



IPD Products for Caterpillar® C7 ENGINES

The Standard for Quality, Innovation, Service and Support Since 1955



IPD...A SAFE AND SECURE INVESTMENT

Since 1955, IPD has lowered repair costs for industrial engines without sacrificing quality, engine life, or job performance, by providing cost effective, high quality service replacement components. Our robust product line covers a wide range of parts for a variety of diesel and gas engines.

IPD recognizes the importance of repairing engines with quality products. These engines power a variety of machines and equipment (an investment), and are a source of revenue for business, and this is important to IPD. We use only quality materials, and with over 55 years of manufacturing experience, our extensive QC process ensures the IPD products pass our high quality assurance standards before being shipped to customers. Additionally, our comprehensive and clearly stated warranties give our customers true peace of mind when purchasing IPD products because they know they are protected.

IPD is ISO9001:2008 certified by Lloyd's Register®, an organization that is respected worldwide for high standards of technical competence, impartiality and independence. Being ISO9001:2008 certified provides our customers the assurance of IPD's consistent compliance with the ISO controls and processes. The extent to which IPD has developed it's ISO process, and made it a part of virtually every aspect of IPD, is an uncommon practice in most companies within the heavy-duty aftermarket parts industry.

Read more about IPD quality and areas of differentiation at www.ipdparts.com. Thank you for taking the time to view this document, we appreciate the opportunity to prove to you what truly sets IPD apart from our competition.

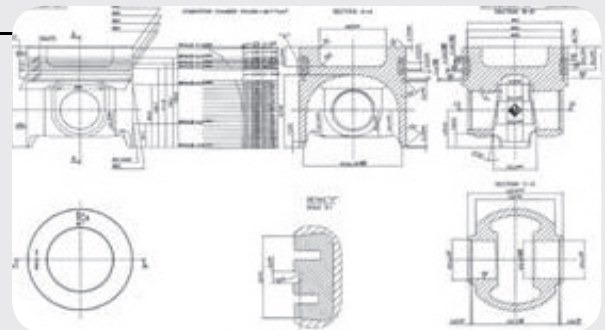


SUPERIOR QUALITY CONTROL

IPD is known industry-wide for high quality parts and excellent service. Our goal is to create consistent and positive interactions with our distributors and their customers from start to finish, as well as offering reliable support after the sale. This starts by manufacturing IPD brand parts from high quality materials, ensuring that each part has the correct specification and tolerances, and has gone through a rigorous quality control process. Our attention to detail and quality truly makes IPD stand out from our competition. Listed below are just a few examples of how IPD ensures quality control, and takes the necessary steps to produce top of the line products.

HOW OUR QC PROCESS WORKS

We produce our products from concept to execution. Our process begins with a drawing that ensures the verification of exact specifications and tolerances, as shown in a sample drawing of an inspection of a natural gas application piston.



Quality control of all IPD aluminum diesel and natural gas pistons includes ultrasonic bond and critical dimension checks through the use of CMM and hand measuring equipment.

Cylinder liner dimensional control includes dozens of critical specifications, including inside and outside dimensions, flange specifications, and o-ring groove size checks, which is accomplished through tools such as a CMM, height gauge, hardness testor, and surface analyzer.



Valves, guides, seats and springs are all critical items in heavy duty engines that require extra care. Our valve inspection program includes checking vital measurements such as valve angles, not to mention the critical metallurgies used today.

Shown here is our in-house tangential piston ring tension tester.



IPD C7 PRODUCT LINE

IPD provides cost effective quality without risk to engine life or performance. Listed below are a few product highlights of the current IPD parts product line for C7 series engines.

Pistons

IPD C7 aluminum pistons are constructed of a special hypereutectic alloy that has high silicon content. Hypereutectic aluminum is stronger than more common cast aluminum pistons, and provides a low coefficient of thermal expansion, which allows for much tighter tolerances. These pistons are treated with a special phosphate conversion coating (lighter gray coloration) that provides enhanced lubricity and corrosion resistance, and a sectional anti-friction graphite skirt coating (darker gray section) on the skirt for enhanced lubricity.

Main and Rod Bearings

IPD C7 rod bearings are made of a special sintered alloy that is plated with a unique overlay. This material is designed exclusively for high loads, and offers excellent cavitation erosion resistance, load carrying capacity, and conformability. IPD C7 main and thrust bearings provide excellent resistance against corrosion, seizure, and fatigue, as well as good load carrying capacity.

Piston Pin

IPD piston pins are manufactured from a hardened chromium, molybdenum, and nickel alloy steel to produce excellent tensile strength and wear resistance.

Gaskets and Gasket Kits

IPD uses premium materials designed for heavy duty industrial engine applications.



SELECT IPD PARTS FOR C7 ENGINES*

Item Description	Part Number	Notes
OVERHAUL KITS		
In-Frame Kits		
IN-FRAME OVERHAUL KIT	IF2698/02	ON-HIGHWAY ENGINES WITH OIL PAN ISOLATION SEAL AND SERIAL NUMBERS WAX, SAP, & KAL
IN-FRAME OVERHAUL KIT	IF2698/12	ON-HIGHWAY ENGINES WITH OIL PAN GASKET AND SERIAL NUMBERS WAX, SAP, & KAL
IN-FRAME OVERHAUL KIT	IF7330/22	ON-HIGHWAY ENGINES WITH OIL PAN ISOLATION SEAL AND SERIAL NUMBER C7S
IN-FRAME OVERHAUL KIT	IF7330/32	ON-HIGHWAY ENGINES WITH OIL PAN GASKET AND SERIAL NUMBER C7S
IN-FRAME OVERHAUL KIT	IF9288/22	ON-HIGHWAY ENGINES WITH OIL PAN ISOLATION SEAL AND SERIAL NUMBER C7S
IN-FRAME OVERHAUL KIT	IF9288/32	ON-HIGHWAY ENGINES WITH OIL PAN GASKET AND SERIAL NUMBER C7S
Out-of-Frame Kits		
OUT-OF-FRAME OVERHAUL KIT	OF7330/21	ON-HIGHWAY ENGINES WITH OIL PAN ISOLATION SEAL AND SERIAL NUMBER C7S WITH STANDARD COUNTERCLOCKWISE ROTATION
OUT-OF-FRAME OVERHAUL KIT	OF7330/31	ON-HIGHWAY ENGINES WITH OIL PAN GASKET AND SERIAL NUMBER C7S WITH STANDARD COUNTERCLOCKWISE ROTATION
OUT-OF-FRAME OVERHAUL KIT	OF2698/01	ON-HIGHWAY ENGINES WITH OIL PAN ISOLATION SEAL AND SERIAL NUMBERS WAX, SAP, & KAL
OUT-OF-FRAME OVERHAUL KIT	OF2698/11	ON-HIGHWAY ENGINES WITH OIL PAN GASKET AND SERIAL NUMBERS WAX, SAP, & KAL
OUT-OF-FRAME OVERHAUL KIT	OF9288/21	ON-HIGHWAY ENGINES WITH OIL PAN ISOLATION SEAL AND SERIAL NUMBER C7S WITH STANDARD COUNTERCLOCKWISE ROTATION
OUT-OF-FRAME OVERHAUL KIT	OF9288/31	ON-HIGHWAY ENGINES WITH OIL PAN GASKET AND SERIAL NUMBER C7S WITH STANDARD COUNTERCLOCKWISE ROTATION
CYLINDER BLOCK, CONNECTING ROD & PISTON GROUPS		
Piston Kits		
PISTON KIT	PK2382698	SELECT SERIAL NUMBERS C7S, KAL, KHL, LBM, SAP, & WAX
PISTON KIT	PK2627330	SELECT C7S SERIAL NUMBERS
PISTON KIT	PK2629288	SELECT C7S SERIAL NUMBERS
Ring Sets		
RING SET	C7RS1	USED WITH 2382698 PISTONS
RING SET	C7RS2	USED WITH 2627330 & 2629288 PISTONS

* Parts listing (subject to change) provided for reference purposes only, not to be used as a catalog.

SELECT IPD PARTS FOR C7 ENGINES*

Item Description	Part Number	Notes
CYLINDER BLOCK, CONNECTING ROD & PISTON GROUPS (Continued)		
Misc.		
BUSHING, CAM	2165586	
BUSHING, CAM	2W7213	
BUSHING, CONN ROD	2W0027	
BEARING STD, CON ROD	2246638	
BEARING .25MM, CON ROD	7C6976	
BEARING .50MM, CON ROD	7C6977	
PISTON	2382698	
PISTON	2627330	
PISTON	2629288	
PISTON PIN	1687224	
PISTON RING, INTERMEDIATE	1979353	
PISTON RING, INTERMEDIATE	2663110	
PISTON RING, OIL CONTROL	1979354	
PISTON RING, OIL CONTROL	2382743	
PISTON RING, TOP	1979386	
PISTON RING, TOP	2997612	
RETAINER, PISTON PIN	7C0111	
SLEEVE, CYL SALVAGE	1077604	

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SELECT IPD PARTS FOR C7 ENGINES*

Item Description	Part Number	Notes
CRANKSHAFT GROUP		
MAIN BEARING STD	1077708	
MAIN BEARING .25MM	1450162	
MAIN BEARING .50MM	1450164	
MAIN BEARING THRUST STD	2124893	
MAIN BEARING .25MM THRUST	7C6966	
MAIN BEARING .50MM THRUST	7C6967	
COOLING SYSTEM		
WATER PUMP	1208402	
ENGINE OIL COOLER GROUP		
OIL COOLER, ENGINE	2674743	
GASKETS		
In-Frame Overhaul Sets		
IN-FRAME OVERHAUL SET	C70002	ON-HIGHWAY ENGINES WITH OIL PAN ISOLATION SEAL AND SERIAL NUMBERS WAX, SAP, & KAL
IN-FRAME OVERHAUL SET	C70012	ON-HIGHWAY ENGINES WITH OIL PAN GASKET AND SERIAL NUMBERS WAX, SAP, & KAL
IN-FRAME OVERHAUL SET	C70022	ON-HIGHWAY ENGINES WITH OIL PAN ISOLATION SEAL AND SERIAL NUMBER C7S
IN-FRAME OVERHAUL SET	C70032	ON-HIGHWAY ENGINES WITH OIL PAN GASKET AND SERIAL NUMBER C7S
IN-FRAME OVERHAUL SET	C70062	SELECT 324D, 325D, & 329D APPLICATIONS. REFER TO ENGINE AND MACHINE SERIAL NUMBERS
IN-FRAME OVERHAUL SET	C70072	SELECT 324D, 325D, & 329D APPLICATIONS. REFER TO ENGINE AND MACHINE SERIAL NUMBERS
IN-FRAME OVERHAUL SET	C70082	SELECT 324D, 325D, & 329D APPLICATIONS. REFER TO ENGINE AND MACHINE SERIAL NUMBERS

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SELECT IPD PARTS FOR C7 ENGINES*

Item Description	Part Number	Notes
GASKETS (Continued)		
Out-of-Frame Overhaul Sets		
OUT-OF-FRAME OVERHAUL SET	C70001	ON-HIGHWAY ENGINES WITH OIL PAN ISOLATION SEAL AND SERIAL NUMBERS WAX, SAP, & KAL
OUT-OF-FRAME OVERHAUL SET	C70011	ON-HIGHWAY ENGINES WITH OIL PAN GASKET AND SERIAL NUMBERS WAX, SAP, & KAL
OUT-OF-FRAME OVERHAUL SET	C70021	ON-HIGHWAY ENGINES WITH OIL PAN ISOLATION SEAL AND SERIAL NUMBER C7S WITH STANDARD COUNTERCLOCKWISE ROTATION
OUT-OF-FRAME OVERHAUL SET	C70031	ON-HIGHWAY ENGINES WITH OIL PAN GASKET AND SERIAL NUMBER C7S WITH STANDARD COUNTERCLOCKWISE ROTATION
Cylinder Head Replacement Sets		
CYLINDER HEAD REPLACEMENT SET	C70003	ON-HIGHWAY ENGINES WITH SERIAL NUMBERS WAX, SAP, & KAL.
CYLINDER HEAD REPLACEMENT SET	C70023	ON-HIGHWAY ENGINES WITH C7S SERIAL NUMBER.
CYLINDER HEAD REPLACEMENT SET	C70063	SELECT 324D, 325D, & 329D APPLICATIONS. REFER TO ENGINE AND MACHINE SERIAL NUMBERS
CYLINDER HEAD REPLACEMENT SET	C70073	SELECT 324D, 325D, & 329D APPLICATIONS. REFER TO ENGINE AND MACHINE SERIAL NUMBERS
CYLINDER HEAD REPLACEMENT SET	C70083	SELECT 324D, 325D, & 329D APPLICATIONS. REFER TO ENGINE AND MACHINE SERIAL NUMBERS
Gaskets / Gasket Sets		
GASKET	2692904	
GASKET SET, CENTRAL & LOWER	2627315	
GASKET SET, CENTRAL & LOWER	2664325	
GASKET SET, CENTRAL & LOWER	2664561	
GASKET SET, CENTRAL & LOWER	2849744	
GASKET SET, CENTRAL & LOWER	2974835	
GASKET SET, SINGLE CYLINDER HEAD	2975350	

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IPD ENGINE MODEL SUMMARY

CATERPILLAR®

D3508 / D3512 / D3516 / D3524

G3508 / G3512 / G3516/ G3520

D3406 / D3408 / D3412

D3406E /D3408E/ D3412E

G3406 / G3408 / G3412

D3304 / D3306 / D333

G3304 / G3306 / G333

3204 / 3208

3114 / 3116 / 3126

3064 / 3066

D379 / D398 / D399

G379 / G398 / G399

D353 / G353

D339 / D342 / G342

D343 / D346 / D348

C7, C9, C10 / 3176C, C12, C15

CUMMINS®

ISX/QSX

DETROIT DIESEL®

60 Series

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