



INTERMEDIATE[®]

ARROW ENGINE MANUFACTURED **REPLACEMENT PARTS**



ARROW
ENGINE COMPANY



a TRIMAS company

WAUK INTERMEDIATE-RP-C-AUG08



In 1955 Arrow Engine Company opened for business, beginning the tradition of providing premium service and exceptional products to the oil & gas industry, as well as the industrial engine market, throughout the world.

Arrow is a part of the Engineered Components segment formed by TriMas Corporation. Headquartered in Bloomfield Hills, Michigan, TriMas Corporation (NASDAQ- TRS) provides engineered and applied products for growing markets worldwide. TriMas Corporation is organized into the following reportable segments: Packaging, Energy, Aerospace & Defense, Engineered Components, Cequent North America, and Cequent Asia Pacific. With almost a billion dollars in sales, TriMas Corporation has approximately 4,000 employees at over 60 different facilities in 11 countries.

With a consistent focus on our customers' needs, striving to help them grow their business, and producing the most reliable equipment and parts in the industry, Arrow has forged a 55-year tradition of excellence.



Replacement Parts for **WAUKESHA INTERMEDIATE GAS ENGINES**

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Arrow Engine Company is in no way associated with any other engine manufacturer. All manufacturer's names and descriptions are used for reference only. The information in this catalog is subject to change without notice.





140G/F554 Engine Kits

Basic Engine Kit	HW970144	Includes:
		6) HW93225 Sleeve Kit
		6) HW140110F Rod Bearing
		1) HW918100 Main Bearing Set
		1) HW900223 Complete Gasket Set
Complete Engine Kit	HW970140	Includes:
		6) HW93225 Sleeve Kit
		6) HW140110F Rod Bearing
		1) HW918100 Main Bearing Set
		6) HWB5624 Wrist Pin Bushing
		1) HW92726 Cam Bearing Set
		1) HW900223 Complete Gasket Set
		1) HW96088 Water Pump Kit
		6) HW140036C Intake Valve
		12) HW94309A Intake/Exhaust Guide
		6) HW74592 Exhaust Seat

140G/F554 Block Components

Sleeve Kit	HW93225	
Piston	HW142204	Includes Pin & Snings
Sleeve	HW142030C	
Sleeve O-Ring Set	HW950087	
Piston Ring Set	HW907104	(3) 1/8" (2) 3/32"
Rod Bearing	HW140110F	2.625" Shaft
Main Bearing Set	HW918100	3.250" Shaft
Cam Bearing Set	HW92726	Includes Cam Plug
Wrist Pin Bushing	HWB5624	1 Per Rod
Thrust Button	HW154097	Camshaft
	76420	Idler Gear
T.B. Spring	HW154130	Spring, Camshaft
T.B. Spring	HW74993	Spring, Idler Gear
Thrust Washer, Idler Gear	HW130028	
Expansion Plug, Camshaft	HW3485	
Lifter, Valve	HW140337C	

140G/F554 Head Components

Head Kit	HW936140	12) HW94309A Intake/Exhaust Guide
		6) HW140036C Intake Valve
		6) HW140136 Intake Guide
		6) HW74592 Exhaust Seat
Valve	HW140036C	Intake, Dual spring head only
	HW140136	Exhaust, Dual spring head only
Valve Guide	HW94309A	Exhaust & Intake
Valve Seat	HW74590	Intake
	HW74592	Exhaust

140G/F554 Gaskets

Complete Gasket Set	HW900223	Stem Seals & Rubber Rear Crankshaft Seal not incl.
Top Gasket Set	HW979237	
Head Gasket	HW142000	2 Per Engine
Valve Cover Gasket	HW74431D	2 Per Engine
Oil Pan Gasket	HW97823	Single Piece Design
Crankshaft Seal	HW140094A	Front
	HW494226	Rear Seal conversion kit
	A156197B	Rear
	A199145D	Rear Seal Sleeve

140G/F554 Accessories

Water Pump Kit	HW96088	Gear driven, less impeller
	HW960201L	Belt driven, less impeller
	HW960201LS	Belt driven, less impeller & shaft
Water Pump Seal	HW120320	Belt driven
	HW120818	Gear driven seal assy. 2 per pump
	HW118227	Gear driven seat insert 2 per pump
Thermostat	HW155311	160°, 2 per engine - hot exhaust
		3 per engine - water cooled exhaust
	155311B	180°, 2 per engine - hot exhaust
		3 per engine - water cooled exhaust
Timing Tape	A211638	
Oil Filter	HW101606	7 7/8" x 5"
Idler Gear Bushing	HW130129T	Pre-Ream Medium
Governor	HW78039	Bearing
	HW78040	Bearing
	A78062	Seal
	85641	Seal, Shaft, 2 per engine
Diaphragm & Air Valve	AV1-12-2	Silicone Diaphragm
Diaphragm	D1-16-2	Silicone Diaphragm
Clutch Plate	5659-L	3 Piece Plate
Clutch Pilot Bearing	M-1985-A	



145G/F817 Engine Kits

Basic Engine Kit	HW970116	includes:
		6) A-932-83 Sleeve Kit
		6) A145110A Rod Bearing
		1) A-918-241 Main Bearing Set
		2) A163145A Thrust Washer
		1) HW900255 Complete Gasket Set

Complete Engine Kit	A-970-817	Includes:
		6) A-932-83 Sleeve Kit
		6) A145110A Rod Bearing
		1) A-918-241 Main Bearing Set
		1) A163145A Thrust Washer Pair
		6) A145008 Wrist Pin Bushing
		1) A-927-27 Cam Bearing Set
		1) HW900255 Complete Gasket Set
		1) A-960-203L Water Pump Kit
		6) A145436C Intake Valve
		6) A145336A Exhaust Valve
		6) A145109E Intake Guide
		6) A145109T Exhaust Guide
		6) A116513A Exhaust Seat
		6) HW273353 Stem Seals



145G/F817 Block Components

Sleeve	A147030M	
Piston Ring Set	A-907-153	(3) 3/32"; (2) 1/4"
Piston	A147704D	Includes Pin & Snap Rings
Sleeve Kit	A-932-83	Arrow 3Ring, 5 3/8"; 9.2 to 1
Sleeve O-Ring Set	A95029	Will fit only Arrow 3 Ring Sleeves
Rod Bearing	A145110A	3.000" Shaft
	A145110A2	.020" undersized
Main Bearing Set	A-918-241	3.500" Shaft
	A-918-244	.020" undersized

Thrust Button	HW154097	Camshaft
	76420	Idler Gear
T.B. Spring	HW154130	Spring, Camshaft
T.B. Spring	HW74993	Spring Idler Gear
Main Bearing Thrust Washer	A163145A	2 Required
Cam Bearing Set	A-927-27	
Wrist Pin Bushing	A145008	1 11/16" OD
	A145208	1 3/4" OD
Oil Pump Repair Kit	HW980127	Oil pumps #AA145080G & CA145080G
Expanding Plug, Cam	A76427	
Lifter, Valve	A145037	
Rod Bolt	HWB1882E	
Rod Nut	HW28666	

145G/F817 Head Components

Head Kit	A-936-817	Includes:
		6) A145436C Intake Valve
		6) A145336A Exhaust Valve
		6) A116513A Exhaust Seat
		6) A145109 Intake Guide
		6) A145109T Exhaust Seat
		6) HW273353 Stem Seal
Valve	A145436C	Intake, 2 9/16" Head Dia
	A145336A	Exhaust, 2" Head Dia
Valve Guide	A145109E	Intake, Machined for Stem Seal
	A145109T	Exhaust
Valve Seat	HW116511A	Intake
	A116513A	Exhaust
Valve Stem Seal	HW273353	Teflon Insert
Valve Spring	HW145135A	Dual Spring Head, Inner
	HW145035A	Dual Spring Head, Outer
	HW145335	Single Spring Head
Retainer, Valve Spring	HW74992	Dual Spring Head; 2 1/4" OD
	HW154940	Single Spring Head; 1 11/16" OD
Valve Taper	HW73629	

145G/F817 Gaskets

Complete Gasket Set	HW900255	Front and Rear Seals Included
Top Gasket Set	HW979238	
Head Gasket	A145000	2 Per Engine
Valve Cover Gasket	A76423C-	2 Per Engine
Oil Pan Gasket	A166386	Single Piece Design
Crankshaft Seal	A145094	Front, Felt
	A209395A	Front, Rubber
	HW199250	Front Seal Repair Sleeve
	HW494226	Rear Seal Conversion Kit
	A156197B	Rear
	A199451B	Rear Seal Sleeve

145G/F817 Accessories

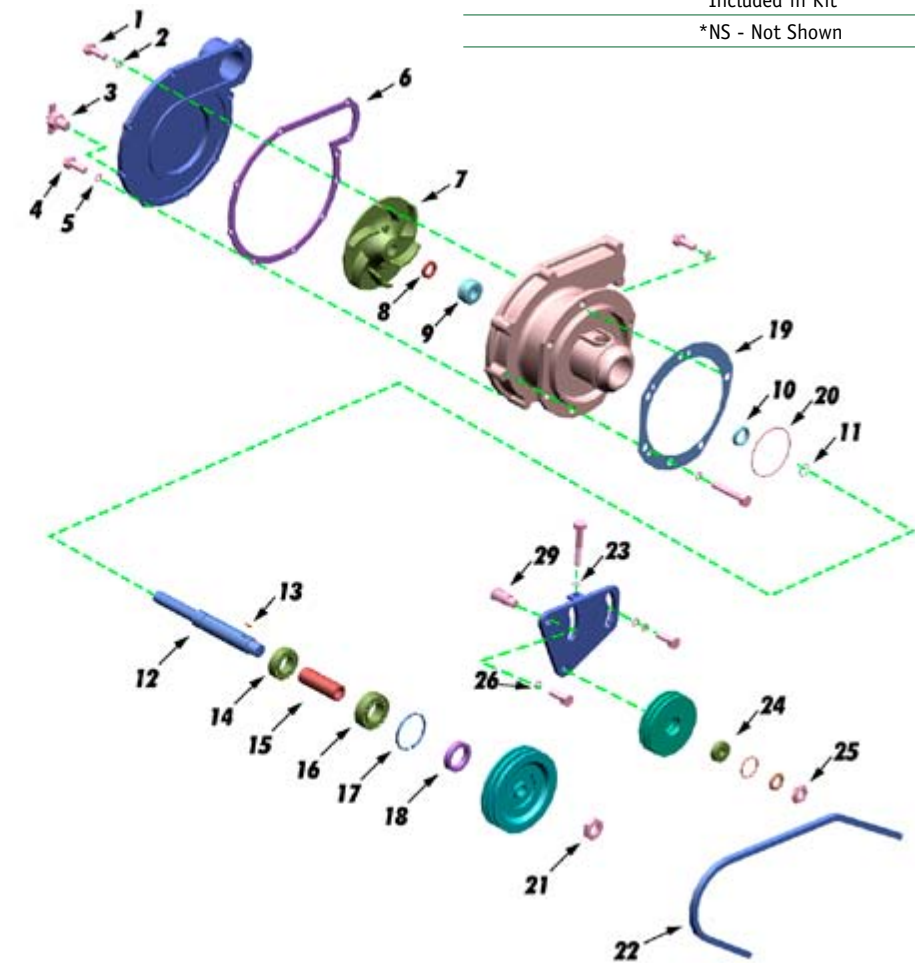
Water Pump Kit	A-960-203	Belt Driven
	A-960-203L	Belt Driven, Impeller NOT included
	HW960203LS	Belt Driven, Impeller and shaft NOT included
	HW96088	Gear Driven, Impeller NOT included
Water Pump Seal	120320B	Belt Driven
	HW120818	Gear Driven, Seal Assembly, 2 per pump
	HW118227	Gear Driven, Seal Insert, 2 per pump
Water Pump Impeller	A145263A	Belt Driven
Thermostat	HW155311	160°, 2 per engine for hot exhaust
	155311B	180°, 3 per engine for water cooled exhaust
	A199451B	Rear Seal Sleeve
Timing Tape	A211638	
Exhaust Manifold	HW145045	One Piece Steel
Oil Filter Adapter	HW145355	Direct Mount for Spin-on Filter
Oil Filter	HW101606	7 7/8" x 5"
	HW167602	16" x 4 3/8"
Idler Gear Bushing	HW130129T	Pre-ReaMedium



Governor	HW78039	Bearing
	HW78040	Bearing
	HW78062	Seal
	HW85641	Seal, Shaft, 2 per engine
Governor Repair Kit	A-817	Governor Repair Kit
	A140092	Governor Cover Gasket (1)
	73596L	Bearing Needle (use with dual carburetor) (2)
	B6316	Shaft Seal Retainer (2)
	85641	Oil Seal (use with dual carburetor) (2)
	A78062	Oil Seal (1)
	HW78039	Ball Bearing (1)
	HW78040	Ball Bearing (1)
	HW78046	Retainer Ball Bearing (1)
	80107A-A26902	Marsden Lock Nut 3/8"-24 (1)
	A140338V	Governor Drive Shaft (1)
	HW76621A	Governor Weight Shifter (1)
	AB4640	Governor Drive Shaft Washer (1)
Diaphragm & Air Valve	AV1-12-2	Silicone Diaphragm
Diaphragm	D1-16-2	Silicone Diaphragm
Clutch Plate	5659-L	3 Piece Plate
Clutch Pilot Bearing	M-1985-A	
Fasteners	HWB1287D	Head Stud, Long
	HWB5220	Head Stud, Short
	B844	Head Nut
	HWB367	Head Nut Washer
	HWB364C	Rocker Arm Stud, 5 1/8" Long
	HW63153B	Water Manifold Stud, 6 3/8" Long
	HWB2737	Water Manifold Stud, 6 5/8" Long
	B1966B	Water Manifold Stud, 7 3/8" Long
	HWB5546B	Exhaust Manifold Nut
	B355	Exhaust Manifold Washer

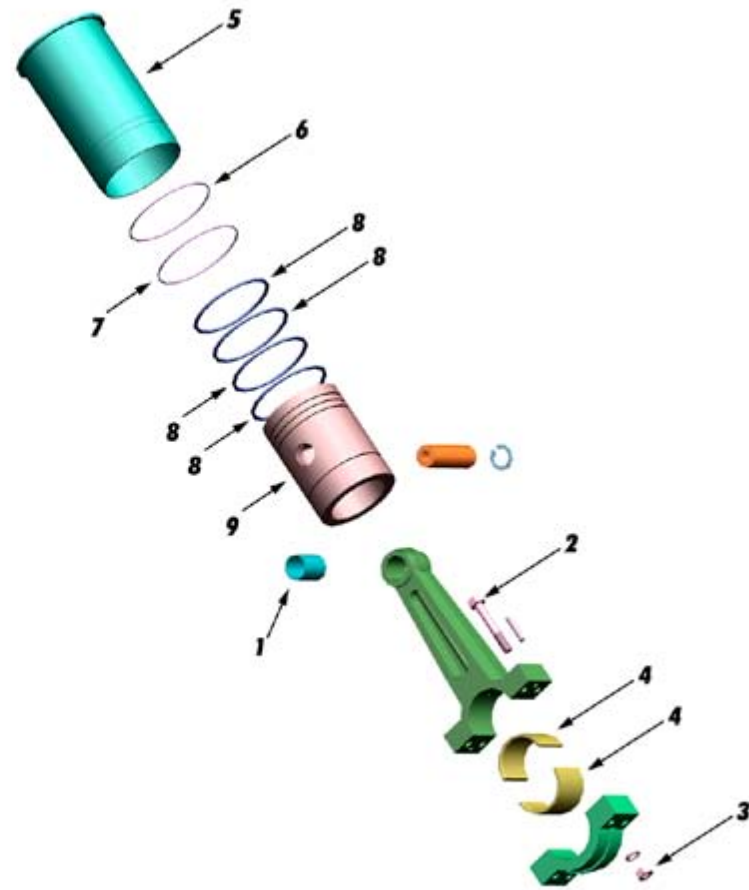
Part No.	Description	No. Req.	
1	*A21374	CAPSCREW, Flat	3
2	*21642	LOCKWASHER, Ext #10 Shpr, Ctsk	3
3	*130-118	COCK, Drain	1
4	7A-5/1618X7/8	CAPSCREW, Hex Head	7
5	1A-5/16	LOCKWASHER, Plated	7
6	*HW164768	GASKET, Water Pump Cover	1
7	*A145263A	IMPELLER, Water Pump	1
8	*161647A	SEAT, Seal	1
9	*120320D	SEAL, Water Pump	1
10	*A164770	SEAL, Oil	1
11	*A167160	RING, Retaining	1
12	*A145356	SHAFT, Water Pump	1
13	*104A-#7	KEY, Woodruff	1
14	*AB5949	BEARING, Ball	1
15	*A164772	SPACER	1
16	*AB4582	BEARING, Ball	1

Part No.	Description	No. Req.	
17	*HW952749B	RING, Retaining	1
18	*A159372	SEAL, Oil (167069A Pulley)	1
18	*A164771	SEAL, Oil(167069 Pulley)	1
19	*A76460	GASKET, Water Pump	1
20	*A118013G	O-RING	1
21	*33A-5/818	LOCKNUT, Nylon Insert	1
NS	A48340	GASKET, End Cover	1
22	HWA164923	BELTS, Water Pump (Set)	1
23	21195	NUT, Hex Jam Plain 3/824	1
24	HW168150	BEARING, Idler	1
25	26729	NUT, Flex Loctite 1/220	1
26	2C-3/8	LOCKWASHER, Internal	1
	KIT		
	A-960-203	WATER PUMP KIT COMPETE	
	A-960-203L	WATER PUMP KIT LESS IMPELLER	
	HW960203LS	WATER PUMP KIT LESS IMPELLER and SHAFT	
		*Included in Kit	
		*NS - Not Shown	



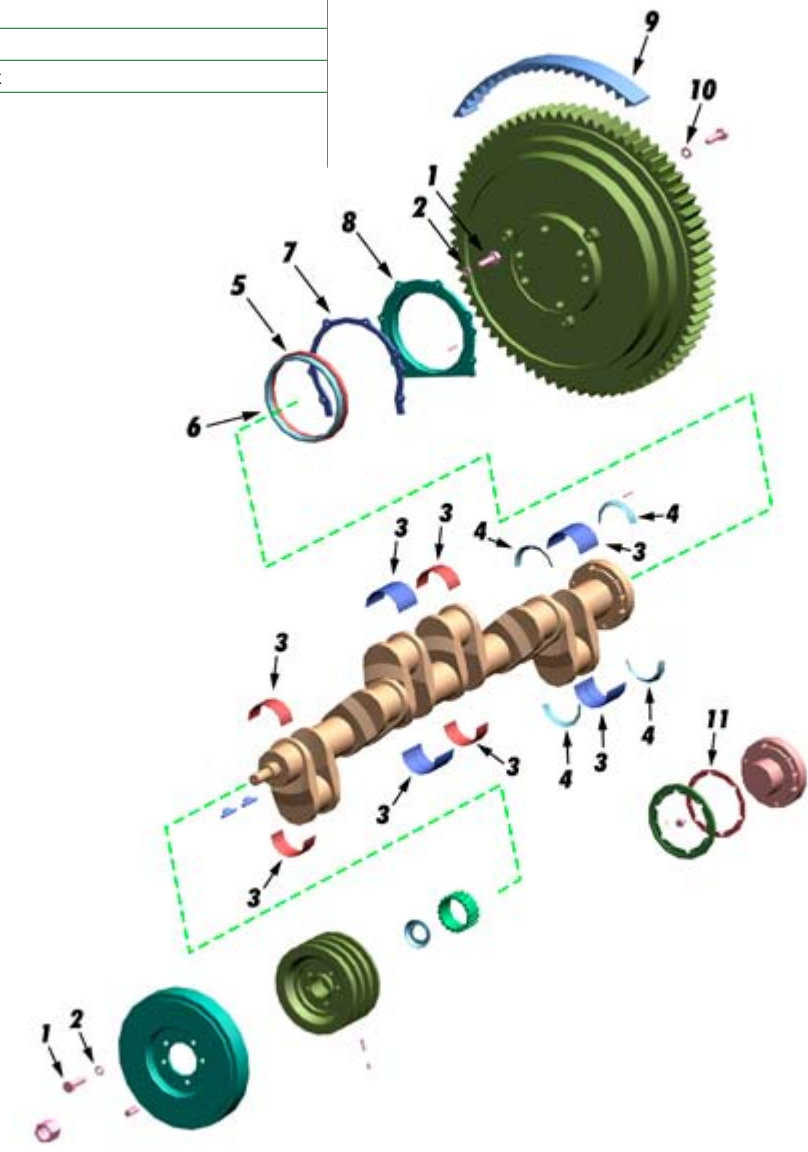
CYLINDER PISTON F817

Part No.	Description	No. Req.
1	A145208 BUSHING, Piston Pin 1 3/4" OD	6
1	A145008 BUSHING, Piston Pin 1 11/16" OD	6
2	HWB1882E BOLT, Connecting Rod	24
3	HW28666 NUT, Rod Grade 8	24
4	A145110A BEARING, Connecting Rod Std.	6
4	A145110A2 BEARING, Connecting Rod .020	6
5	*A147030M SLEEVE, Cylinder	6
6	*A169484A O-RING, Black	12
7	*12 46 GASKET, Cylinder. Sleeve	6
8	*G-907-153 RING, Set	6
9	*A147704D PISTON, w/Pins and Retainers (9 to 1 Compression Ratio)	6
KIT		
A-932-83	SINGLE SLEEVE KIT *Included in kit	
A95029	O-RING SET (Includes item 6 & 7) Will fit the Arrow 3 Ring Sleeve only	



CRANKSHAFT, PULLEY F817

Part No.	Description	No. Req.
1	7A1/213x11/4 SCREW, Hex Head	6
1	7A-3/816x1 SCREW, Hex Head	18
2	1A-1/2 WASHER, Lock	6
2	1A-3/8 WASHER, Lock	18
3	A-918-241 BEARING, Main Set STD.	1
3	A-918-244 BEARING, Main Set .020	1
4	A163145A RING, Thrust w/pins	2
5	*A156197B SEAL, Crankshaft	1
6	*A199451D SLEEVE, Wear Rear	1
7	*HW74709 GASKET, Seal Housing	1
8	*HW135090B RETAINER ,Oil Seal	1
9	A211638 TAPE, Timing	1
10	B355 WASHER, Plain	8
11	A78624 GASKET, Oil Slinger	1
KIT		
HW494226	REAR SEAL KIT *Included in kit	



WATER PUMP GEAR F817

Part No.	Description	No. Req.	
1	155248	O-RING,1.06x1.19x.06	2
2	HW118227	SEAT, Insert	2
3	HW48311	SEAL	1
4	HW48340	GASKET	1
5	M-141-A	BEARING, Solid Shaft 7, 8" Double Shielded	1
6	7A-3/816x33/4	CAPSCREW, Hex Head	3
7	1A-3/8	LOCKWASHER, Plated	3
8	HW48594	GASKET, Water Pump Body	1
9	116855	WASHER, Water Pump Seal	2
10	116841C	SEAL, Water Pump	2
11	HW26597	PIN, Roll	1
12	HWB3104	PLUG, Pipe	2
13	HW116867	SEAL, Oil	1

Part No.	Description	No. Req.	
14	HW140656A	SHAFT, Water Pump 140/145G	1
15	104A-#13	KEY, Woodruff	1
16	HW116839	BEARING, Front	1
17	7A-5/1618x1/2	CAPSCREW, Hex Head	2
18	A76460	GASKET, Water Pump Crankcase	1
NS	A76709	GASKET, Oil Cooler	1
NS	HW48593	GASKET, Water Pump	1
NS	HW63205	GASKET, Water Elbow	1
NS	HW73386A	GASKET, Water Pipe	1
NS	HW74372A	Gasket, Water Pump Mounting	1
NS	HW120818	SEAL, Assembly	2

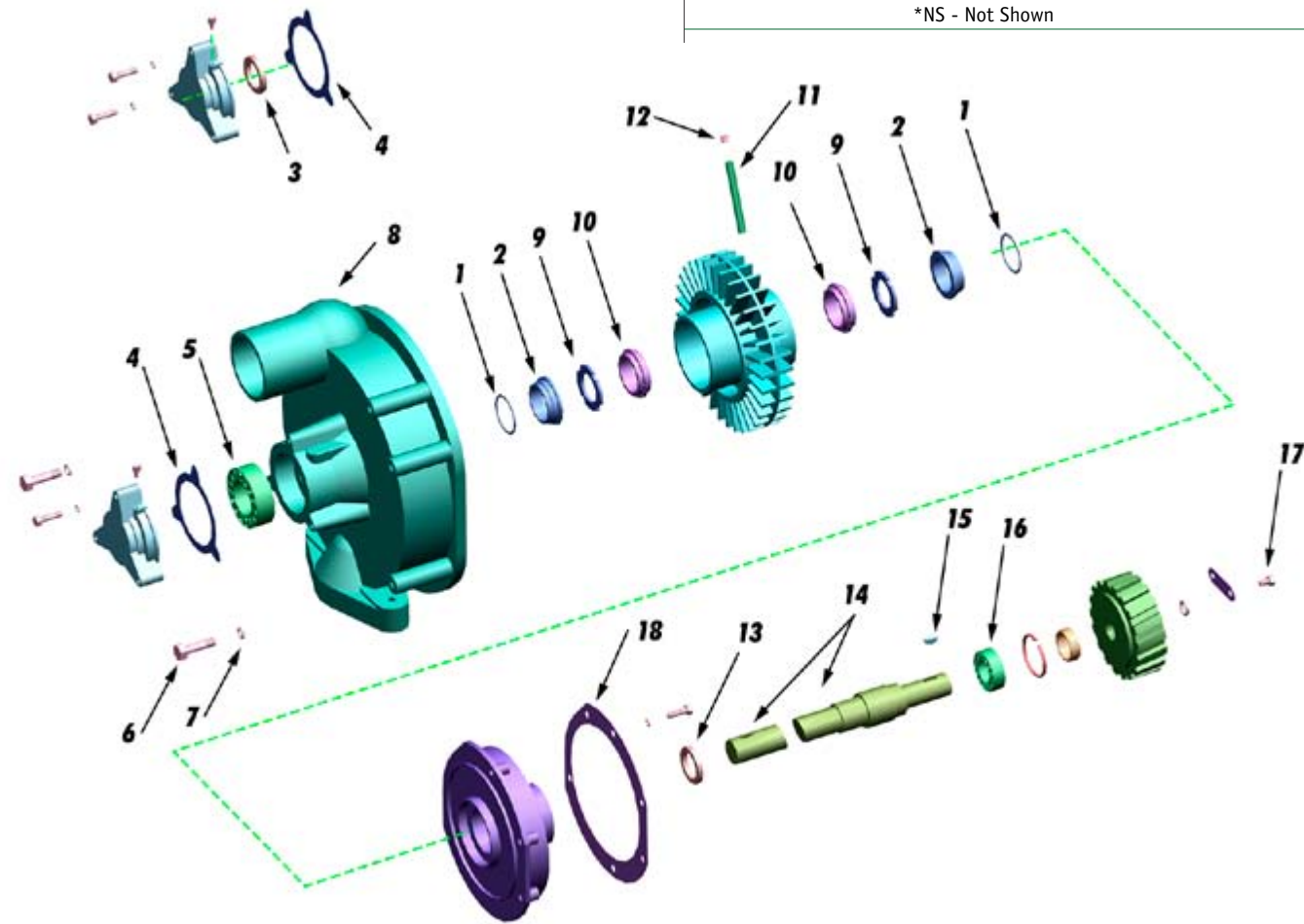
(Takes the place of items 1,2,9, & 10)

KIT

HW96088 WATER PUMP KIT LESS IMPELLER

HW96088LS WATER PUMP KIT LESS IMPELLER AND SHAFT

*NS - Not Shown



CYLINDER HEAD F817

Part No.	Description	No. Req.	
1	HWB9037E	CAP, Breather	2
2	A76423C	GASKET, Rocker Arm Cover	2
3	*A116513A	SEAT, Exhaust	6
NS	HW116511A	SEAT, Intake	6
4	*A145109E	GUIDE, Intake	6
5	*A145109T	GUIDE, Exhaust	6
6	HW73629	KEEPER, Valve	24
7	HW74992	RETAINER, Valve Spring	12
8	A158386A	SEAL, Valve Guide (Old Style)	6
8	*HW273353	SEAL, Stem	6
9	HW145135A	SPRING, Dual Valve Inner	12
10	HW145035A	SPRING, Dual Valve, Outer	12
NS	HW145335	SPRING, Single Head	12
11	*A145436C	VALVE, Intake	6
12	*A145336A	VALVE, Exhaust	6

Part No.	Description	No. Req.	
13	B844	NUT, Hex 5/8-18x13/16	22
14	HWB367	WASHER, Flat	28
15	HWB1287D	STUD, Head Long	22
16	HWB5220	STUD, Head Short	6
17	A145000	GASKET, Head (New Style)	2
18	1A-1/2	LOCKWASHER, Plated	12
19	7A-1/213x11/4	CAPSCREW, Hex Head	6
20	73017A	CONNECTOR, Inverted	4
21	HWB4104	BUSHING, Rocker Arm	12
22	HW73658C	SCREW, 7/16x20x113/16	12

KITS

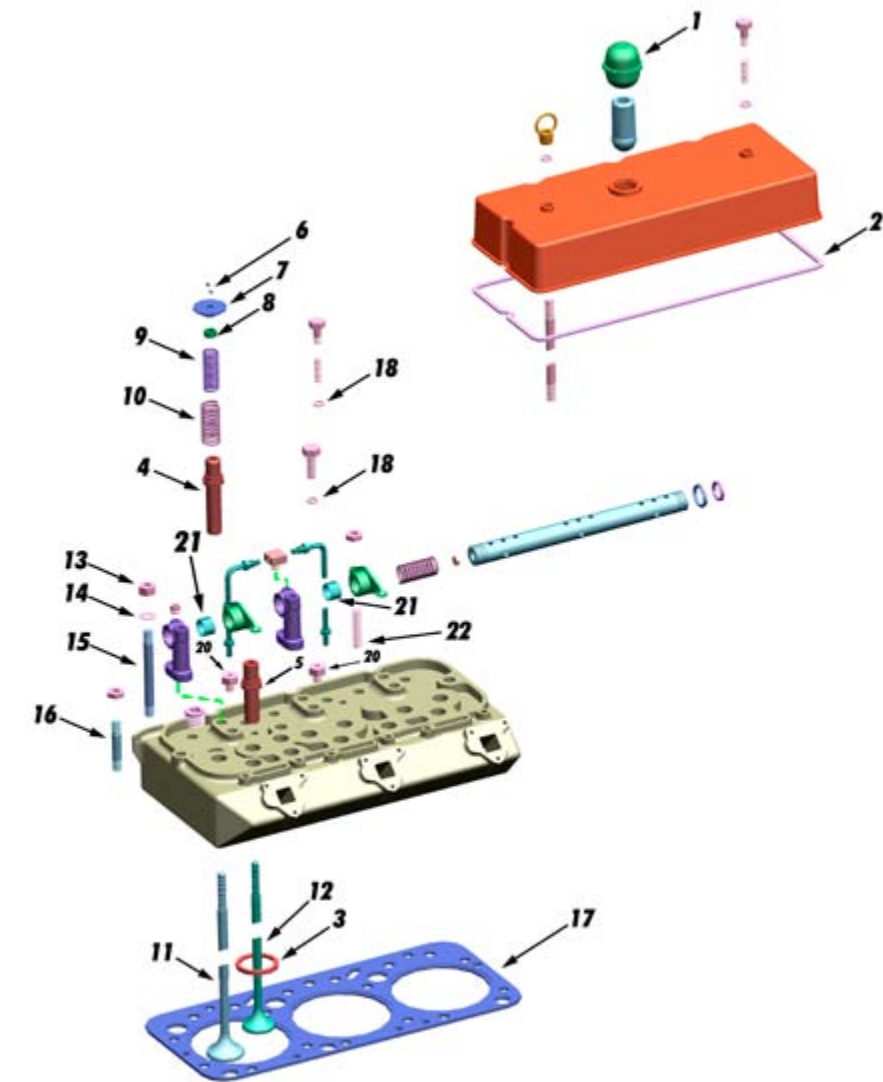
A-936-817 CYLINDER HEAD REBUILD KIT

HW9361995 CYLINDER HEAD REBUILD KIT (Single Head)

*Included in kit

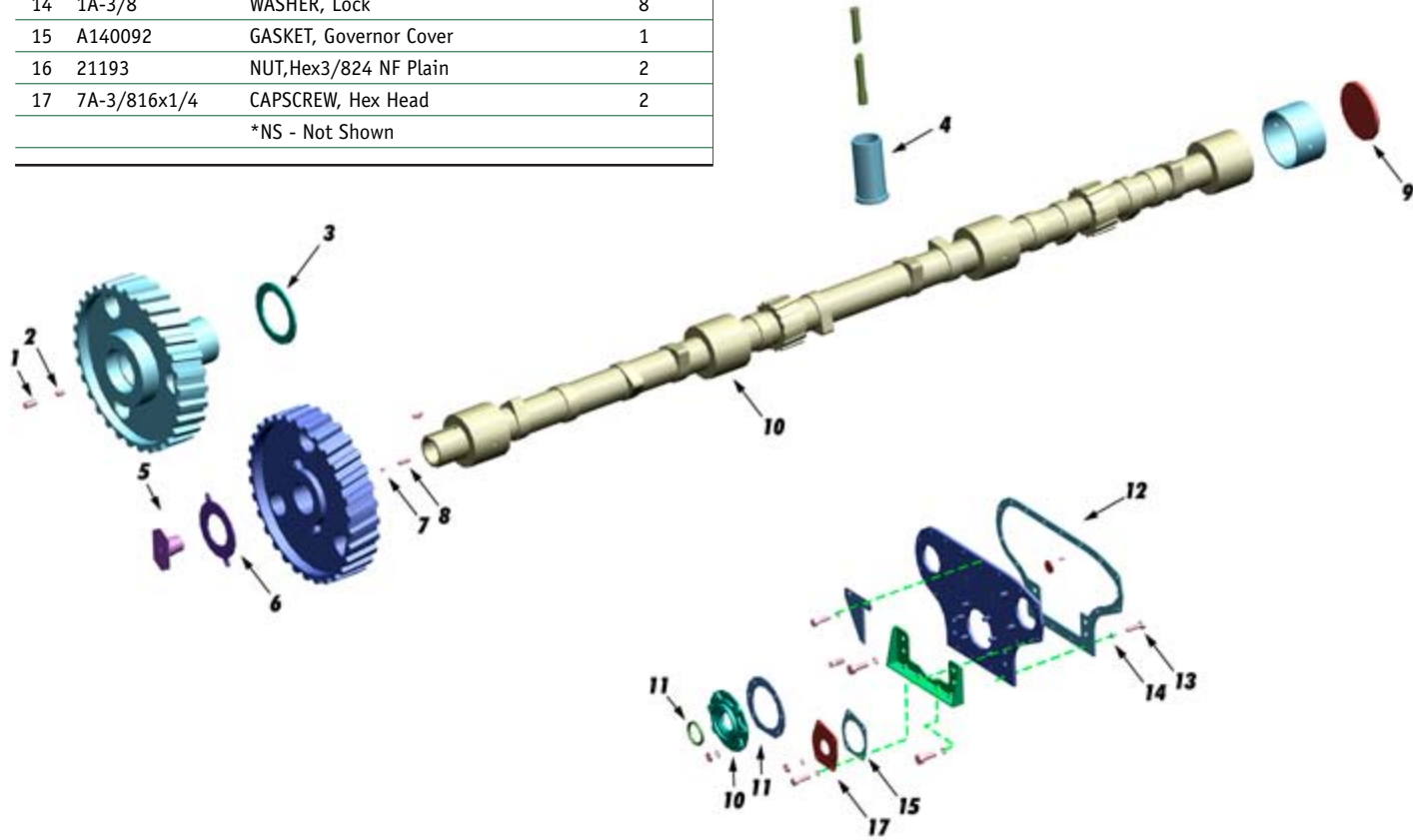
HW979238 TOP GASKET SET

*NS - Not Shown



CAM, FRONT F817

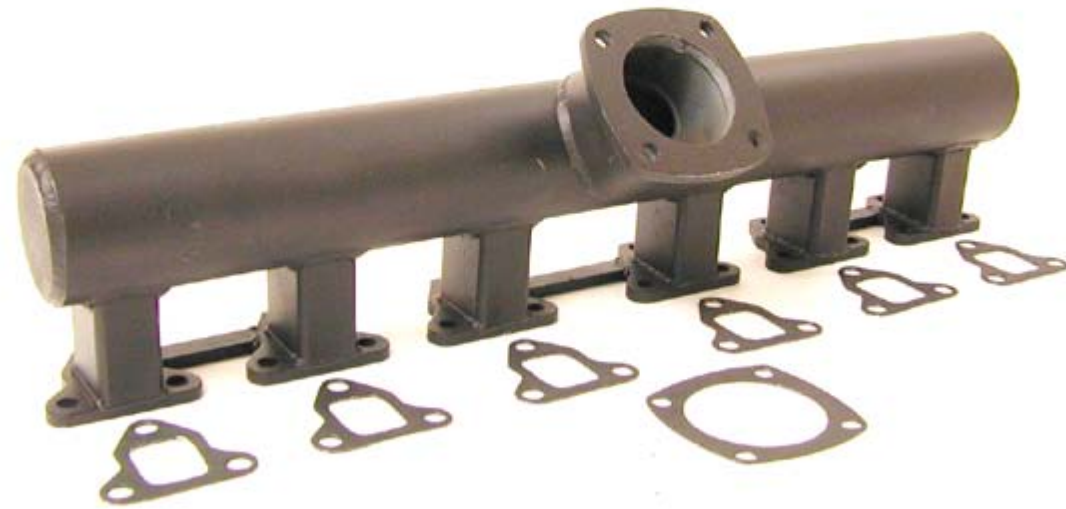
Part No.	Description	No. Req.	
1	76420	BUTTON, THRUST	1
2	74993	SPRING, Button	1
3	A130028	WASHER, Thrust	1
4	A145037	LIFTER	12
5	A154101	CAPSCREW, Flat	1
6	HW154102	PLATE, Cam Gear Lock	1
7	HW154097	PLUNGER, Thrust	1
8	HW154130	SPRING, Button	1
9	A76427	PLUG, Expansion	1
10	A145323	CAMSHAFT	1
	KIT		
	A-927-27	CAMSHAFT BUSHING KIT	
10	21195	NUT, Hex Jam 3/824 Plain	6
11	A145094	SEAL, Felt Front	1
11	A209395	SEAL, Rubber Front	1
NS	HW199250	SLEEVE, Crankshaft Seal	1
12	A76428A	GASKET, Gear Cover	1
13	21350	CAPSCREW, Hex Head 3/8-16x1/8	4
14	1A-3/8	WASHER, Lock	8
15	A140092	GASKET, Governor Cover	1
16	21193	NUT, Hex 3/824 NF Plain	2
17	7A-3/816x1/4	CAPSCREW, Hex Head	2
	*NS - Not Shown		



HW979238 F817

Part No.	Description	No. Req.	Part No.	Description	No. Req.
A145000	GASKET, Cylinder Head	2	A156197B	SEAL, Rear Lip	1
A76423C	GASKET, Rocker Arm Cover	2	HW21144	BOLT, Front Support	1
HW118013G	O-RING	1	HW48604A	GASKET	1
HW78064	GASKET, Exhaust Flange	1	HW48607A	GASKET	1
HW78966	GASKET, Manifold Expansion	2	A63087D	SEAL, Rope	1
A76430	GASKET, Intake Manifold	6	HW74709	GASKET, Seal Housing	1
A76432	GASKET, Exhaust Manifold	6	HW78064	GASKET, Exhaust Flange	2
A76455	GASKET, Water Manifold	6	A145000	GASKET, Cylinder Head	2
A76916	GASKET, Therm Housing	1	A76423C	GASKET, Rocker Arm Cover	2
HW44515	GASKET, Exhaust Flange	1	HW118013G	O-RING	1
HW73386A	GASKET, Water Pipe	7	HW78064	GASKET, Exhaust Flange	1
HWB1003	GASKET, Thermostat	1	HW78966	GASKET, Manifold Expansion	2
HWB2207	GASKET, Water Pipe	2	A76430	GASKET, Intake Manifold	6
HWB4854A	GASKET, Carburetor	4	A76432	GASKET, Exhaust Manifold	6
HW118013N	O-RING	2	A76455	GASKET, Water Manifold	6
HW118013P	O-RING	1	A76916	GASKET, Therm Housing	1
HW176412	WASHER, Copper	2	HW44515	GASKET, Exhaust Flange	1
HW2130	WASHER, Copper	10	HW73386A	GASKET, Water Pipe	7
HWB2131	WASHER, Copper	4	HWB1003	GASKET, Thermostat	1
B8556	WASHER, Copper	9	HWB2207	GASKET, Water Pipe	2
			HWB4854A	GASKET, Carburetor	4
85641	SEAL, Oil	3	HW118013N	O-RING	2
A145094	SEAL, Felt	1	HW118013P	O-RING	1
A166386	GASKET, Oil Pan	1	HW176412	WASHER, Copper	2
A199451D	REAR Wear Sleeve	1	HW2130	WASHER, Copper	10
A209395A	SEAL, Front Oil	1	HWB2131	WASHER, Copper	4
A73818A	GASKET, Oil Pan Cover	1	B8556	WASHER, Copper	9
A76428A	GASKET, Gear Cover	1	HW80170	GASKET	2
A78062	SEAL, Oil	1	A116841C	SEAL, Oil	1
A130028	Washer, Thrust	1	SHW418		
			SHW420		

Arrow's One-Piece Exhaust Manifold for F817 Engines



Arrow has designed an all steel One Piece Exhaust Manifold for the F817 engine. Installation and maintenance are simpler with the one-piece design, and the all steel construction resists cracking. This design replaces the old style three-piece cast iron design.

WAK/F1197 Engine Kits

Basic Engine Kit	
HW970173	Includes:
	6) HW932218 Sleeve Kit
	6) HW123210H Rod Bearing
	1) HW918225 Main Bearing Set
	2) HW63617A Thrust Washer
	1)HW900209 Complete Gasket Set

WAK/F1197 Engine Kits

Complete Engine Kit	
HW970997	Includes:
	6) HW932218 Sleeve Kit
	6) HW123210H Rod Bearing
	1) HW918225 Main Bearing Set
	2) HW63617A Thrust Washer
	1)HW900209 Complete Gasket Set
	1) HW960181 Water Pump Kit
	6) HW123036L Intake Valve
	6) HW123236A Exhaust Valve
	6) HW123009E Intake Guide
	6) HW123109K Exhaust Guide
	12) HW123108 Wrist Pin Bushing
	6) HW48943B Exhaust Seat
	6) HW273353 Stem Seals

WAK/F1197 Block Components

Sleeve Kit	HW932218	Arrow 3 Ring , 6 1/4", 9.0 to 1
Piston	HW123804	Includes Pin and Snap Ring
Sleeve	HW123130	
Sleeve O-Ring Set	HW95072	Will fit only Arrow 3' Ring Sleeve
Piston Ring Set	HW907152	3 3/16", 1 1/4"
Main Bearing Set	HW918225	4.000" Shaft
Main Bearing Thrust Washer	HW63617A	2 Required
Cam Bearing Set	HW92729	
Wrist Pin Bushing	HW123108	2 Per rod
Oil Pump Repair Kit	A-980-125	
Idler Gear Bushing, Camshaft	HW8749	
Lifter, Valve	HWAD125237A	F1197, Roller Lifter, Guide 1197
Lifter Guides	HW156357A	Lifter, Guide 1197

WAK/F1197 Head Components

Head Kit	HW936995	Includes:
		6) HW123036L Intake Valve
		6) HW123236A Exhaust Valve
		6) HW123009E Intake Guide
		6) HW123109K Intake Guide
		6) HW48943B Exhaust Seat
		6) HW273353 Stem Seals
Valve	HW123036L	Intake
	HW123236A	Exhaust
Valve Guide	HW123009E	Intake, flanged, machined for Stem Seal
	HW123109K	Exhaust, Flanged
Valve Seat	HW164676	Intake
	HW48943B	Exhaust
Valve Stem Seal	HW273353	Teflon Insert
Valve Spring	HW123135F	
Retainer, Valve Spring	HW161760A	
Rotator	HW159169	
Valve Taper	HW73629	

WAK/F1197 Gaskets

Complete Gasket Set	HW900209	Front and Rear Seals included, Stem Seals not included
Top Gasket Set	HW979110	
Valve Cover Gasket	HW73810F	2 Per engine
Head Gasket	HW123000	2 Per engine
Oil Pan Gasket	HW97820	Single piece design
Crankshaft Seal	HW161288	Front, F1197, Rubber
	HW199350	Repair Sleeve, Front
	HW494328	Rear Seal Conversion Kit
	A199451D	Rear Seal Sleeve
	A156197B	Rear

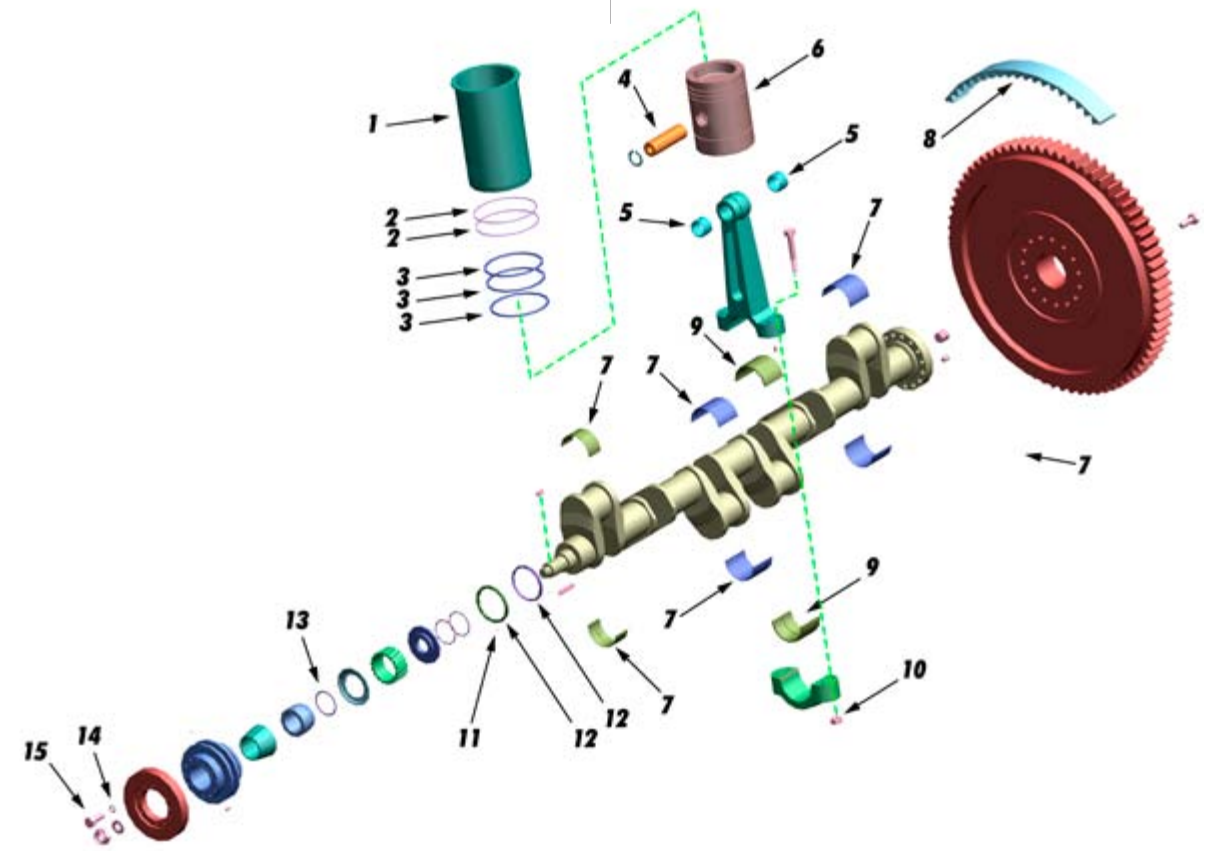
F1197 Accessories

Water Pump Kit	HW960181	
	HW960181L	Impeller not included
	HW960181LS	Impeller and Shaft not included
Water Pump Seal Assembly	HW117177	2 Per pump
Impeller	HW123863	
Water Pump Conversion Kit	HW263356	This kit converts an old style WAK water pump (123660) to a new style F1197 water pump (123760)
Thermostat	HW155311	160°, Water cooled exhaust
	155311B	180°, Cooling system
	162492	157°-182°, Cooling System, 2 per engine
	162492A	167°-192°, Cooling System, 2 per engine
Timing Tape	A211638	
Oil Filter	HW167602	16" x 4 3/8"
	HW172607	16 7/8" x 6 3/4"
Diaphragm & Air Valve	AV1-12-2	Silicone Diaphragm
Diaphragm	D1-16-2	Silicone Diaphragm
Clutch Plate	5659-L	3 Piece plate
Clutch Pilot Bearing	M-1985-A	
Fasteners	HW163146	Cylinder Head Stud, Solid
	B844	Cylinder Head Nut, Solid Stud
	HWB10648	Cylinder Head Nut, Hollow Stud
	HW73807	Rocker Arm Stud
	HWB5990A	Water Manifold Stud, 6" long

A123055RP Governor Repair Kit

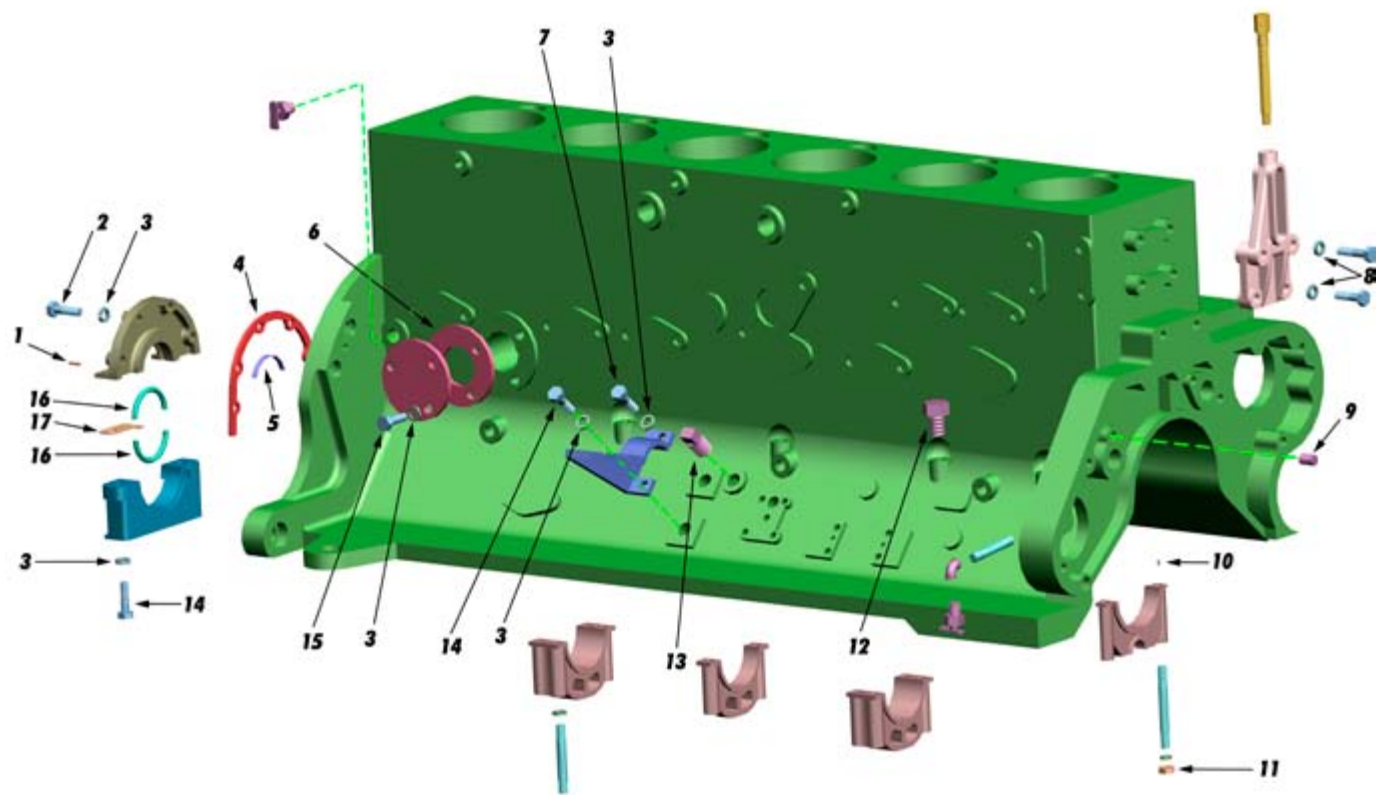
Governor Repair Kit	A-1197		
(1) Nut, 3/4"-16, Thin Hex-Flex Lock	26661	(1) Oil Seal	A74789
(2) Ball Bearing	HWB4367	(1) Governor Bronze Bushing	A41454
(1) Ball Thrust Bearing	A78028	(1) Governor Shaft	A123052A
(1) Thrust Bearing Sleeve	AB8864A	(1) Governor Lever Shaft	A116282
(2) Needle Bearing	A73596L	(1) Governor Gasket	HW73839A
(1) 1" Expansion - Brass Plug	B4171	(1) Governor Cover Gasket	HW41453A

Part No.	Description	No. Req.
1	*HW123130 SLEEVE, Cylinder 3-Ring	6
2	*HW95072 O-RING, Set	6
3	*HW907152 RINGS, Piston Set	6
4	*HW123006 PIN, Piston	6
5	HW123108 BUSHING, Piston Pin	12
6	*HW123804 PISTON, 9 to 1 C.R. (Includes Pin & Retainers)	6
7	HW918225 BEARING, Main Set	1
8	A211638 TAPE, Timing	1
9	HW123210H BEARING, Rod Pair	6
10	HW177382A NUT, Connecting Rod	24
11	HWB1883 DOWEL, Thrust Ring	2
12	HW63617A RING, Thrust	2
13	HW157497F O-RING	1
14	7A-1/213x1 CAPSCREW, Hex Head	6
15	1A-1/2 LOCKWASHER, Medium 1/2	6
NS	HW199350 SLEEVE, Front Repair	1
NS	A199451D SLEEVE, Rear Repair	1
	KIT	
	HW932218 SLEEVE KITS	
	*included in kit	
	*NS - Not Shown	



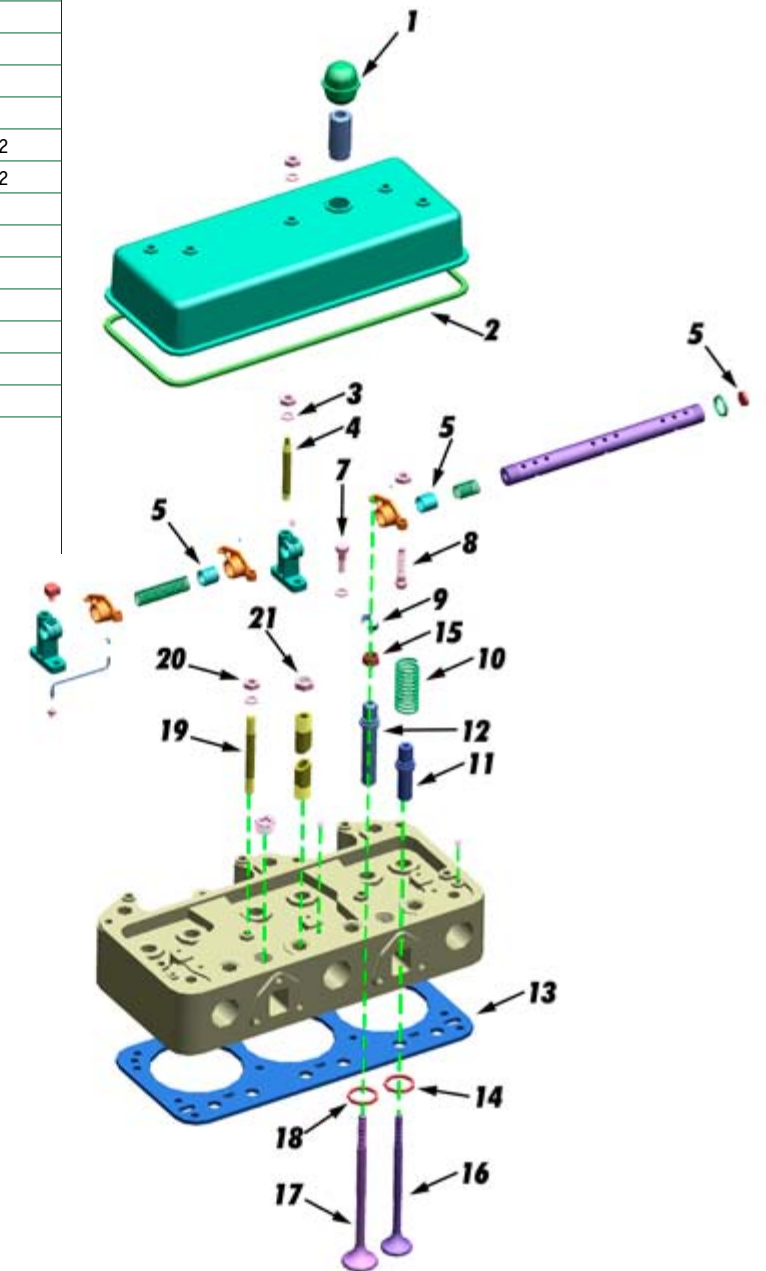
CRANKCASE 1197

Part No.	Description	No. Req.	
1	HWB1883	PIN, Dowel	2
2	7A-3/816x1	CAPSCREW Hex Head	4
3	1A-3/8	LOCKWASHER, Plated	9
4	HW74725	GASKET, Oil Seal Retainer	1
5	HW166445	SHIM, 1197 Rear Seal	4
6	HWB1727	GASKET, Cleanout Cover	1
7	21350	CAPSCREW Hex Head 3/8-16x11/8	1
8	1A-1/2	LOCKWASHER, Plated Medium 1/2	4
9	78283A	PLUG, Pipe Countersunk Head	1
10	B2315	DOWEL, Pin .375X.88LG	14
11	HW28245	NUT, NI-Lock 3/4"-16	18
12	26743	PLUG, Pipe, Hex Head 1/8	9
13	PF4-3/8	PLUG, SQ Head Pipe	1
14	7A-3/816x11/4	CAPSCREW, Hex Head	3
15	7A-3/816x3/4	CAPSCREW, Hex Head	3
16	A63087D	SEAL, Rope	2
17	HW73820	GASKET, Oil Seal Retainer	2
NS	A156197B	SEAL, Rear Lip	1
KIT			
HW494328	REAR SEAL CONVERSION KIT (Converts from rope to seal)		
*NS - Not Shown			



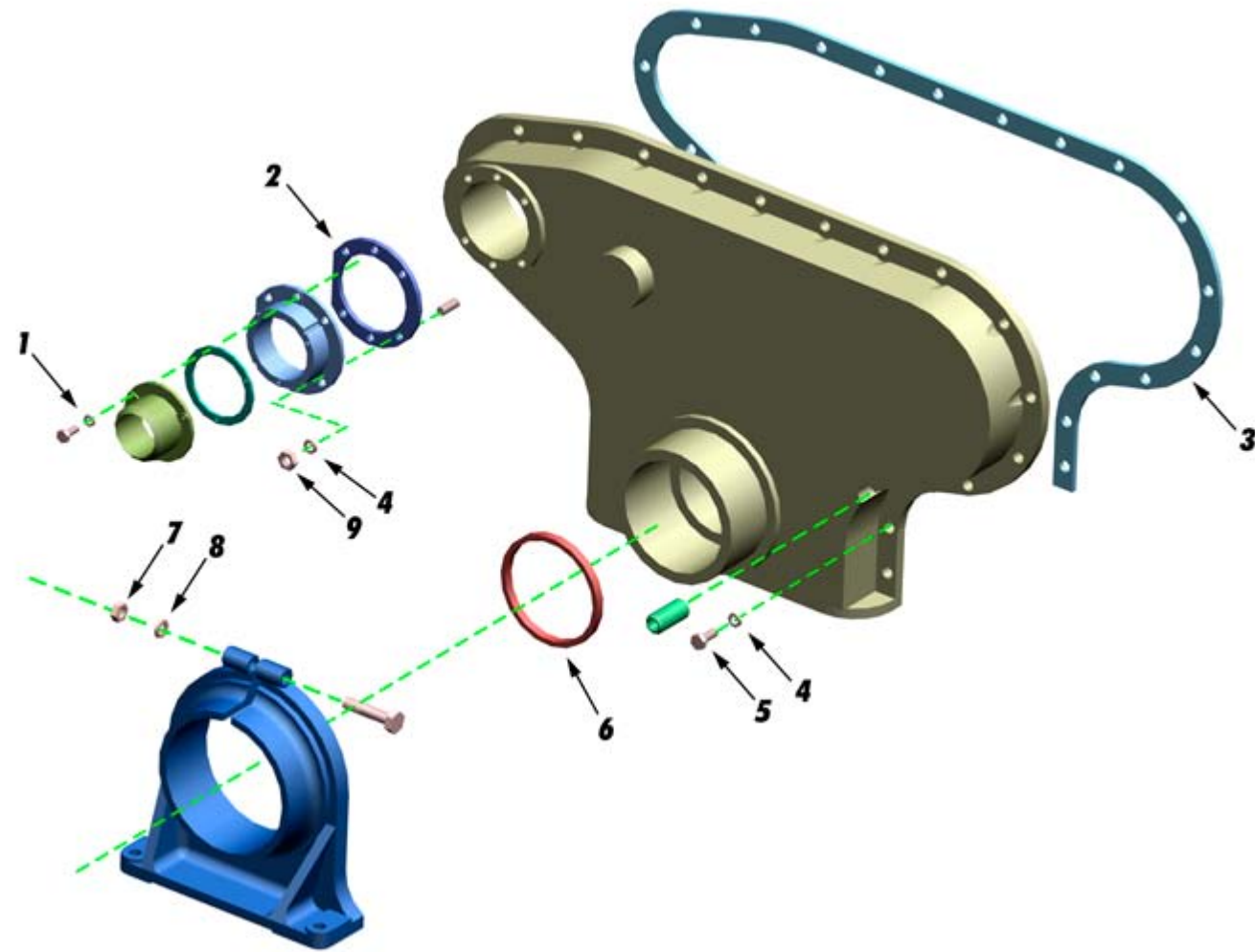
CYLINDER HEAD 1197

Part No.	Description	No. Req.	
1	HWB9037E	CAP, Breather	2
2	HW73810F	GASKET, Valve Cover	2
3	1A-1/2	LOCKWASHER, Medium 1/2	12
4	HW73807	STUD, Rocker Arm and Cover	6
5	HWB4104	BUSHING, Rocker Arm	12
6	B4171	PLUG, Brass Expansion 1"	4
7	7A-1/213x11/4	CAPSCREW, Hex Head	6
8	HW73658C	SCREW, Adjusting	12
9	HW73629	Keeper, Valve	24
10	HW123135F	SPRING, Valve	12
11	*HW123109K	GUIDE, Exhaust Flanged	6
12	*HW123009E	GUIDE, Intake Flanged	6
13	HW123000	GASKET, Cylinder Head	2
14	*HW48943B	SEAT, Valve Exhaust	6
15	*HW273353	STEM, Seal	6
16	*HW123236A	VALVE, Exhaust	6
17	*HW123036L	VALVE, Intake	6
18	HW164676	SEAT, Valve Intake	6
19	HW163146	STUD, Cylinder Head	22
20	B844	NUT, Hex 5/8-18x13/16	22
21	HWB10648	NUT, Cylinder Head Hollow Stud	8
KIT			
HW936995	HEAD REPAIR KIT		
HW9361995	HEAD REPAIR KIT, SINGLE HEAD		
*Included in Kit			
HW979110	COMPLETE TOP GASKET SET		



GEAR COVER 1197

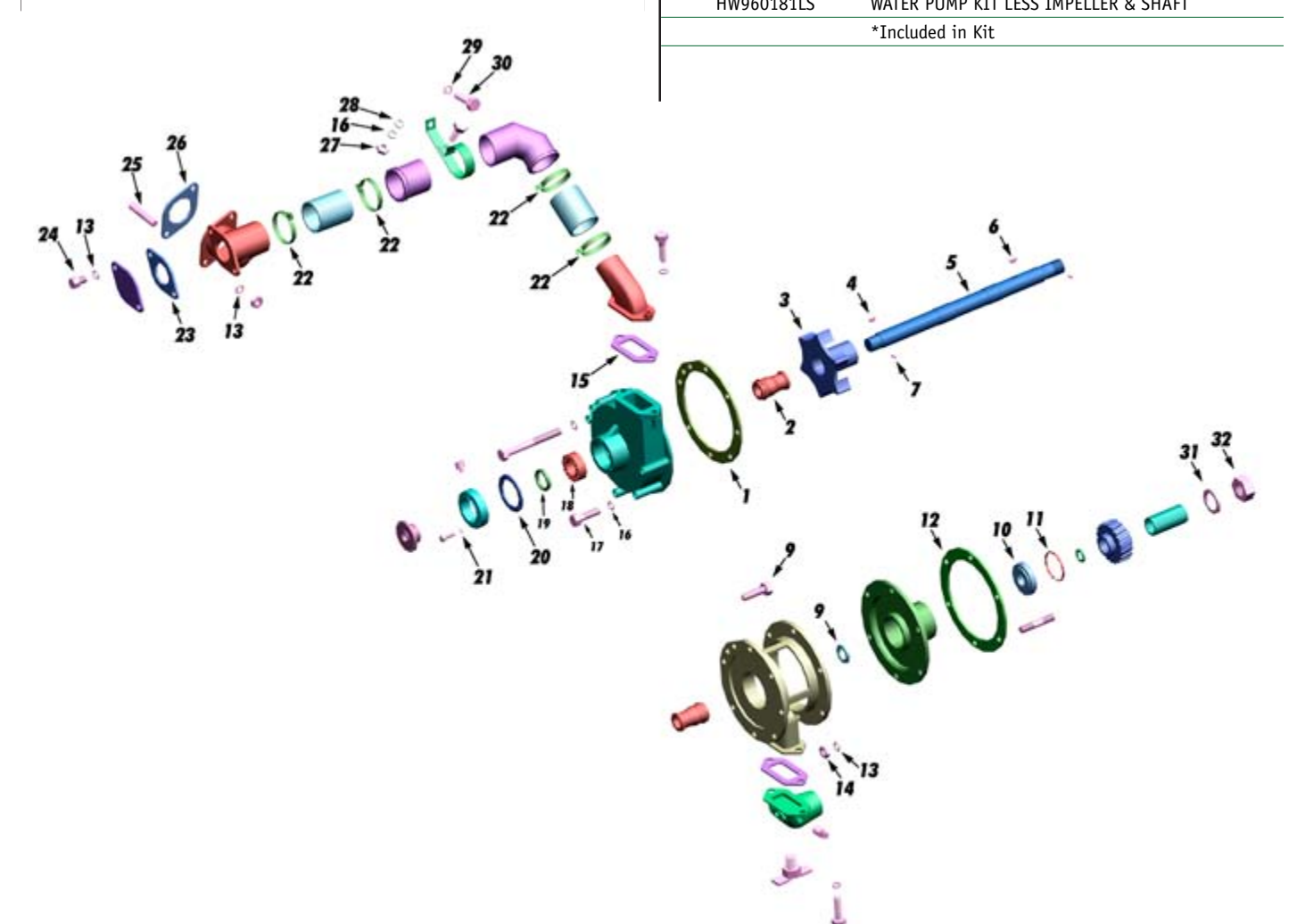
Part No.	Description	No. Req.	
1	1A-#10	LOCKWASHER, Plated	3
2	HWB9737	GASKET, Waste Pump Shaft	1
3	HW73838A	GASKET, Front Cover	1
4	1A-3/8	LOCKWASHER, Plated	22
5	7A-3/816x11/4	CAPSCREW, Hex Head	18
6	HW161288	SEAL, Front Rubber	1
7	29A-1/2x13	NUT, Hex Finished	1
8	1A-1/2	LOCKWASHER, Plated	1
9	21195	NUT, Hex Jam 3/824 Plain	4



WATER PUMP 1197

Part No.	Description	No. Req.	
1	*HW73825B	GASKET, Cover	1
2	*HW117177	SEAL, Assembly	2
3	*HW123863	IMPELLER, Water Pump	1
4	*104A-#8	KEY, Woodruff	1
5	*HW123956	SHAFT, Water Pump	1
6	*104A-#15	Key, Woodruff	1
7	41A-3/16x11/4	PIN, Roll	1
8	26939	CAPSCREW Hex Head	4
9	*HW211442	SEAL, Oil	1
10	*HW73093	BEARING, Front	1
11	*HW44999L	RING, Retaining	1
12	*HW73827B	GASKET, Water Pump Mounting	1
13	1A-3/8	LOCKWASHER, Plated	10
14	21193	NUT, Hex 3/824	6
15	*HW73895	GASKET, Flange	2
16	1A-5/16	LOCKWASHER, Plated	6
17	21323	CAPSCREW Hex Head	5
18	*M-141-A	BEARING, Solid Shaft	1

Part No.	Description	No. Req.	
19	*HW48311	SEAL	1
20	*HW152401	GASKET, Seal Retainer	1
21	1A-1/4	LOCKWASHER, Plated	3
22	41236D	CLAMP, Hose 2.06-3.0	6
23	HWB2207	GASKET, Water Pipe	1
24	7A-3/816x1	CAPSCREW Hex Head	2
25	B1437	STUD, GR 5 .375x1.19LG	2
26	HWB4854A	GASKET, Carburetor	1
27	29A-5/1618	NUT, Hex Finished Heavy	1
28	1N-5/16	WASHER, Flat SAE Plated	1
29	1A-1/2	LOCKWASHER, Plated	1
30	7A-1/213x1	CAPSCREW Hex Head	1
31	*1B-3/4	WASHER, Flat STD	1
32	*CV-15	NUT, Hex Jam 3/4-16 3/16	1

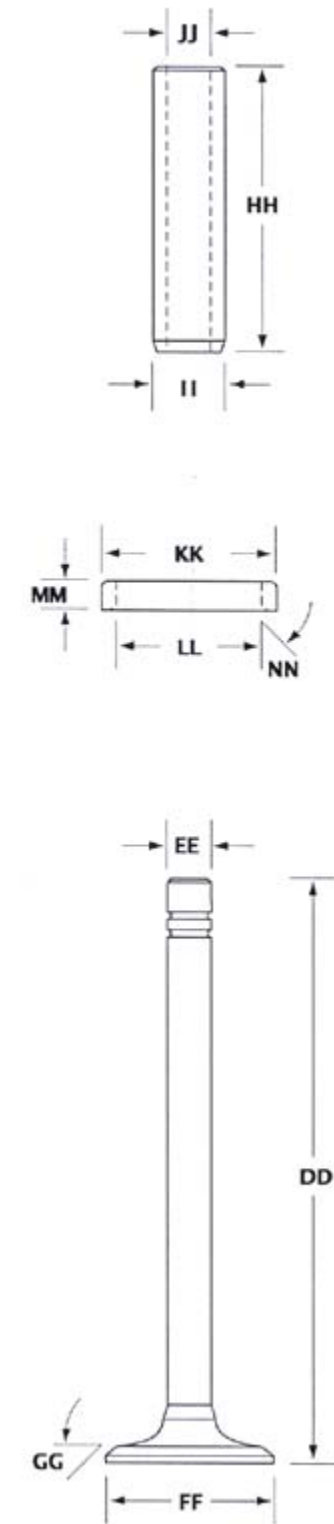


KITS		
HW960181	WATER PUMP KIT COMPLETE	
HW960181L	WATER PUMP KIT LESS IMPELLER	
HW960181LS	WATER PUMP KIT LESS IMPELLER & SHAFT	
*Included in Kit		

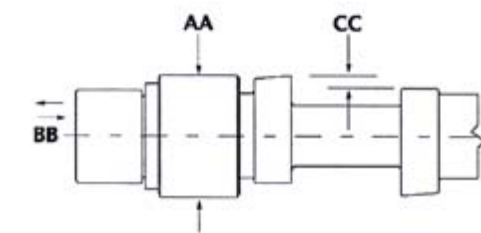
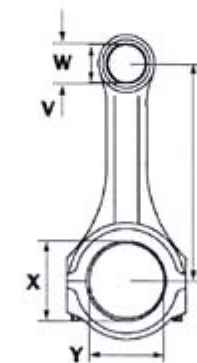
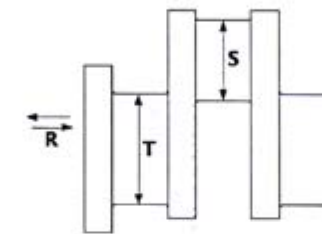
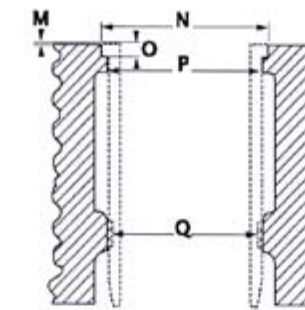
ENGINE DIMENSIONS & TOLERANCES

ENGINE DIMENSIONS & TOLERANCES

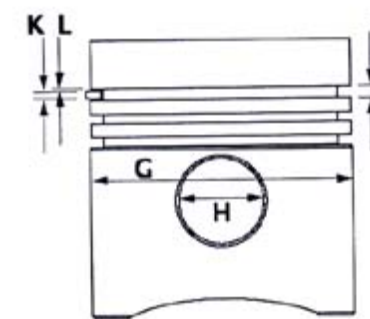
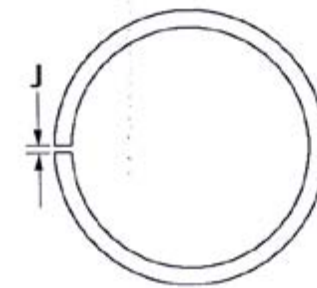
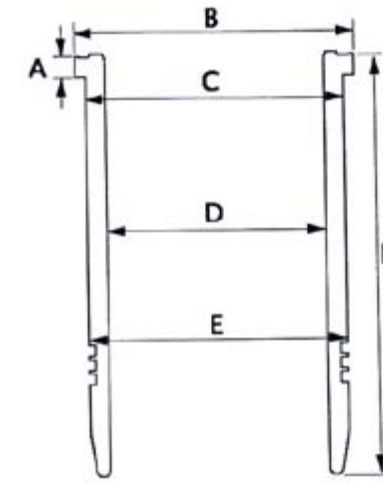
VALVE	140G/F554	145G/F817	WAK/F1197
(DD) Valve Length (Intake)	6 49/64"	8 1/8"	8 13/16"
(DD) Valve Length (Exhaust)	6 23/32"	8 13/64"	8 13/16"
(EE) Valve Stem Diameter (Intake)	.4345" -.4355"	.4965" -.4975"	.4965" -.4975"
(EE) Valve Stem Diameter (Exhaust)	.4335" -.4345"	.4955" -.4965"	.4955" -.4965"
(FF) Valve Head Diameter (Intake)	2 3/32"	2 9/16"	2 41/64"
(FF) Valve Head Diameter (Exhaust)	1 9/16"	2"	2 7/32"
(GG) Valve Face Angle (Intake)	30°	30°	30°
(GG) Valve Face Angle (Exhaust)	45°	45°	45°
Valve Face & Seat Run-out (Max.)	.0025"	.0025"	.0025"
(HH) Guide Length (Intake)	4 1/8"	4.307" -4.325"	4.497" -4.515"
(HH) Guide Length (Exhaust)	3 11/32"	4.307" -4.325"	4.497" -4.515"
(II) Guide Outside Diameter (In. & Ex.)	.6880" -.6890"	.8760" -.8770"	.8760" -.8770"
(JJ) Guide Inside Diameter (In. & Ex.)	.438" -.439"	.500" -.501"	.500" -.501"
Guide Extends Above Head (Intake)	1 1/8" (Flanged)	1 11/16" (Flanged)	2 1/8" (Flanged)
Guide Extends Above Head (Exhaust)	1 1/8" (Flanged)	1 11/16" (Flanged)	2 1/8" (Flanged)
Head Bore for Guide (Intake & Exhaust)	.6865" -.6875"	.874" -.875"	.874" -.875"
(KK) Exhaust Seat Outside Diameter	1.7535" -1.7545"	2.253" -2.254"	2.4425" -2.4445"
(LL) Exhaust Seat Inside Diameter	1.370" - 1.380"	1 13/16"	2"
(MM) Exhaust Seat Depth	.373" -.375"	.4355" -.4375"	.373" -.375"
(NN) Insert Angle (Exhaust)	45°	45°	45°
(NN) Seat Angle (Intake)	30°	30°	30°
Exhaust Insert Counterbore Depth	.385" -.390"	.448" -.453"	.385" -.390"
Exhaust Insert Counterbore Diameter	1.7495" -1.7505"	2.249" -2.250"	2.4365" -2.4375"
Valve Spring Free Length (Intake)	2 17/32" Outer 2 21/64" Inner	3 15/32" Outer 3 5/32" Inner	4 15/32"
Valve Spring Free Length (Exhaust)	2 17/32" Outer 2 21/64" Inner 2 9/16 Single	3 15/32" Outer 3 5/32" Inner 3 3/32" Single	4 15/32"
Valve Closed Spring Length (Intake)	2 3/16" Outer @ 31# 1 29/32" Inner @ 26# 2 11/64 Single @ 74#	2 31/32" Outer @ 67# 2 31/32" Inner @ 42#	3 15/32" Outer @ 90# 2 37/64" Single @ 67#
Valve Closed Spring Length (Exhaust)	2 3/16" Outer @ 31# 1 29/32" Inner @ 26# 2 11/16 Single @ 74#	2 31/32" Outer @ 67# 2 31/32" Inner @ 42#	3 15/32" Outer @ 90# 2 37/64" Single @ 67#
Valve Open Spring Length (Intake)	1 21/32" Outer @ 86# 1 7/16" Inner @ 55# 1 41/64 Single @ 177#	2 3/8" Outer @ 158# 2 1/16" Inner @ 100#	2 13/16" Outer @ 180#



CRANKCASE	140G/F554	145G/F817	WAK/F1197
(M) Sleeve Projection Above Crankcase	.003" -.006"	.003" -.006"	.002" -.005"
(N) Sleeve Counterbore Diameter	5.437" -5.438"	6.187" -6.188"	7.375" 7.377"
(O) Sleeve Counterbore Depth	.310" -.312"	.373" -.375"	.435" .437"
(P) Crankcase Upper Bore	5.1825" -5.1925"	5.9325" -5.9425"	7.0624" -7.0626"
(Q) Crankcase Lower Bore	5.125" -5.126"	5.875" -5.876"	7.000" -7.002"
Crankcase Main Bearing Journal Bore	3.5025" -3.5032"	3.7525" -3.7532"	4.5000" -4.5007"
Camshaft Bearing Bore	2.2495" -2.2505"	2.6245" -2.6255"	2.8740" -2.8750"(Nos. 1-3)
Camshaft Bearing Bore			2.1865" -2.1875"(No. 4)
CRANKSHAFT			
(R) Crankshaft End Play	.0070" -.0110"	.0050" -.0130"	.0050" -.0150"
Thrust Bearing thickness	2.995" -2.998"	Thrust Rings	Thrust Rings
Con. Rod Bearing Running Clearance	.0016" -.0041"	.0014" -.0039"	.0015" -.004"
(S) Con. Rod Bearing Journal Diameter	2.624" -2.625"	2.999" -3.000"	3.374" -3.375"
Main Bearing Running Clearance	.0015" -.0045"	.0015" -.0045"	.002" -.0047"
(T) Main Bearing Journal Diameter	3.249" -3.250"	3.499" -3.500"	3.999" -4.000"
Main & Rod Journal Max. Out-of-Round	.001"	.001"	.001"
Main & Rod Journal Maximum Taper	.001"	.001"	.001"
Main Bearing Shell Thickness	.1241" -.1252"	.1242" -.1255"	.2475" -.2485"
CONNECTING ROD			
Weight Variation Per Set	1/2 oz. set	1/2 oz. set	2 oz. set
(U) Rod Length Center to Center	10.245" -10.255"	11.751" -11.752"	13.251" -13.252"
(V) Small End Finish Size	1.4295" -1.4305"	1.7495" -1.7505"	2.0620" -2.0625"
(W) Bushing Bore Diameter	1.3750" -1.3755"	1.6252" -1.6257"	1.8760" -1.8764"
(X) Large End Finish Size	2.8465" -2.8470"	3.2215" -3.2220"	3.6255" -3.6260"
(Y) Conn. Rod Bearing Wall Thickness	1097" -.1102"	.1098" -.1103"	.1240" -.1245"
CAMSHAFT			
(AA) Camshaft Journal Diameter	2.1240" -2.1250"	2.4990" -2.5000"	2.7420" -2.7430"(No. 1-3) 2.0550" -2.0560" (No. 4)
(BB) Camshaft End Play	Thrust Button Replacement	Thrust Button Replacement	.004" -.006" via Thrust Plate Replacement
Camshaft Bushing I.D.	2.1260" -2.1290"	2.5010" -2.5040"	2.7450" -2.7455" (No. 1-3) 2.0580" -2.0590"(No. 4)
(CC) Cam Lift Intake	.322"	.351"	.384"
(CC) Cam Lift Exhaust	.322" (.287 Low Speed)		.351" .384"

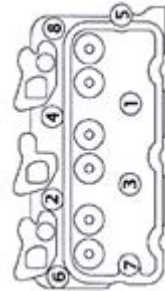


SLEEVE	140G/F554	145G/F817	WAK/F1197
(A) Flange Height @ Coining Bead	.315" -.316"	.378"-.379"	.439"-.440"
(B) Flange Diameter	5.429"-5.431"	6.179"-6.181"	7.367"-7.369"
(C) Sleeve Diameter Below Flange	5.130"-5.140"	5.850"-5.860"	6.9375"
(D) Sleeve Bore Diameter	4.6250"-4.6265" (GZ)	5.3753"-5.3763"	6.2503"-6.2513"
(E) Sleeve Diameter Lower Seal Area	5.1215"-5.1230"	5.8725"-5.8740"	6.9965"-6.9980"
(F) Sleeve Length	11 5/16"	12 1/2"	14 7/16"
Sleeve Bore Maximum Out of Round	.0015"	.002"	.002"
Sleeve Bore Maximum Taper	.001"	.001"	.001"
PISTON			
(G) Piston Diameter	4 5/8"	5 3/8"	6 1/4"
Piston Pin Diameter	1.3744" -1.3746"	1.6245" -1.6246"	1.8745" -1.8747"
Piston Pin Fit (Room Temp.)	.0002" -.0004"	.0002" -.0004"	.0003" -.0005"
Weight Variation	1/2 oz. set	1/2 oz. set	1 oz. set
(H) Piston Pin Hole Bore	1.3748" -1.3749"	1.6248" -1.6249"	1.8749" -1.8751"
Piston Skirt to Sleeve Clearance	.0061" -.0069	.007" -.0085"	.0085" -.0096"
(I) Groove Width - Top	.1260" -.1280"	.0970" -.0980"	.1890" -.1900"
-2nd Groove	.1255" -.1265"	.0960" -.0970"	.1890" -.1900"
-3rd Groove	.1255" -.1265"	.0960" -.0970"	.1890" -.1900"
-4th & -5th Groove	.1880" -.1895"	.2505" -.2515"	.2510" -.2520"
(J) Ring Gap - Top	.013" -.025"	.017" -.032"	.017" -.032"
-2nd Groove	.013" -.023" (GZ)	.017" -.032"	.017" -.032"
-3rd Groove	.013" -.023" (GZ)	.017" -.032"	.017" -.032"
-4th & -5th Groove	.013" -.025"	.017" -.032"	.017" -.032"
(K) Ring Width - Top	.1235" -.1240"	.0930" -.0935"	.1855" -.1865"
-2nd Groove	.1230" -.1240"	.0925" -.0935"	.1855" -.1865"
-3rd Groove	.1230" -.1240"	.0925" -.0935"	.1855" -.1865"
-4th & -5th Groove	.1860" -.0865"	.2485" -.2490"	.2480" -.2490"
(L) Side Clearance - Top	.0020" -.0045"	.0035" -.0050"	.0025" -.0045"
-2nd Groove	.0015" -.0035"	.0025" -.0045"	.0025" -.0045"
-3rd Groove	.0015" -.0035"	.0025" -.0045"	.0025" -.0045"
-4th & -5th Groove	.0015" -.0035"	.0015" -.0035"	.0020" -.0040"

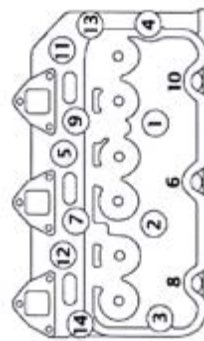


BASIC ENGINE DATA	140G/F554	145G/F817	WAK/F1197
Number of Cylinders	6	6	6
Compression Ratio	9.0:1	9.2:1	9.0:1
Firing Order	1-5-3-6-2-4	1-5-3-6-2-4	1-5-3-6-2-4
Number of Main Bearings	7	7	7
Crankcase Capacity (w/filter approx)	14 qts.	22 qts.	36 qts.
Cylinder Compression	190-210 psi.	195-215 psi.	200-220 psi.
Valve Clearance Cold (Intake)	.014"-.016"	.014"-.016"	.017"-.019"
Valve Clearance Cold (Exhaust)	.027"-.029"	.034"-.036"	.037".039"
TORQUE DATA			
Cylinder Head Cap Screw	200-208 ft. lbs.	200-208 ft. lbs. (long) 150-155 ft. lbs. (short)	200-208 ft. lbs. (solid) 250-266 ft. lbs. (hollow)
Main Bearing Caps	125-133 ft. lbs.	266-275 ft. lbs.	292-300 ft. lbs.
Connecting Rods (Esna)	75-79 ft. lbs. (self locking)	56-60 ft. lbs. (self locking)	75-79 ft. lbs. (self locking)
(Marsden)	96-100 ft. lbs. (castle nut)	67-69 ft. lbs. (castle nut) 73-75 ft. lbs. (grade 5)	96-100 ft. lbs. (castle nut)
Fly Wheel Bolts	112-117 ft. lbs.	112-117 ft. lbs.	112-117 ft. lbs.
Crank Bolt/ Nut	296-304 ft. lbs.	296-304 ft. lbs.	296-304 ft. lbs.
Spark Plug (Dry)	26-30 ft. lbs (Dry)	26-30 ft. lbs (Dry)	24-28 ft. lbs. (Dry)

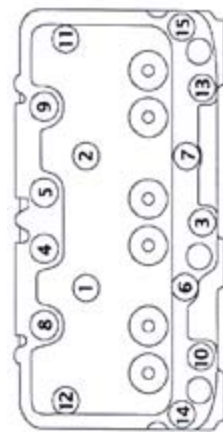
140G/F554



145G/F817



WAK/F1197



Arrow Ignition Coils



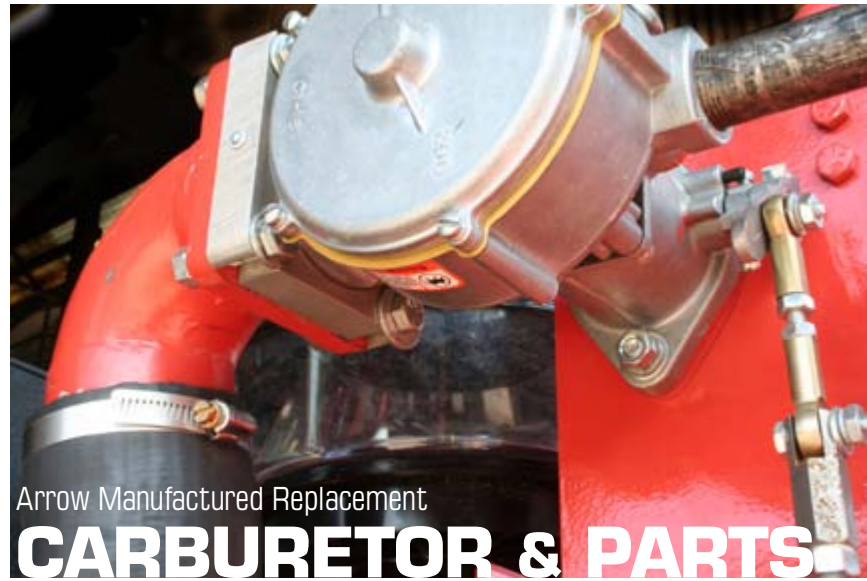
- Will work on most industrial engine applications
- Primary resistance: .60 - .80 OHMS
- Secondary resistance: 9.000 - 12.5000 OHMS
- Primary inductance: 6.0 - 8.0 mH (REF)
- Secondary inductance: 75.0 - 102 H (REF)
- For low tension magneto
- Voltage 35,000 peak D.C.
- 0.323 DIA x 1.0 Deep hole for ignition wire
- 0.33 wide slots can extend through outer edges (option)

Arrow Oil Filter Adapters

F817 ADAPTER FEATURES

- Dual parallel flow configuration
- Bolts directly to the engine over the oil line flanges
- All gaskets & bolts are included in kit part #HW145355





Arrow Manufactured Replacement

CARBURETOR & PARTS

C-Series Carburetors with Cross Flanges for Old Style Engines

(These Carburetors are for use with Cylinder heads w/only two stud holes on the intake)

ASIC-6	100 Carburetor C-66
ASIC-6-A	100 Carburetor C-46
ASIC-6-A-110	110 C-46
ASIC-7	200 Carburetor C-96

C-Series Carburetor for New Style Engines

ASIC-6-B	100 Carburetor C-46, 66
ASIC-6-110	110 Carburetor C-46, 66
ASIC-7-B	200 Carburetor C-96
ASIC-7-210	210 Carburetor C-96
ASIC-8-B	200 Carburetor C-106
ASIC-8-210	210 Carburetor C-106
ASIC-9	200 Carburetor C-255



Bare Carburetor without Air Cleaner Flange

ASIC-6-C	100 Carburetor C-46, 66
ASIC-7-C	200 Carburetor C-96
ASIC-8-C	200 Carburetor C-106

Carburetor for VR220, 260, 330, 380

199097A	100 Carb VR220, 260, 330, 380
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Other Replacement Carburetor Available

ASIC-1-A	100 Carburetor-118, 208 w/elbow
ASIC-12	200T Carburetor L1770, 2165
ASIC-14	Carburetor Conversion Kit-E-42
ASIC-15	200 Carburetor 346, 503
ASIC-15-210	210 Carburetor 346, 503
ASIC-25	100 Carb 98RC w/air cleaner
ASIC-27	100 Carburetor E-15, E-20
ASIC-3	110 Carburetor 5x6.5
ASIC-5	210 Carburetor for 7.5, 8.5x10
A405094	125 Carburetor G26
ASIC-K6	K6

The **ASIC-8-C** also fits these engines:

Waukesha®	140Gz 145GK 145GKU 145 GKB 145KBU 145GZB 145GXBU 817
Minneapolis-Moline®	1810-4A MEU
Caterpillar®	G333
Continental®	B-427
White®	260A 280A



Replacement Parts

- Ford®
- Caterpillar®
- Waukesha®
- Ajax®
- Fairbanks®
- Gemini®

Arrow OEM Parts

- C Series
- VR Series
- K Series
- Lufkin
- Witte
- VRC-2

Arrow Power Units are natural gas, 6-120hp units to meet a wide range of needs. From our low rpm single cylinder engines to the six cylinder turbo units, our field tested, reliable units have it all.

Chemical Injector Pumps

From 1 Pint to 500 Gallons Per Day



Introducing the new **Arrow VRC-2**, a two-throw separable reciprocating gas compressor with a maximum rating of 125HP at 1800RPM. The VRC-2 gas compressor is available in various cylinder sizes and in single, two or three stage configuration. The VRC-2 is a perfect complement to the Arrow Engine product line of gas engines, compressor skids and ASME coded vessels.

ARROW ENGINE COMPANY

2301 East Independence, Tulsa, OK 74110

Toll Free 800.331.3662

Toll Free Fax in US & Canada 800.266.1481

Local 918.583.5711

Local Fax 918.388.3204

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ARROW MANUFACTURED
**REPLACEMENT
PARTS**

Caterpillar® Engines

G379 G3304
G398 G3306
 G399

Waukesha® Engines

F2895 P9390
F3521 145G/F817
F5108 140G/F554
L5790 WAK/1197
 L7042

Fairbanks Morse® Engines

ZC-118 ZC-503
ZC-208 ZC-739
 ZC-346

Ajax® Engines

5 x 6½
EA-22, 6½ x 8 CMA
EA-30, 7¼ x 8 CMA
E-30, 7½ x 10 CMA
E-42, 8½ x 10 CMA
DP-60, 9½ x 10 CMA
DP-70/80/160, 11 x 14 CMA
DP-115/230, 13¼ x 16

Piston & Rod Assemblies
180
360
600
800

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OEM

C-Series

*C-46 *C-96
*C-66 *C-101
*C-106 *C-255

VR-Series

VR-155 VR-310
VR-220 *VR-330
VR-232 *VR-330CF
*VR-260 VR-265
VR-283 *VR-380

A-Series

*A42 *A54 *A62

K6 Slow Speed Engine

Lufkin Engines

L-333 L-1770
*L-795 L-2165

Witte Engines

98 E15 F32
B12 E20 F42

Arrow Chemical Pumps

*10 Series (beam operated)
*12 & 13 Series (pneumatic)
*430 Series (electric)
*500 & 510 Series (pneumatic)
*Solar Chempump

Gas Compressors

*VRC-2 *VRC-CNG

Gas Products

*Volume Tanks
*Vertical & Horizontal Separators
*Suction Scrubbers
*Meter Runs
*Coalescers
*Skids



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