.....	20 N•m.....	15 lb ft
Crankshaft Balancer Bolt.....	318 N•m	235 lb ft
Crankshaft Bearing Cap M10 Bolts - First Pass in Sequence.....	20 N•m.....	15 lb ft

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CT525 Circle Track Crate Engine Torque Specifications-continued

Crankshaft Bearing Cap M10 Bolts - Final Pass in Sequence	80 degrees	
Crankshaft Bearing Cap M10 Studs - First Pass in Sequence.....	20 N•m.....	15 lb ft
Crankshaft Bearing Cap M10 Studs - Final Pass in Sequence	51 degrees	
Crankshaft Bearing Cap M8 Bolts - first pass.....	20 N•m.....	15 lb ft
Crankshaft Bearing Cap M8 Bolts - final pass.....	30 N•m.....	22 lb ft
Crankshaft Oil Deflector Nuts.....	25 N•m.....	18 lb ft
Crankshaft Position (CKP) Sensor Bolt.....	25 N•m.....	18 lb ft
Crankshaft Rear Oil Seal Housing Bolts.....	25 N•m.....	18 lb ft
Cylinder Head M11 Bolts - First Pass in Sequence.....	30 N•m.....	22 lb ft
Cylinder Head M11 Bolts - Second Pass in Sequence.....	90 degrees	
Cylinder Head M11 Bolts - Final Pass in Sequence.....	70 degrees	
Cylinder Head M8 Bolts - in Sequence.....	30 N•m.....	22 lb ft
Cylinder Head Coolant Plug.....	20 N•m.....	15 lb ft
Engine Block Coolant Drain Hole Plug.....	60 N•m.....	44 lb ft
Engine Block Oil Gallery Plug.....	60 N•m.....	44 lb ft
Exhaust Manifold Bolts - First Pass.....	15 N•m.....	11 lb ft
Exhaust Manifold Bolts - Final Pass.....	20 N•m.....	15 lb ft
Exhaust Manifold Heat Shield Bolts	9 N•m.....	80 lb in
Exhaust Manifold Studs.....	20 N•m.....	15 lb ft
Flywheel Bolts - First Pass.....	20 N•m.....	15 lb ft
Flywheel Bolts - Second Pass.....	50 N•m.....	37 lb ft
Flywheel Bolts - Final Pass.....	100 N•m.....	74 lb ft
Front Cover Bolts.....	25 N•m.....	18 lb ft
Ignition Coil Bracket-to-Valve Rocker Arm Cover Stud.....	12 N•m.....	106 lb in
Ignition Coil-to-Bracket Bolts.....	10 N•m.....	89 lb in
Intake Manifold Bolts - First Pass in Sequence.....	5 N•m.....	45 lb in
Intake Manifold Bolts - Final Pass in Sequence.....	10 N•m.....	90 lb in
J 41798 M8 Bolt	25 N•m.....	18 lb ft
J 41798 M10 Bolts.....	50 N•m.....	37 lb ft
Knock Sensor Bolts.....	25N•m.....	18 lb ft
Motor Mount Bracket Bolts.....	50 N•m.....	37 lb ft
Oil Pan M6 Bolts - Oil Pan-to-Rear Oil Seal Housing.....	12 N•m.....	106 lb in
Oil Pan M8 Bolts - Oil Pan-to-Engine Block and Oil Pan-to-Front Cover	25 N•m.....	18 lb ft
Oil Pump Cover Bolts.....	12 N•m.....	106 lb in
Oil Pump Relief Valve Plug.....	12 N•m.....	106 lb in
Oil Pump Screen Nuts.....	25 N•m.....	18 lb ft
Oil Pump Screen-to-Oil Pump Bolt.....	12 N•m.....	106 lb in
Oil Pump-to-Engine Block Bolts.....	25 N•m.....	18 lb ft
Spark Plugs.....	15 N•m.....	11 lb ft
Timing Chain Dampener Bolts.....	30 N•m.....	22 lb ft

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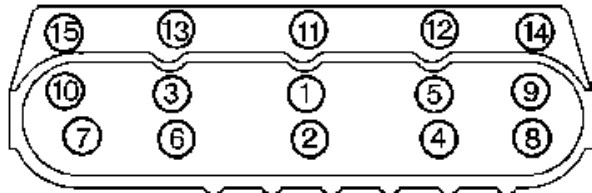
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CT525 Circle Track Crate Engine Torque Specifications-continued

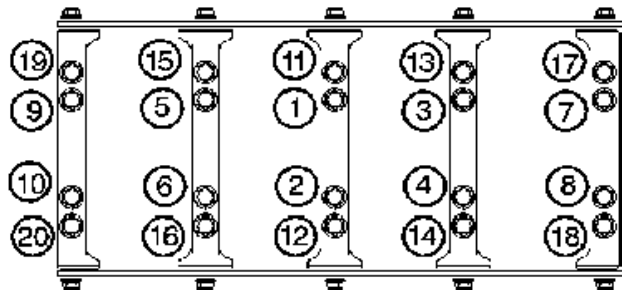
Valley Cover Bolts	25 N•m.....	18 lb ft
Valve Lifter Guide Bolts	12 N•m.....	106 lb in
Valve Rocker Arm Bolts	30 N•m.....	22 lb ft
Valve Rocker Arm Cover Bolts	12 N•m.....	106 lb in
Water Inlet Housing Bolts	15 N•m.....	11 lb ft
Water Pump Bolts - First Pass	15 N•m.....	11 lb ft
Water Pump Bolts - Final Pass.....	30 N•m.....	22 lb ft

CT525 Circle Track Crate Engine Torque Sequences



Cylinder Head Bolts

Crankshaft Bearing Cap Bolts and Studs (arrow indicates front of engine)



CT525 Circle Track Crate Engine Service Parts List

Part Number	Qty	Name
12569167	8	ARM ASM,INTAKE VALVE ROCKER
10214664	8	ARM ASM,VALVE ROCKER
19242906	1	BALANCER,CRANKSHAFT
89017572	1	BEARING KIT, CRANKSHAFT (POSITION 3)
89017571	4	BEARING KIT, CRANKSHAFT (POSITIONS 1,2,4,5)
89017573	8	BEARING KIT,CONNECTING ROD
19167218	1	BEARING,CAMSHAFT (POSITION 3)
19167383	2	BEARING,CAMSHAFT (POSITIONS 1,5)
19167382	2	BEARING,CAMSHAFT (POSITIONS 2,4)
12623967	1	BLOCK ASM,ENGINE
11515756	4	BOLT/SCREW,CAMSHAFT RETAINER



Part Number	Qty	Name
12556127	3	BOLT/SCREW,CAMSHAFT SPROCKET
11561455	4	BOLT/SCREW,CAMSHAFT THRUST PLATE
11570662	16	BOLT/SCREW,CONNECTING ROD
19242907	1	BOLT/SCREW,CRANKSHAFT BALANCER
12560272	10	BOLT/SCREW,CRANKSHAFT BRG CAP
12556127	10	BOLT/SCREW,CRANKSHAFT BRG CAP (SIDE)
11588723	12	BOLT/SCREW,CRANKSHAFT RR OIL SEAL
11515756	1	BOLT/SCREW,CRANKSHAFT POSITION SENSOR
19258707	20	BOLT/SCREW,CYLINDER HEAD
12558840	10	BOLT/SCREW,CYLINDER HEAD
11518075	11	BOLT/SCREW,ENG BLOCK VALLEY
11588715	4	BOLT/SCREW,ENG COOLANT AIR BLEED PIPE
11515758	8	BOLT/SCREW,ENG FRT COVER
11588712	2	BOLT/SCREW,ENG FRT COVER
11515767	4	BOLT/SCREW,ENG LIFT BRACKET
11519840	12	BOLT/SCREW,EXH MANIFOLD HEAT SHIELD
11518860	12	BOLT/SCREW,EXHAUST MANIFOLD FLANGE
11569956	6	BOLT/SCREW,FLYWHEEL
11516424	8	BOLT/SCREW,IGNITION COIL
11562426	8	BOLT/SCREW,IGNITION COIL
11515758	13	BOLT/SCREW, OIL PAN
11516424	2	BOLT/SCREW, OIL PAN
11515758	4	BOLT/SCREW, OIL PUMP
11519133	7	BOLT/SCREW, OIL PUMP COVER
11588712	1	BOLT/SCREW, OIL PUMP SUCTION PIPE
3531733	8	BOLT/SCREW, PCV BFL
11519681	2	BOLT/SCREW,T IMING CHAIN DAMPENER
12551163	4	BOLT/SCREW, VALVE LIFTER GUIDE
12560961	16	BOLT/SCREW,VALVE ROCKER ARM
12577215	8	BOLT/SCREW,VALVE ROCKER ARM
12551926	6	BOLT/SCREW,WATER PUMP
11516480	2	BOLT/SCREW,WATER PUMP INLET
12580353	1	BRACKET,IGNITION COIL (RH)
88958738	1	BRACKET,IGNITION COIL (LH) Reworked coil bracket, not available
88958745	1	BRACKET,IGNITION COIL (LH) Reworked coil bracket, not available
88958770	1	CAMSHAFT ASM
10166344	16	CAP,VALVE SPRING
12586482	1	CHAIN ASM,TIMING
12611424	8	COIL ASM,IGNITION
12599296	1	COVER ASM,ENG BLK VALLEY
12602540	2	COVER ASM,ENG COOL AIR BLD PIPE HOLE

TITLE	CT525 Circle Track Crate Engine	IR 31JA13	PART NO.	19244554	SHEET	10	OF	36
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Part Number	Qty	Name
12633906	1	COVER ASM,ENG FRT
88958737	1	COVER ASM,VALVE ROCKER ARM (LEFT) Reworked valve cover not available
12637684	1	COVER ASM,VALVE ROCKER ARM (RIGHT)
12597569	1	CRANKSHAFT ASM
12588670	1	DAMPENER ASM,TIMING CHAIN
12558189	1	DEFLECTOR,CRANKSHAFT OIL
19172114	1	GASKET KIT,INT MANIFOLD (2 PER KIT)
12639249	1	GASKET,CRANKSHAFT RR OIL SEAL
12610046	2	GASKET,CYL HD
12610141	1	GASKET,ENG BLK VALLEY COVER
12633904	1	GASKET,ENG FRT COVER
12617944	2	GASKET,EXHAUST MANIFOLD
12612350	1	GASKET, OIL PAN
12637683	2	GASKET,VALVE ROCKER ARM COVER
12630223	2	GASKET,WATER PUMP
12595365	4	GUIDE,VALVE LIFTER
12629063	2	HEAD ASM,CYL (W/VALVES)
12600254	1	HOSE,ENG COOL AIR BLEED PIPE
12639250	1	HOUSING ASM,CRANKSHAFT RR OIL SEAL
12561513	1	KEY,CRANKSHAFT BALANCER
10166345	32	KEY,VALVE STEM
17122490	16	LIFTER ASM,VALVE
12603758	1	MANIFOLD,EXHAUST (LEFT)
12603760	1	MANIFOLD,EXHAUST (RIGHT)
25534401	1	MANIFOLD,INTAKE
11516076	9	NUT,CRANKSHAFT OIL DEFLECTOR
11516076	1	NUT,OIL PUMP SUCTION PIPE
19172376	1	PAN ASM, OIL . only available as a oil pan kit p/n 19243065.
12570326	4	PIN,CYL HD LOC
01453658	2	PIN,TRANS LOC
12602548	1	PIPE ASM,ENG COOL AIR BLEED
19207287	8	PISTON ASM,(W/ PIN)
12582437	1	PLATE ASM,A/TRNS FLEX (W/HUB)
11610259	1	PLUG ASM,CYL HD CORE HOLE
09427693	1	PLUG ASM,ENG BLK OIL GALLEY
12573460	1	PLUG ASM,ENG BLK OIL GALLEY
11588949	2	PLUG ASM,ENG BLK OIL GALLEY
11610259	1	PLUG,CYL HD CORE HOLE
11588949	1	PLUG,ENG BLK COOL DRN HOLE
11611351	1	PLUG,ENG BLK COOL DRN HOLE
12602048	2	PLUG,ENG COOL AIR BLEED

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Part Number	Qty	Name
12557520	1	PLUG,OIL LEVEL INDICATOR TUBE
12621258	8	PLUG,SPARK [A/C # 41-110]
12586665	1	PUMP ASM,OIL
19180610	1	PUMP KIT,WATER
12589016	1	RETAINER,CAMSHAFT
12569638	16	RETAINER,PISTON PIN
19168090	8	RING KIT,PISTON
12586768	1	RING,CRANKSHAFT POSITION SENSOR EXCITER
12649190	8	ROD ASM,CONNECTING
10238852	16	ROD ASM,VALVE PUSH
12585673	1	SEAL ASM,CRANKSHAFT FRT OIL
89060436	1	SEAL KIT,CRANKSHAFT RR OIL
12610160	8	SEAL,ENG BLOCK VALLEY COVER
12602541	2	SEAL,ENG COOLANT AIR BL PIPE (O RING)
12585673	1	SEAL,ENG FRT COVER
12482062	8	SEAL,EXH VALVE STEM OIL
12482063	8	SEAL,INT VALVE STEM OIL
12557752	1	SEAL,OIL PUMP SUCTION PIPE (O RING)
12587397	1	SEAL,WAT INLET
12591720	1	SENSOR ASM,CAMSHAFT POSITION
12585546	1	SENSOR ASM,CRANKSHAFT POSITION
12608814	1	SENSOR ASM,ENG COOLANT TEMP
12616646	1	SENSOR ASM,ENG OIL PRESSURE
12623730	2	SENSOR ASM,KNOCK
12576823	1	SHIELD,EXHAUST MANIFOLD HEAT (LEFT)
12576822	1	SHIELD,EXHAUST MANIFOLD HEAT (RIGHT)
15336959	1	SHIELD,SPARK PLUG WIRE
12625033	16	SPRING ASM,VALVE
12586481	1	SPROCKET,CAMSHAFT
12556582	1	SPROCKET,CRANKSHAFT
12560273	10	STUD,CRANKSHAFT BRG CAP
11518424	4	STUD,EXHAUST MANIFOLD
12554211	10	STUD,IGNITION COIL BRKT
12600936	2	SUPPORT,VALVE ROCKER ARM PIVOT
12582719	8	VALVE,EXHAUST
12569427	8	VALVE,INTAKE
19242908	1	WASHER,CRANKSHAFT BALANCER
12627501	1	WIRE ASM,CAMSHAFT POSITION SENSOR
12579355	2	WIRE ASM,IGNITION COIL
19206446	8	WIRE ASM,SPARK PLUG

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