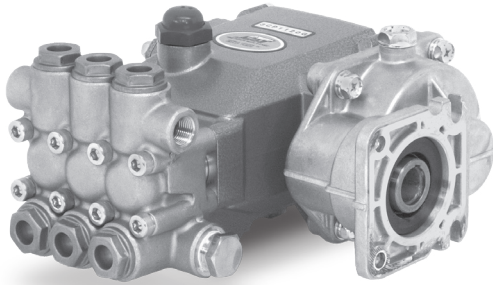


DATA SHEET

DIRECT DRIVE 3CP GEARBOX



Model: **8075** *Used on models 3CP1120G, 3CP1211G, 3CP1241G*



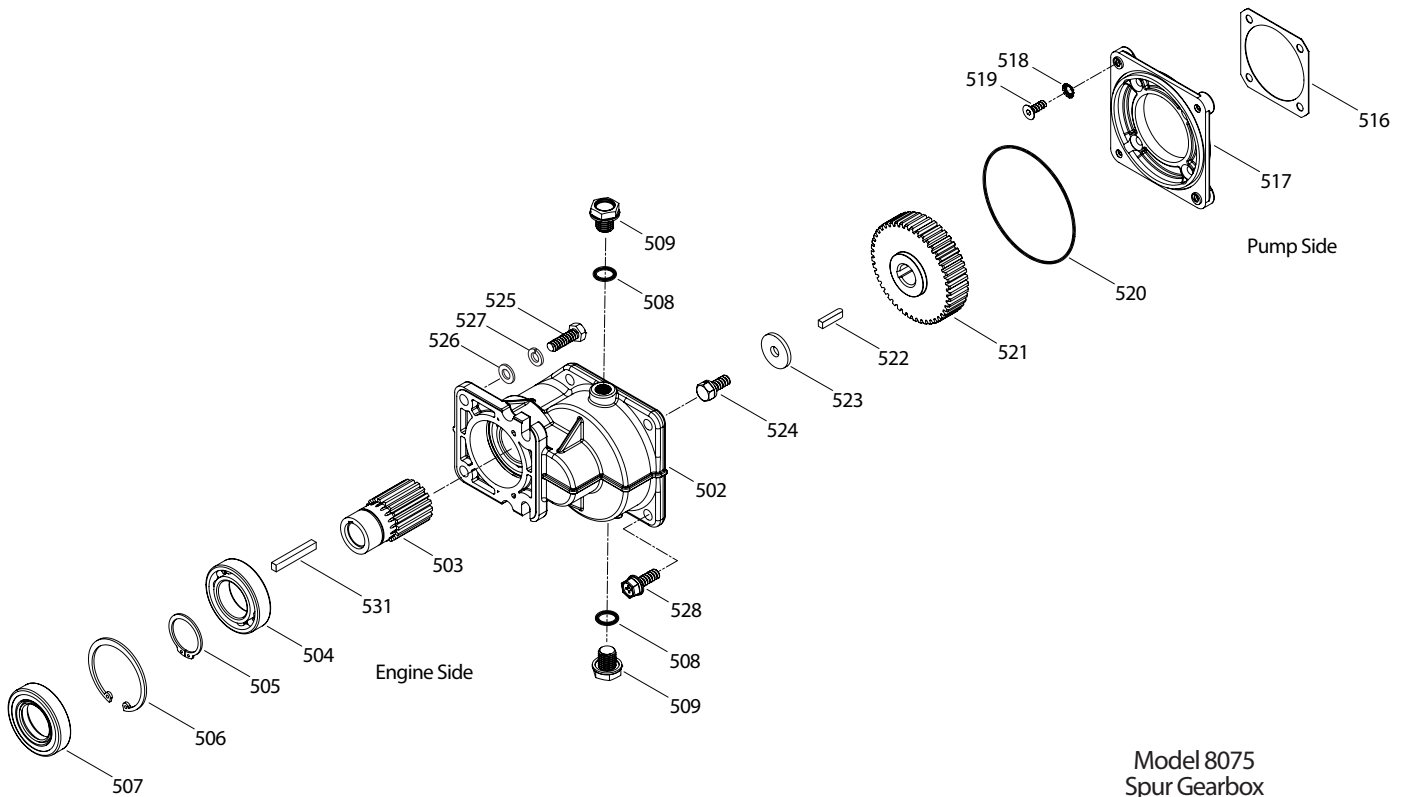
GEARBOX SPECIFICATIONS	U.S. Measure	Metric Measure
Gear Ratio	2.55 to 1	2.55 to 1
Mounting Face	3 5/8"	92 mm
Engine Shaft Diameter	3/4"	19 mm
Engine Shaft Length	2 3/8"	60 mm
Gearbox Capacity	8.5 oz	0.25 l
Pump Crankcase Capacity	12.0 oz	0.35 l
Weight	4.85 lbs	2.20 kg
Dimensions	5.88 x 3.39 x 5.00"	149 x 86 x 127 mm

GEARBOX FEATURES

- No pulley selection or need for adjustment allows for quick, easy gas engine mounting.
- Compact flange mount permits easy, direct mounting to most gas engines.*
- Pump and gearbox share an oil reservoir for ease-of-service and filling, no additional gear lube required.
- Hardened steel spur gear design promotes smooth, quiet operation.

*Gas Mounting Flange: SAE J609, Flange A, Extensions 3 (3/4" Ø)
Shaft Length = 2 3/8", Pilot Ø = 1 5/8", B.C. Ø = 3 5/8", Thread = 5/16" 24 UNF TAP

EXPLODED VIEW



Model 8075
Spur Gearbox
with Pinion Bearing
March 2021

PARTS LIST

ITEM	P/N	MATL	DESCRIPTION	QTY.	ITEM	P/N	MATL	DESCRIPTION	QTY.
502	45085	AL	Housing	1	520	44558	NBR	O-Ring, Flange-70D	1
503	45087	STL	Gear, Pinion	1	521	44297	STL	Gear, Spur	1
504	14488	STL	Bearing, Ball	1	522	57352	STL	Key (M5 x 5 x 21)	1
505	47333	STL	Ring, Retaining (Inner)	1	523	126579	STZP R	Washer, Flat (M8)	1
506	54673	STL	Ring, Retaining (Outer)	1	524	92521	STZP	Screw, Sems HHC (M8 x 20)	1
507	45089	NBR	Seal, Oil, Pinion	1	525	44314	STZP	Screw, HH (5/16" - 24 x 1")	4
508	23170	NBR	O-Ring, Drain Plug-70D	2	526	126573	STCP R	Washer, Flat (M8)	4
509	25625	STCP	Drain Plug, (1/4" x 19 BSP)	2	527	126232	STCP R	Lockwasher (M8)	4
516	48262	—	Gasket, Flange	1	528	126544	STCP R	Screw, Sems HHC (M8 x 25)	4
517	48261	AL	Flange, Bearing Cover	1	531	44294	STL	Key (3/16" x 1/4" x 2 5/32")	1
518	126745	STCP R	Lockwasher, (M6)	4	—	6106	—	Lubrcant, Antiseize (2ml)	1
519	45763	STZP	Screw, FH (M6 x 16)	4					

R Components comply with RoHS Directive

MATERIAL CODES (Not Part of Part Number): AL=Aluminum NBR=Medium Nitrile (Buna-N) S=304SS STL=Steel STCP=Steel/Chrome Plated STZP=Steel/Zinc Plated

SERVICING THE GEARBOX

DISASSEMBLY

1. Completely drain oil from pump and gearbox housing.
2. Remove the four (4) hex head (HH) screws, lockwashers and washers which fasten the gearbox to the engine. Separate gearbox and pump from engine.
3. Remove the four (4) HHC screws which fasten the gearbox to the bearing cover flange. Separate gearbox housing from pump.
4. Remove hex machined retaining screw, lockwasher and flat holding washer from center of spur gear on pump shaft.
5. Slide spur gear from crankshaft.
6. Remove key from keyway in pump crankshaft.
7. Remove four (4) flat head screws holding flange to pump.
8. Tap bearing cover flange with soft mallet to separate from pump crankcase.
9. Examine pump bearing and replace if worn.
10. Examine gasket on outside of bearing cover flange and replace if cut or cracked.
11. Examine O-ring on inside outer groove of bearing cover flange and replace if cut or worn.
12. Place gearbox housing on work surface with pinion oil seal facing up.
13. Remove pinion oil seal by inserting screwdriver between pinion gear and inner lip of seal and pry out.
NOTE: Pinion oil seal will be damaged and must be replaced.
14. Remove large outer retaining ring in groove below the pinion oil seal using retaining ring pliers and set aside for re-use.
15. Turn gearbox housing over onto engine mount flange surface. Bearing is pressed into position so it is necessary to press pinion and bearing out from rear. Set gearbox housing aside.
16. Using reverse pliers remove inner retaining ring from groove on pinion gear and press bearing from pinion. Set aside pinion, bearing and retaining ring.
17. At this point the gearbox has been disassembled. Examine all parts for wear and replace as needed.

REASSEMBLY

1. Line up the four holes and mount gasket on outside of bearing cover flange.
2. Line up the inside mounting holes on bearing cover flange with the holes on the pump.
3. Apply Loctite® 242® to the threaded area of screws before replacing. Torque per chart.
4. Install outer O-ring onto flange.
5. Insert rounded-end of key into pump crankshaft keyway until flush with end of shaft.
6. Line up keyway on spur gear with pump shaft keyway and key and slide onto shaft. Be certain long neck end is installed toward pump crankcase.
7. Install flat holding washer, lockwasher and retaining screw. Apply Loctite® 242® onto shaft and torque per chart.
8. Press bearing over pinion gear until seated on shoulder.
9. Install inner retaining ring on pinion gear and snap into groove.
10. Insert pinion and gear assembly into gearbox housing and press into position until seated on shoulder.
NOTE: Groove for large outer retaining ring must be visible.
11. Insert large outer retaining ring into pinion bearing housing and snap into groove.
12. Lubricate ID and OD of new pinion oil seal. Place oil seal at mouth of pinion bearing housing with garter spring facing down. Carefully press seal into position until seated on retaining ring. Keep seal square in position to avoid inner lip hanging up on pinion gear edge.
13. Rotate pinion gear so keyway is up. Mount assembled gearbox housing with pinion gear onto bearing cover flange.
NOTE: Carefully match pinion gear teeth with spur gear teeth and line up mounting holes. Place engine and helical mounting flange in forward position.
14. Install the screws to fasten gearbox to bearing cover flange. Torque per chart.
15. Fill pump and gearbox with Cat Pumps oil (PN 6107) before operation. Fill pump with recommended amount, allow time for oil to flow into gearbox.

MOUNTING PUMP WITH GEARBOX ONTO ENGINE

1. Rotate crankshaft of engine until keyway is at top.
2. Insert key into keyway and generously apply Loctite® 76764 Antiseize lubricant to engine shaft.
3. Line up keyway of pinion gear and engine shaft and carefully slip gearbox onto engine shaft until flush with engine face. Install four (4) hex machined screws, lockwashers and flat washers. Torque per chart.
4. Before starting operation, fill crankcase of pump with recommended amount of Cat Pumps oil (PN 6107) allow to flow into gearbox.

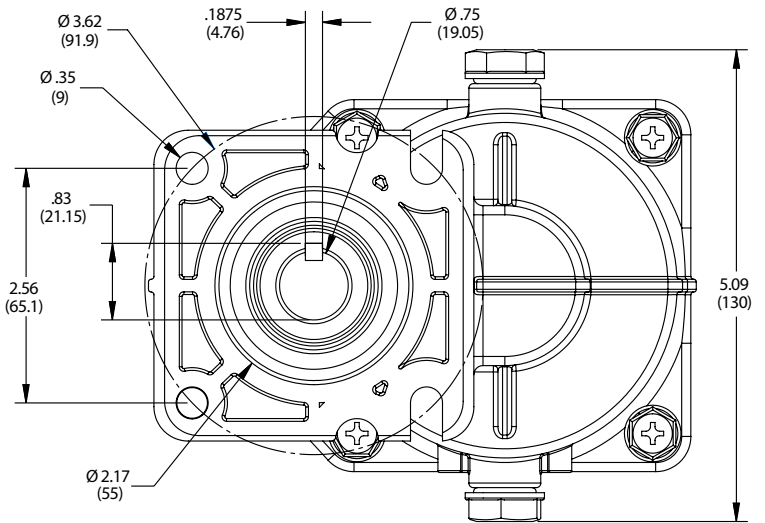
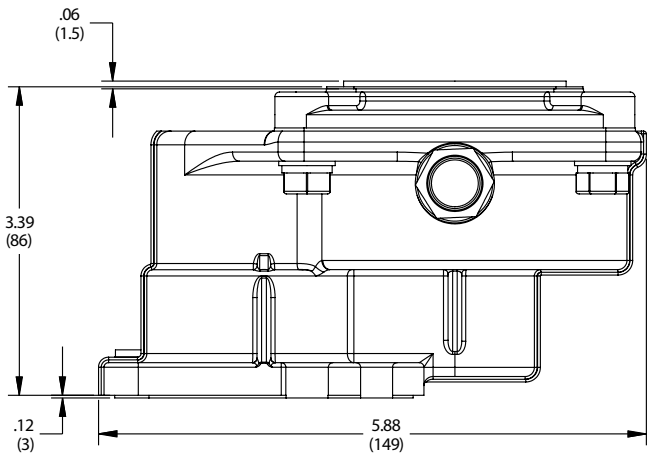
FIELD CONVERSION FROM STANDARD PUMP

To convert from a standard pump to a gearbox pump, remove the existing four (4) HHC combination head screws. Replace with new gearbox bearing cover flange, gasket, four (4) lockwashers and new hex socket flat head screws.

TORQUE CHART

Description	Thread	Tool	Torque
Flange to Pump	M6	4 mm hex	4.1 ft-lbs (5.6 Nm)
Gearbox to Bearing Cover Flange	M8	13 mm	4.1 ft-lbs (5.6 Nm)
Engine Mounting Screw	5/16"-24	1/2"	9.1 ft-lbs (12.3 Nm)
Gear Retaining Screw	M8	13 mm	9.1 ft-lbs (12.3 Nm)

DIMENSIONAL



⚠ CAUTIONS AND WARNINGS

All high-pressure systems require a primary pressure regulating device (i.e. regulator, unloader) and a secondary pressure relief device (i.e. pop-off valve, relief valve). Failure to install such relief devices could result in personal injury or damage to pump or property. Cat Pumps does not assume any liability or responsibility for the operation of a customer's high-pressure system. Read all CAUTIONS and WARNINGS before commencing service or operation of any high-pressure system. The CAUTIONS and WARNINGS are included in each Service Manual and with each Accessory Data sheet. CAUTIONS and WARNINGS can also be viewed online at www.catpumps.com/dynamic-literature/cautions-and-warnings or can be requested directly from Cat Pumps.

WARRANTY

View the Limited Warranty on-line at www.catpumps.com/literature/cat-pumps-limited-warranty

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