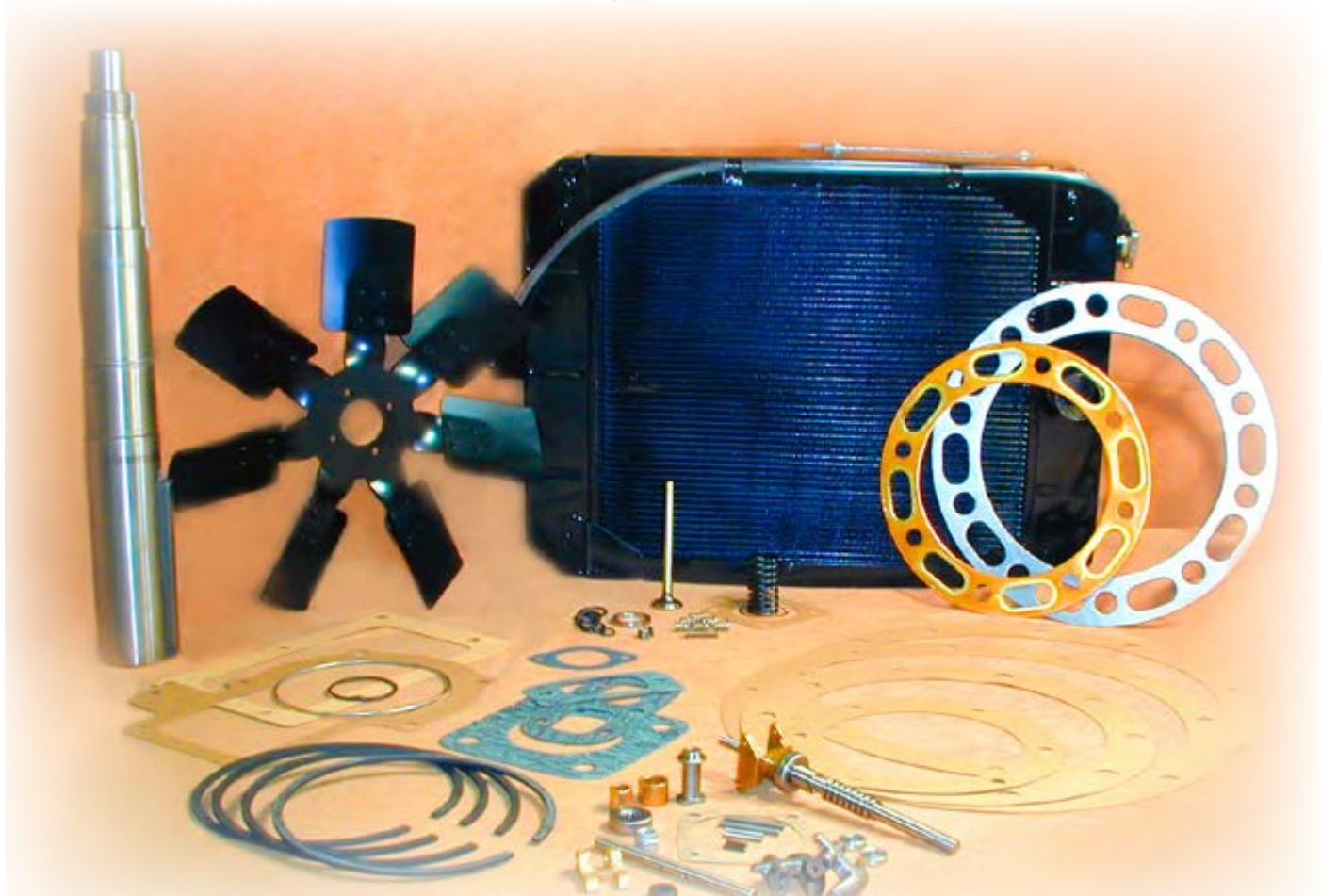


SES ARROW



AJAX®

SES ARROW MANUFACTURED REPLACEMENT PARTS

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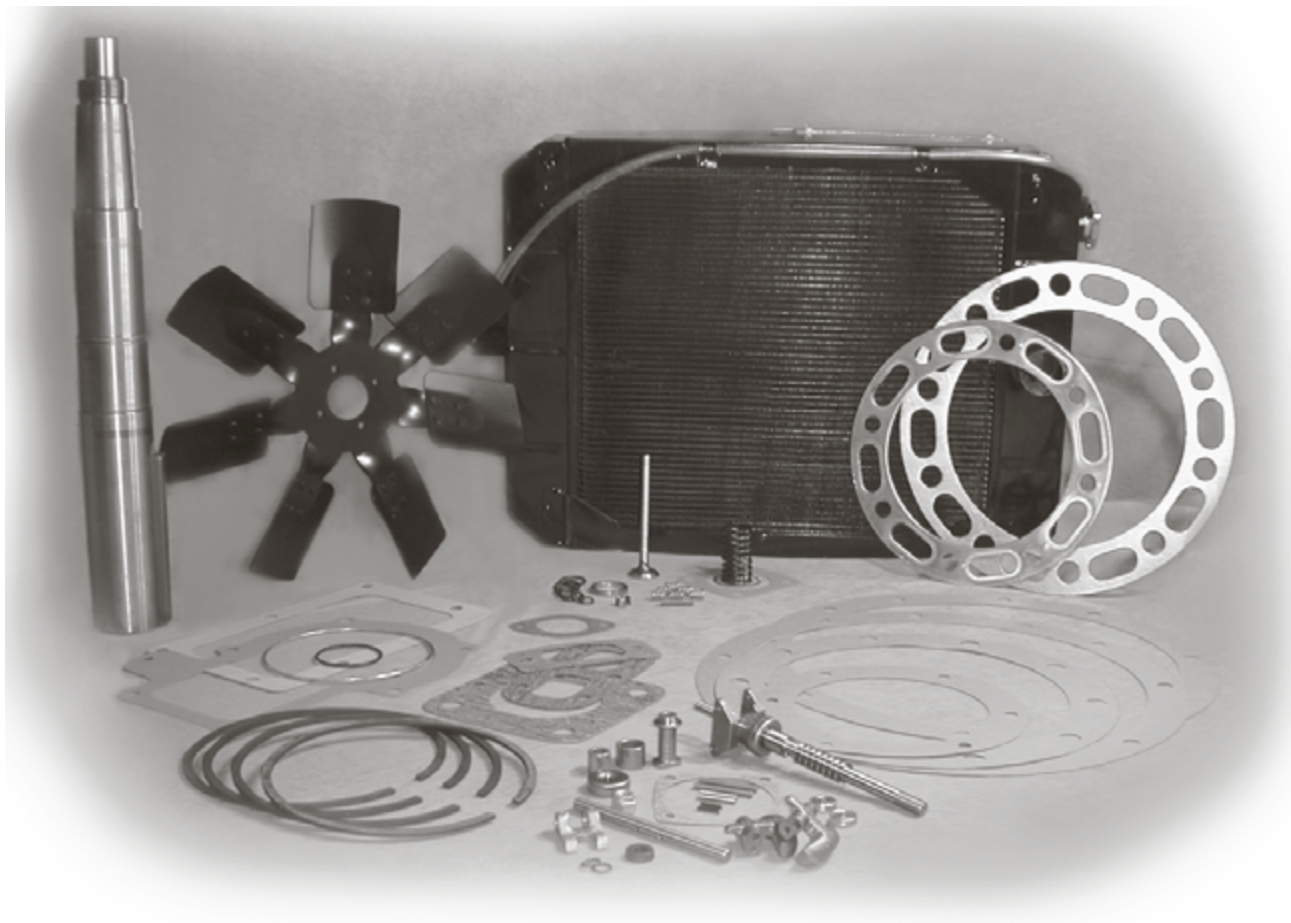
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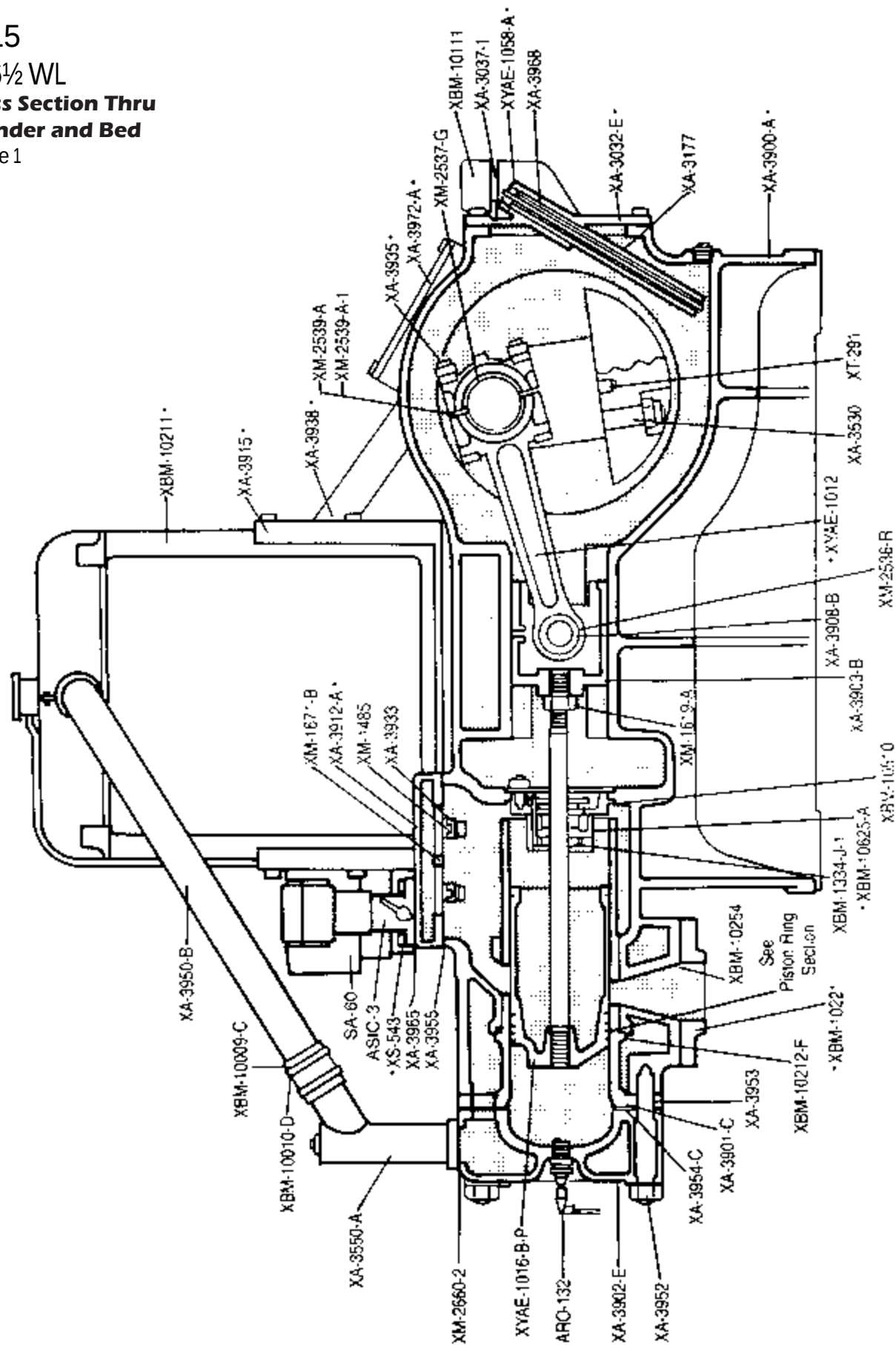
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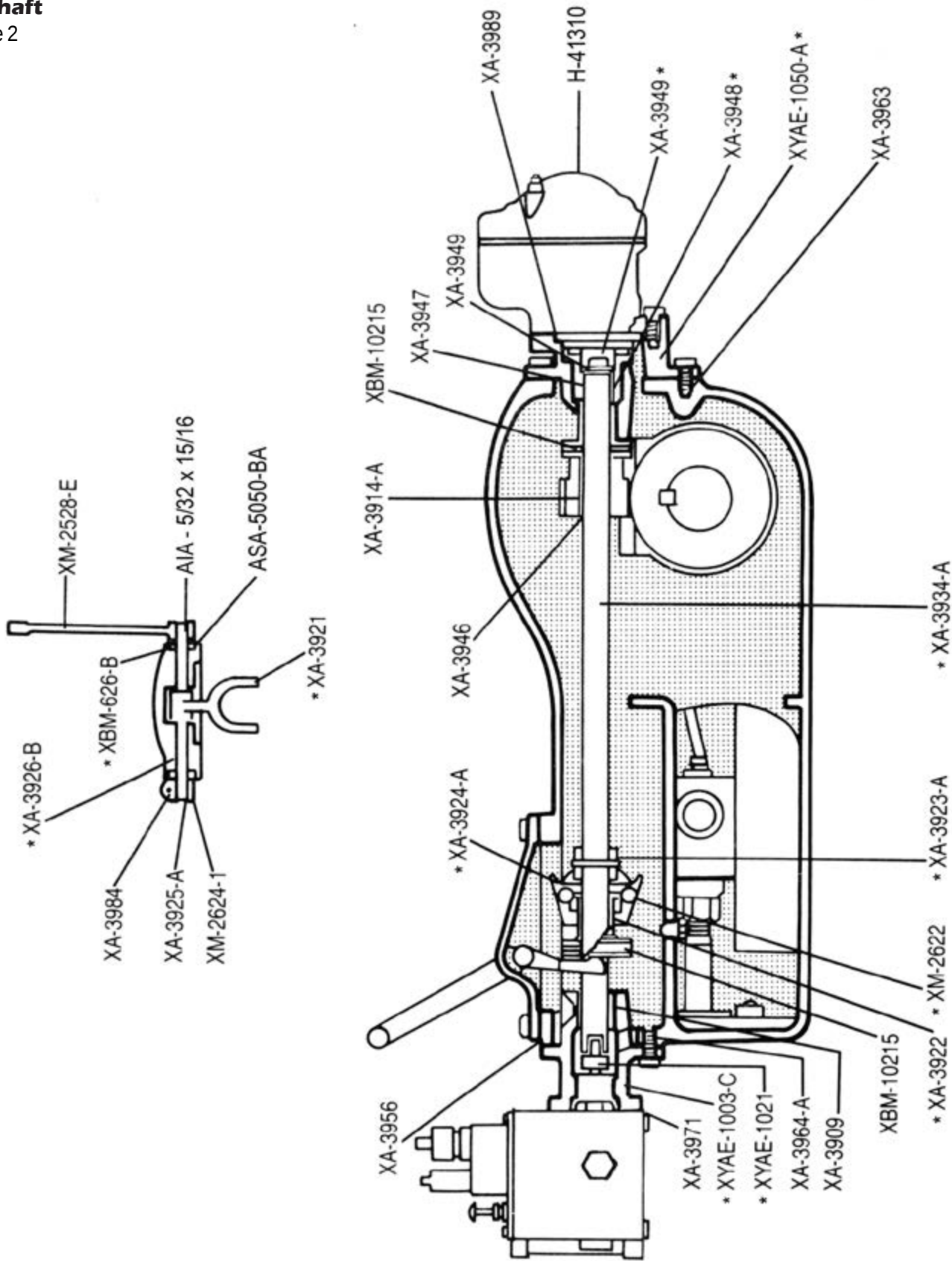


EA-15
5X6½ WL
**Cross Section Thru
Cylinder and Bed**
Figure 1



ASSEMBLIES:			
XYAE-1012*	X	Connecting Rod Assembly	1
XYAE-1016-B-P	X	Piston & Rod Assy., used w/ aluminum Crosshead only	1
XYAE-1058-A*	X	Oil Gauge bayonet Assembly	1
INDIVIDUAL PARTS:			
XA-3032-E*	X	Breather Plate	1
XA-3037-1	X	Breather Connection	1
XA-3177	X	Gasket, Breather Plate to Bed	1
XA-3530	X	Stud, Counterweight to Crankshaft	4
XA-3550-A	X	Water Outlet Connection	1
XA-3900-A*	X	Bed and Cylinder (Cast Integral)	1
XA-3901-C	X	Cylinder Liner	1
XA-3902-E*	X	Cylinder Head	1
XA-3903-B	X	Crosshead (Aluminum)	1
XA-3908-B	X	Crosshead Pin	1
XA-3912-A*	X	Mixer Valve Manifold	1
XA-3915*	X	Radiator Support	1
XA-3933	X	Mixer Valve Stop	2
XA-3935*	X	Connecting Rod Bolt	2
XA-3938*	X	Fan Belt Guard	1
XA-3950-B	X	Water Line, Radiator to Cylinder Head	1
XA-3952	X	Stud, Cylinder Head and Liner to Bed	6
XA-3953	X	Gasket, Liner to Bed	1
XA-3954-C	X	Cylinder Head Gasket	1
XA-3955	X	Gasket, Manifold to Bed	1
XA-3958	X	Gasket, Radiator Support (Not Shown)	1
XA-3959	X	Gasket, Cover Plate (Not Shown)	1
XA-3965	X	Gasket, Carb. to Manifold	1
XA-3968	X	Oil Gauge Pipe	1
XA-3972-A*	X	Starting Cover Plate	1
SA-60	X	Air Cleaner	1
XBM-1334-J-1	X	Piston Rod Packing & Springs	
XBM-10009-C	X	Water Line Hose	2
XBM-10010-D	X	Water Line Hose Clamps	4
XBM-10111	X	Berkson Breather Cap	1
XBM-10211*	X	Radiator	1
XBM-10221-F	X	Gasket	1
XBM-10221*	X	Exhaust Flange	1
XBM-10254	X	Gasket, Exhaust Flange to Bed	1
XBM-10510	X	Gasket, Stfg. Box to Bed	1
XBM-10625-A*	X	Stuffing Box Assembly	1
XM-1485	X	Mixer Valve Springs	6
XM-1619-A	X	Piston Rod Nut	1
XM-1671-B	X	Mixer Valve	3
PISTON RINGS	X	See Piston Ring Section	5
XM-2537-G	X	Crankpin Bearing	1
XM-2539-A	X	Shim, Laminated	2
XM-2539-A-1	X	Shim, Solid	2
XM-2536-R	X	Crosshead Pin Bearing	1
XM-2660-2	X	Gasket, Water Outlet Connection to Cylinder Head	1
ARO-132	X	Spark Plug Cable Assembly	
ASIC-3	X	Impco Replacement for Ensign	
XS-543*	X	Stud, Carburetor to Manifold	2
XT-291	X	Dowel Pins, Counterweight to Crankshaft	2

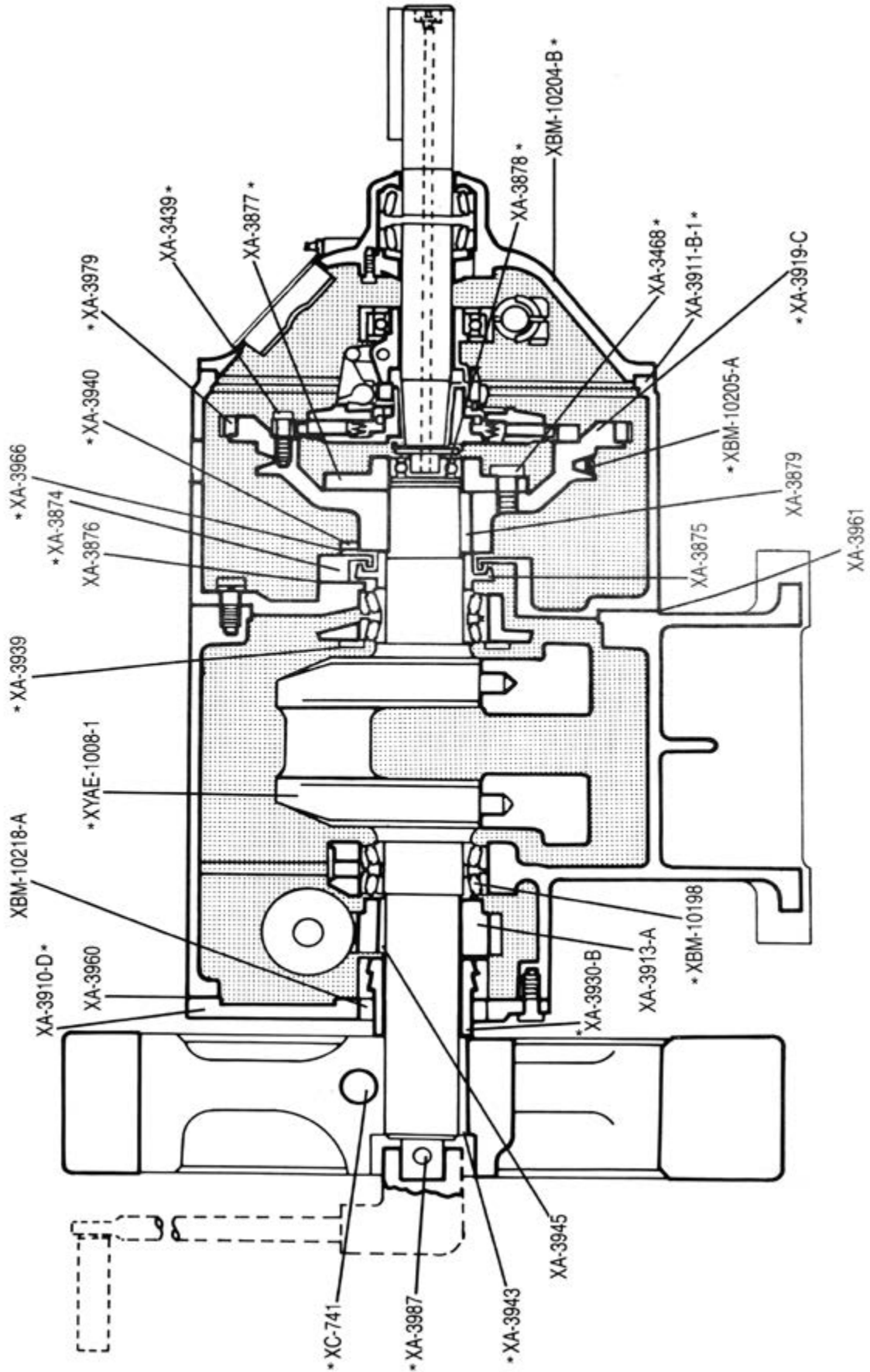
5X6½ WL
 Cross Section Thru
 Layshaft
 Figure 2



5X6½ WL
Cross Section Thru
Layshaft
Figure 2

<i>Arrow Part No.</i>	<i>Ajax Engine Size 5X6½</i>	<i>Description</i>	<i>No. Req.</i>
ASSEMBLIES:			
XYAE-1003-C*	X	Rear Layshaft Bearing Assembly	1
XYAE-1021*	X	Lubricator Coupling Assembly	1
XYAE-1050-A*	X	Front Layshaft Bearing & Magneto Bracket	1
INDIVIDUAL PARTS:			
XA-3909	X	Bushing, Rear Layshaft Bearing	1
XA-3914-A	X	Layshaft Gear	1
XA-3921*	X	Governor Yoke	1
XA-3922*	X	Sliding Sleeve	1
XA-3923-A*	X	Weight Stand	1
XA-3924-A*	X	Governor Weight	2
XA-3925-A	X	Governor Yoke Shaft	1
XA-3926-B*	X	Governor Cover	1
XA-3934-A*	X	Layshaft	1
XA-3946	X	Key, Layshaft Gear to Layshaft	1
XA-3947	X	Magneto Coupling	1
XA-3948	X	Key, Magneto Coupling	1
XA-3949	X	Layshaft End Plate	1
XA-3956	X	Gasket, Governor Cover to Bed	1
XA-3963	X	Gasket, Front Layshaft Bearing to Bed	1
XA-3964-A	X	Gasket, Rear Layshaft Bearing to Bed	1
XA-3971	X	Gasket, Lubricator to Rear Layshaft Bearing	1
XA-3984	X	Spring Lever Screw	1
XA-3989	X	Gasket, Magneto to Front Layshaft Bearing	1
XBM-626-B*	X	Ball Bearings	2
H-41310	X	Magneto	1
XBM-10215	X	Thrust Bearing, Governor	1
AIA- 5/32 x 15/16	X	Dowel Pins, Governor Levers	2
ASA-5050-BA	X	"O" Rings, Governor Cover	2
XM-2528-E	X	Governor Lever	1
XM-2622*	X	Governor Weight Pin	2
XM-2624-1	X	Governor Spring Lever	1

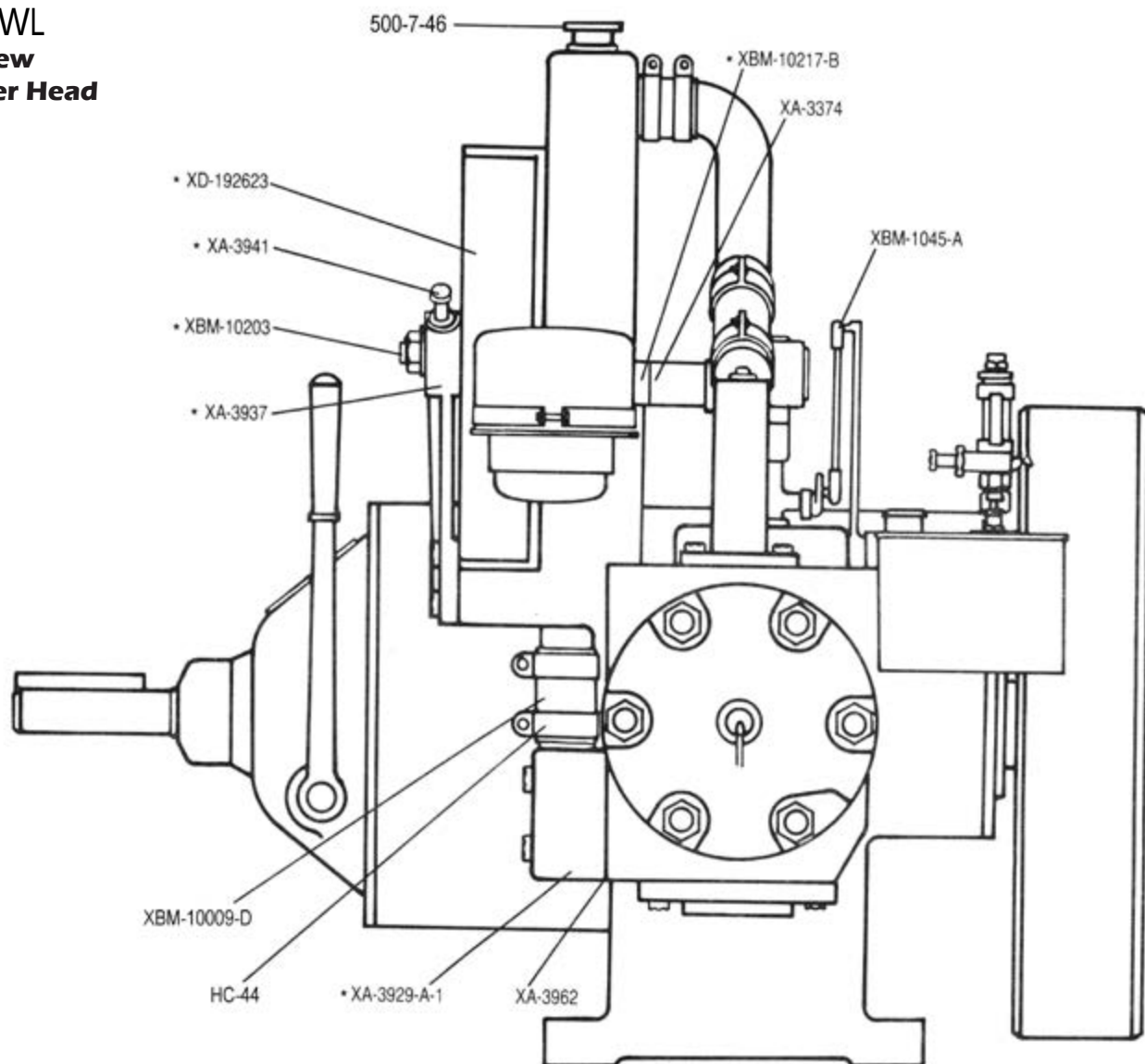
5X6½ WL
**Cross Section Thru
 Crankcase**
 Figure 3



5X6½ WL
Cross Section Thru
Crankcase
Figure 3

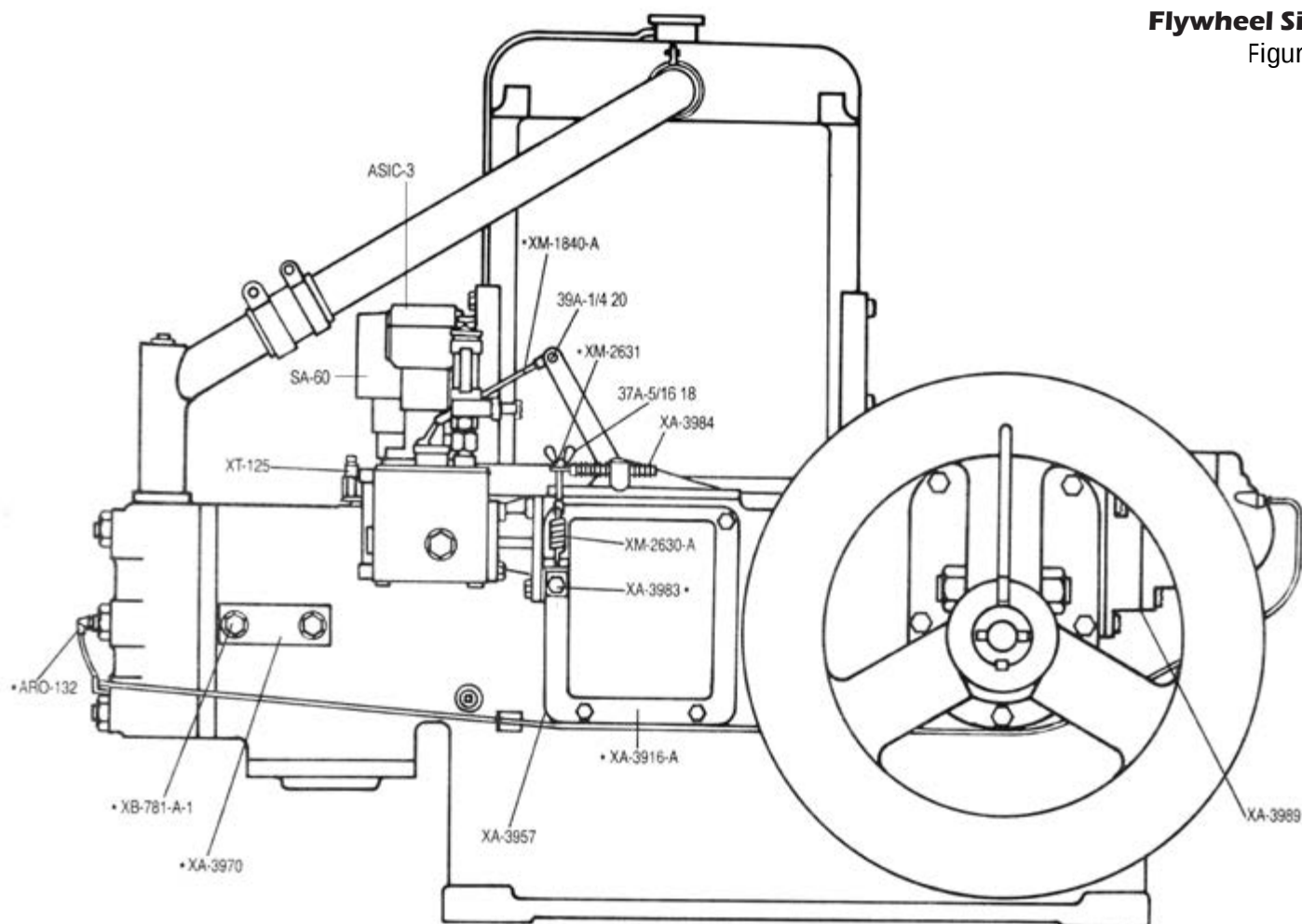
<i>Arrow Part No.</i>	<i>Ajax Engine Size 5X6½</i>	<i>Description</i>	<i>No. Req.</i>
ASSEMBLIES:			
XYAE-1008-1*	X	Crankshaft Assy. without Bearings	1
INDIVIDUAL PARTS:			
XA-3439*	X	Screw, Clutch Ring to Adapter	6
XA-3468*	X	Screw, Clutch Adapter to Hub	6
XA-3874*	X	Bearing Support Cover	1
XA-3875	X	Oil Slinger	1
XA-3876	X	Gasket, Bearing Support Cover	1
XA-3877*	X	Pilot Bearing Housing	1
XA-3878*	X	Spacer, Clutch Adaptor Bearing	1
XA-3879	X	Key, Clutch Adaptor to Crankshaft	1
XA-3910-D*	X	Spiral Gear Cover	1
XA-3911-B-1*	X	Bearing Support and Clutch Housing	1
XA-3913-A	X	Crank Shaft Gear	1
XA-3919-C*	X	Clutch Adaptor	1
XA-3930*	X	Crankshaft Spacer, Flywheel Side	1
XA-3939*	X	Main Bearing Clamp	2
XA-3940*	X	Bearing Clamp Bolt	4
XA-3943*	X	Key, Flywheel	1
XA-3945	X	Key, Crankshaft Gear	1
XA-3960	X	Gasket, Spiral Gear Cover to Bed	1
XA-3961	X	Gasket, Clutch Adaptor Housing to Bed	1
XA-3966*	X	Washer, Main Bearing Clamp Bolt	4
XA-3979*	X	Starter Ring Gear	1
XA-3987*	X	Dowell Pin	1
XBM-10198*	X	Timken Roller Bearing	2
XBM-10204-B*	X	Power Take-Off Clutch	1
XBM-10205-A*	X	Fan Belt	1
XBM-10218-A	X	Oil-Seal Crankshaft	2
XC-741*	X	Bolt, Flywheel	1
XT-181	X	Flywheel Wedge	

5X6½ WL
End View
Cylinder Head
 Figure 4



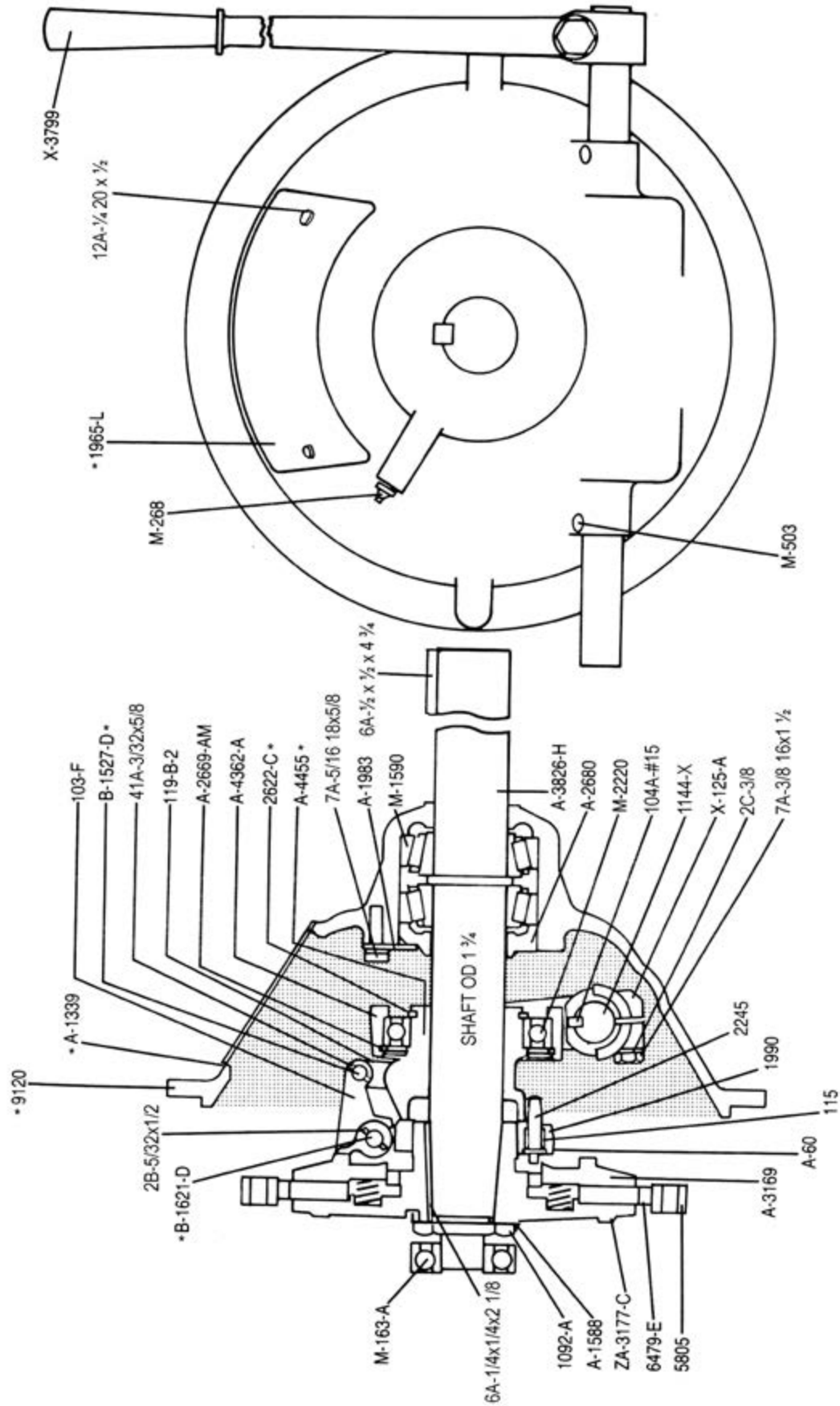
Arrow Part No.	Ajax Engine Size 5X6½	Description	No. Req.
XA-3374	X	Hose, Air Cleaner to Carburetor	1
XA-3929-A-1*	X	Water Inlet Connection	1
XA-3937*	X	Bracket	1
XA-3941*	X	Adj. Screw	1
XA-3962	X	Gasket, Water Inlet Connection to Bed	1
XBM-1045-A	X	Ball and Socket Joint	1
XBM-10009-D	X	Hose	1
HC-44	X	Hose Clamps	2
XBM-10217-B*	X	Air Duct Hose Clamps	2
XBM-10203*	X	Fan	1
XD-192623*	X	Fan Guard	1
500-7-46	X	Radiator Cap	1

5X6½ WL
Side View
Flywheel Side
 Figure 5



Arrow Part No.	Ajax Engine Size 5X6½	Description	No. Req.
ARO-132	X	Ignition Cable Assembly	1
XA-3916-A	X	Cover Plate	1
XA-3957	X	Gasket, Bed Cover Plate, Governor Side	1
XA-3970	X	Gas Inlet Connection	1
XA-3983	X	Governor Spring Clip	1
XA-3984	X	Spring Lever Screw	1
XA-3989	X	Gasket	1
XB-781-A-1	X	Washers, Gas Inlet Connection	2
XBM-2003-A-72	X	Spark Plug Cable (Specify Length)	
XBM-10191	X	¼" Self Locking Nut, Ball and Socket Joints	2
XBM-10618	X	Wing Nut	1
XBM-10930	X	Spark Plug Terminal	
XBM-10931	X	Spark Plug Insulator	
XM-1840-A	X	Control Rod	1
XM-2630-A	X	Governor Spring	1
XM-2631	X	Spring Adjusting Screw	1
XT-125	X	Check Valve	1
ASIC-3	X	Impco Carburetor	1
SA-60	X	Oil Bath Air Cleaner	1
*ARO-6796	X	Comp. Gasket Set	1

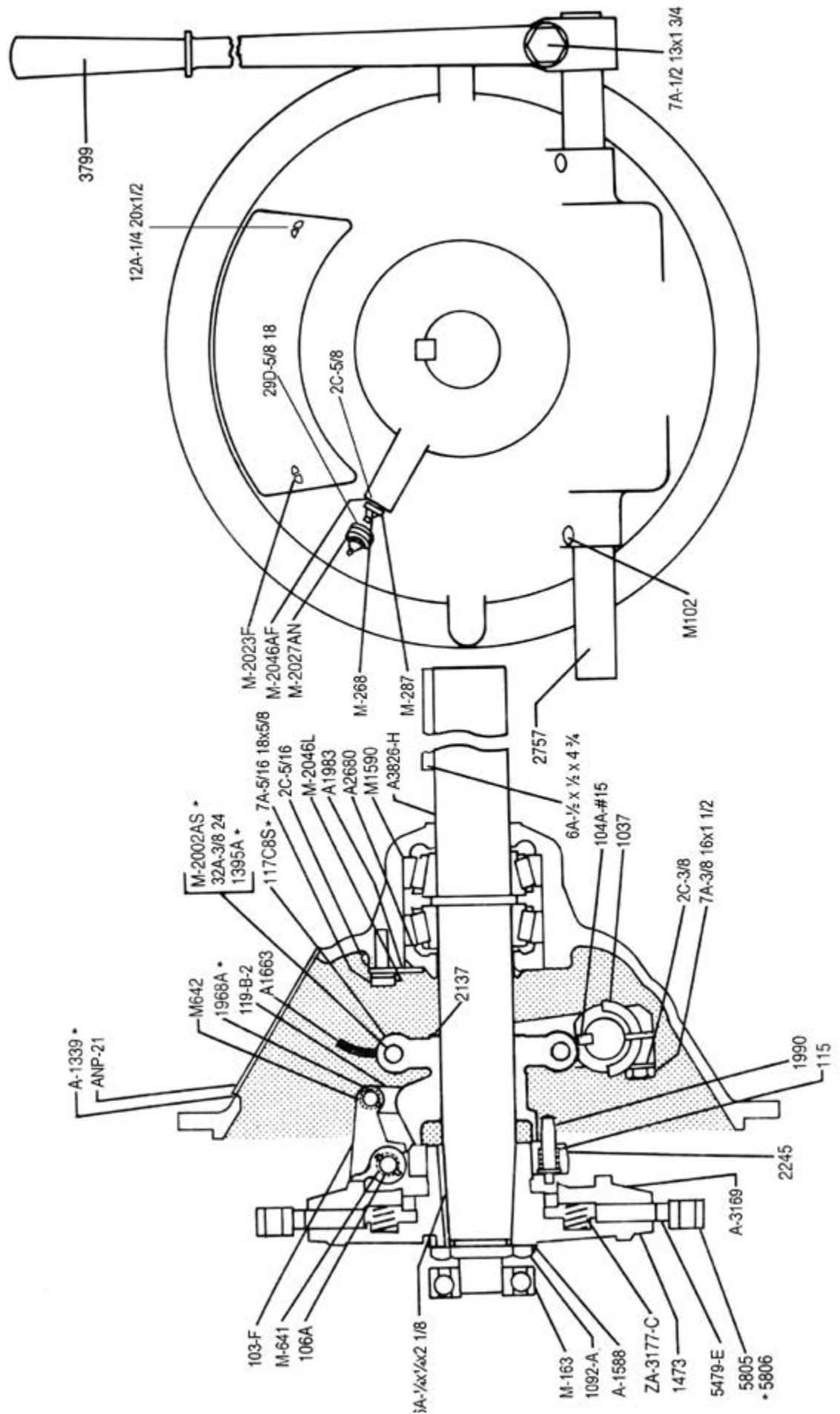
5X6½ WL
New Style
Twin Disk Clutch
 Figure 6



5X6½ WL
New Style
Twin Disk Clutch
Figure 6

<i>Arrow Part No.</i>	<i>Ajax Engine Size 5X6½</i>	<i>Description</i>	<i>No. Req.</i>
103-F	X	Finger Levers	4
115	X	Adjusting Lock Pin Spring	1
119-B-2	X	Lever Links	8
1092-A	X	Hub Nut	1
1144-X	X	Operating Shaft	1
1965-L	X	Hand Hole Plate	1
1990	X	Adjusting Yoke	1
2245	X	Adjusting Lock Pin	1
2622-C	X	Snap Ring (Sleeve)	1
5805	X	Driving Ring	1
6479-E	X	Driving Plate	1
9120	X	Clutch Housing	1
A-60	X	Adjusting Yoke Assy. (Incl. Parts 1990, 103-F, B-1621-D, M-1927-AD, 2245, 115)	1
A-1339	X	Gasket	1
A-1588	X	Lock Washer	2
A-1983	X	Retainer Lock	4
A-2669-AM	X	Snap Ring (Collar)	1
A-2680	X	Bearing Retainer	1
A-3169	X	Floating Plate	1
A-3826-H	X	Clutch Shaft	1
A-4362-A	X	Collars	4
A-4455	X	Sliding Sleeve	1
B-1527-D	X	Lever Link Pins	
B-1621-D	X	Finger Pins	
CE-108	X	Clutch Assy. (Incl. parts ZA-3177-C, A-60, S-644, 6479-E, A-3169, 1473)	1
M-163-A	X	Pilot Bearing	1
M-268	X	Hydraulic Fitting	2
M-503		Oil Cups	
M-1590	X	Timken Bearings	2
2B-5/32 x 1/2	X	Roll Pins	4
41A-3/32 x 5/8	X	Roll Pins	8
7A-5/16 18 x 5/8	X	Hex Head Cap Screws	1
7A-3/8 16 x 1 1/2	X	Hex Head Cap Screws	2
104A-#15	X	Woodruff Key	2
6A-1/4 x 1/4 x 2 1/8	X	Hub Key	1
6A-1/2 x 1/2 x 4 3/4	X	Key (Taped to Shaft)	1
12A-1/4 20 x 1/2	X	Button Hd. Screws	2
2C-3/8	X	Lock Washers	2
M-2220	X	Ball Bearing (Throwout)	1
S-644	X	Sliding Sleeve Assy. (Incl parts A-4455, 119-B-2, B-1527-D, M-1927-AS, A-4362-A, M-2220, A-2669-AM, A-2622-C)	1
X-125-A	X	Throwout Yoke	1
X-3799	X	Hand Lever	1
ZA-3177-C	X	Hub and Back Plate	1

5X6½ WL
Old Style
Twin Disk Clutch
 Figure 7



5X6½ WL
Old Style
Twin Disk Clutch
 Figure 7

<i>Arrow Part No.</i>	<i>Ajax Engine Size 5X6½</i>	<i>Description</i>	<i>No. Req.</i>
BM-10204	X	Twin Disk Power Take-Off Clutch C-108-HP-4 with Moulded Split Driving Plates and SAE No. 4 Housing	
C-108		Clutch Assembly Composed of:	1
	X	1)ZA-3177-C Hub & Back Plate, Taper Bore 1¾	
	X	1)A-60 Adjusting Yoke Assy Composed of:	
	X	1)1990 Adjusting Yoke	
	X	4)103-F Finger Levers	
	X	4)106A Finger Pins	
	X	4)M-641 Snap Rings	
	X	1)2245 Adjusting Lock Pin	
	X	1)115 Adjusting Lock Pin Spring	
	X	1)S-384 Sliding Sleeve Assy Composed of:	
	X	1)2137 Sliding Sleeve, Bore 1.756-1.754	
	X	8)119B2 Lever Links	
	X	8)1968A Lever Lock Pins	
	X	1)117C8S Cone Collar	
	X	2)M-2002AS Bolts	
	X	2)32A-3/8 24 Nuts	
	X	8)M642 Snap Rings	
	X	4)1395A Washers	
	X	1)5479-E Driving Plate	
	X	1)A3169 Floating Plate	
	X	6)1473 Release Springs	
9120	X	Clutch Housing #4 SAE	
A3826-H	X	Clutch Shaft	
M-2033-AE	X	Key (½ X ½ X 4 7/8 Tape to Shaft)	1
2757	X	Operating Shaft	1
5805	X	Driving Ring	1
M-287	X	Hydraulic Fitting (¼)	1
12A-¼ 20 x ½	X	Rd Hd Screw	1
29D-5/8 18	X	Nut, HX Jam Finished	1
2C-5/8	X	Lockwasher, Internal	1

Continued

5X6½ WL
Old Style
Twin Disk Clutch
Figure 7

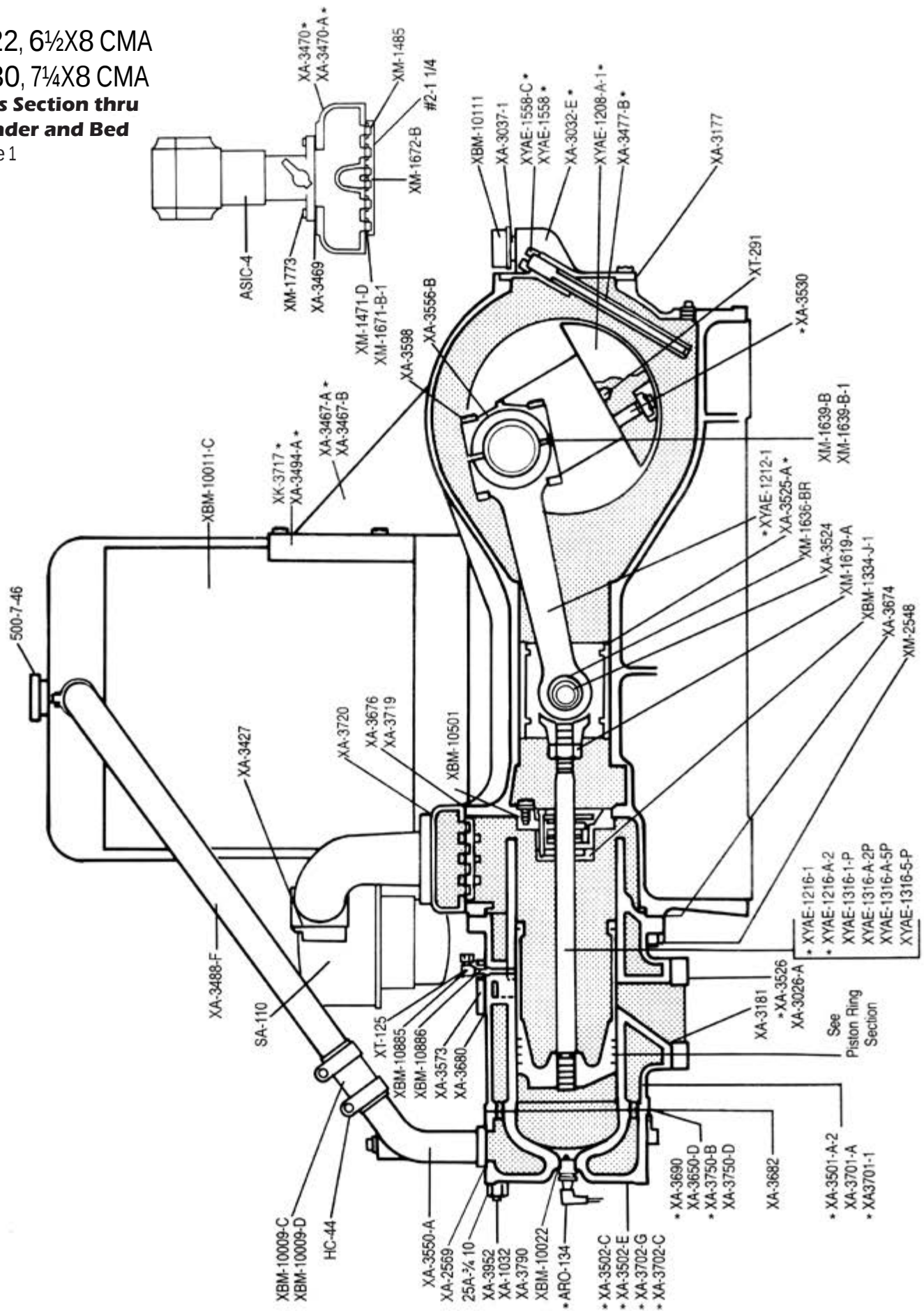
Continued from pg 14

Arrow Part No.	Ajax Engine Size 5X6½	Description	No. Req.
Z-585	X	Miscellaneous P.T.O. Parts Composed of:	1
	X	2)M1590 Timken Roller Bearings (25584-25521)	
	X	1)M-163 Pilot Ball Bearing (305-F)	
	X	1)1965 Hand Hole Plate	
	X	1)A-1339	
	X	2)M-2023F	
	X	1)1037	
	X	2)7A-3/8 16x1 1/2	
	X	2)2C-3/8	
	X	1)1092-A	
	X	1)A-1588	
	X	2)104A-#15	
	X	1)3799	
	X	1)7A-1/2 13x1 3/4	
		1)A2680	
		1)A1663	
	X	1)M-2027AN	
	X	1)M-2046AF	
	X	2)M-268	
	X	2)M102	
	X	1)M-2032Z	
	X	1)A-1983	
	X	1)7A-5/16 18x5/8	
	X	1)M-2046L	
	X	1)2C-5/16	
3799	X	Hand Lever	1
M-163	X	Pilot Bearing (305F)	1
5806	X	Driving Ring	1



EA-22, 6½x8 CMA
EA-30, 7¼x8 CMA

EA-22, 6½X8 CMA
EA-30, 7¼X8 CMA
**Cross Section thru
Cylinder and Bed**
Figure 1



EA-22, 6½X8 CMA
EA-30, 7¼X8 CMA
**Cross Section thru
Cylinder and Bed**
Figure 1

Arrow Part No.	EA-22	EA-30	6½X8 CMA	7¼X8 CMA	Description	No. Req.
ASSEMBLIES:						
XYAE-1212-1	X	X	X	X	Connecting Rod Assy.	1
XYAE-1216-1			X		Piston & Rod Assy.	1
XYAE-1216-A-2	X				Piston & Rod Assy.	1
XYAE-1220-A	X	X	X	X	Air Starting Line (not shown)	1
XYAE-1236			X	X	Gas Inlet Line Assy. (not shown)	1
XYAE-1316-1-P				X	Piston & Rod Assy. Std.	1
XYAE-1316-A-2-P		X			Piston & Rod Assy.	1
XYAE-1316-A-5-P		X			Piston & Rod Assy. Semi Fin	1
XYAE-1316-5-P				X	Piston & Rod Assy. Semi Fin	1
XYAE-1538-B	X	X	X	X	Gov. Assy. (see old style Gov. page)	1
XYAE-1558-C	X	X			Oil Gauge Bayonet Assy.	1
XYAE-1558			X	X	Oil Gauge Bayonet Assy.	1
XYAE-2038-D	X	X	X	X	Gov. Assy. (see new style Gov. page)	1
INDIVIDUAL PARTS:						
ARO-134	X	X			Spark Plug Cable Assy.	1
ASIC-4			X	X	Carburetor Assembly	1
500-7-46			X	X	Radiator Cap	1
XA-1032			X		Stud-Cylinder Head to Cylinder	6
XA-2569	X	X			Gasket-Water Outlet	1
XA-3026-A	X	X	X	X	Exhaust Flange	1
XA-3032-E	X	X			Breather Plate	1
XA-3037-1	X	X	X	X	Breather Connection-Engine Bed	1
XA-3177	X	X	X	X	Gasket-Breather Plate	1
XA-3181	X	X	X	X	Gasket-Exhaust Flange	1
XA-3427	X	X			Gasket	1
XA-3467-A	X	X			Fan Belt Guard	1
XA-3467-B			X	X	Fan Belt Guard	1
XA-3469			X	X	Gasket-Manifold to Carb.	1
XA-3470			X	X	Mixer Valve Manifold	1
XA-3470-A	X	X			Mixer Valve Manifold	1
XA-3477-B	X	X	X	X	Oil Gauge Pipe	1
XA-3488-F	X	X	X	X	Upper Water Line	1
XA-3494-A			X		Radiator Support	1
XA-3501-A-2			X		Cylinder	1
XA-3501-A-2	X				Cylinder	1
XA-3502-E			X		Cylinder Head	1
XA-3502-E	X				Cylinder Head	1
PISTON RINGS	X				See Piston Ring Section	4
XA-3524	X	X	X	X	Crosshead Pin	1

Continued

EA-22, 6½X8 CMA

EA-30, 7¼X8 CMA

**Cross Section thru
Cylinder and Bed**

Figure 1

Continued from page 19

Arrow Part No.	EA-22	EA-30	6½X8 CMA	7¼X8 CMA	Description	No. Req.
XA-3525-A	X	X	X	X	Crosshead	1
XA-3526			X	X	Exhaust Flange	1
XA-3530	X	X			Studs, Counterweights	2
XA-3530			X	X	Studs, Counterweights	4
XA-3550-A	X	X	X	X	Water Outlet Connection	1
XA-3556-B	X	X	X	X	Crankpin Bearing	1
XA-3573	X	X	X	X	Cover Plate, Cylinder	1
XA-3598	X	X	X	X	Connecting Rod Bolt	1
XA-3650-D	X		X		Gasket, Cylinder Head to Cylinder	1
XA-3674	X	X	X	X	Gasket, Cylinder to Bed	1
XA-3676			X	X	Gasket, Mixer Valve Manifold to Bed	1
XA-3680	X	X	X	X	Gasket, Cover Plate (not shown)	1
XA-3682			X		Gasket, Cylinder Head Plate to Cylinder Head (not shown)	1
XA-3690			X		Gasket, Combustion Chamber to Cylinder Head (not shown)	1
XA-3701-A		X			Cylinder	1
XA-3701-1				X	Cylinder	1
XA-3702-G		X			Cylinder Head	1
XA-3702-C				X	Cylinder Head	1
XA-3719	X	X			Gasket, Mixer Valve Manifold to Bed	1
XA-3720	X	X			Gasket	1
XA-3750-B		X		X	Gasket, Cylinder Head	1
XA-3750-D		X			Gasket, Cylinder	1
XA-3782				X	Gasket, Cylinder Head Plate (not shown)	1
XA-3790				X	Studs, Cylinder Head	6
XA-3952	X	X			Studs, Cylinder Head	6
XBM-1334-J-1	X	X			Packing Rings and Springs Only	1
XBM-1414-D			X	X	Oil Seal, Control Box Flange (not shown)	1
XBM-1703			X	X	Terminal Rajah (not shown)	1
XBM-1728-A	X	X	X	X	Stop Cock (not shown)	1
XBM-2003-A	X	X	X	X	Ignition Cable (see ARO-134)	1
XBM-2594			X	X	Male Connector (not shown)	1
XBM-10009-C	X	X			Radiator Hose 3" Long	4
XBM-10009-C			X	X	Radiator Hose 3" Long	2
XBM-10009-D			X	X	Radiator Hose 4¾" Long	4
HC-44	X	X			Hose Clamps	8
XBM-10011-C	X	X			Radiator	1
XBM-10012-B			X	X	Radiator Hose (not shown)	1
XBM-100061-A			X	X	Air Duct Hose, Air Cleaner to Carb.	1
XBM-10062-A			X	X	Hose Clamps, Air Duct Hose (not shown)	2
XBM-10111	X	X	X	X	Breather Cap	1

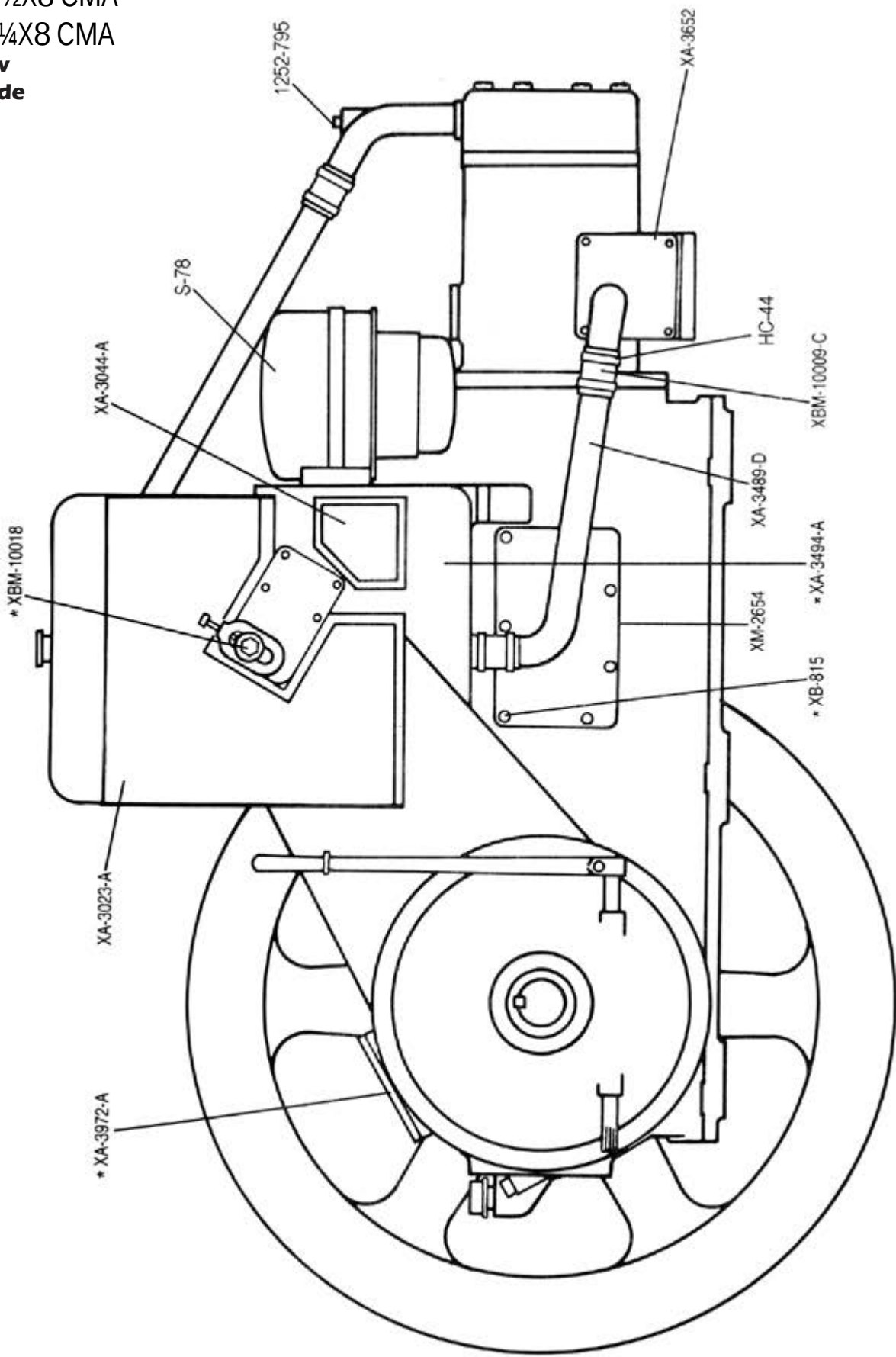
Continued

EA-22, 6½X8 CMA
EA-30, 7¼X8 CMA
**Cross Section thru
Cylinder and Bed**
Figure 1

Continued from page 20

Arrow Part No.	EA-22	EA-30	6½X8 CMA	7¼X8 CMA	Description	No. Req.
XBM-10501			X	X	Gasket, Stuffing box to Bed	1
XBM-10885	X	X			Angel Check Valve	1
XBM-10886	X	X			Adaptor, Angle Check Valve	1
XBM-10930	X	X			Spark Plug Terminal (see ARO-134)	1
XBM-10931	X	X			Spark Plug Insulator (see ARO-134)	1
SA-110	X	X			Vortex Air Cleaner	1
XK-3717	X	X			Radiator Support	1
XM-1471-D	X	X			Mixer Valves	5
XM-1485	X	X			Mixer Valve Springs	10
XM1485			X	X	Mixer Valve Springs	8
XM-1619-A	X	X	X	X	Piston Rod Nut	1
XM-1636-BR	X	X	X	X	Crosshead Pin Bearing	1
XM-1639-B	X	X	X	X	Shims, Laminum	2
XM-1639-B-1	X	X	X	X	Shims, Solid	2
XM-1671-B-1			X	X	Mixer Valve CMA	4
XM-1672-B			X	X	Mixer Valve stop	2
XM-1773			X	X	Stud, Carcuretor to Manifold	2
XM-2548	X	X	X	X	Stud, Cylinder to Bed	6
XT-125			X	X	Check Valve	1
XT-291	X	X	X	X	Dowel Pins, Counterweights	2

EA-22, 6½X8 CMA
EA-30, 7¼X8 CMA
Side View
Clutch Side
Figure 2



EA-22, 6½X8 CMA

EA-30, 7¼X8 CMA

Side View

Clutch Side

Figure 2

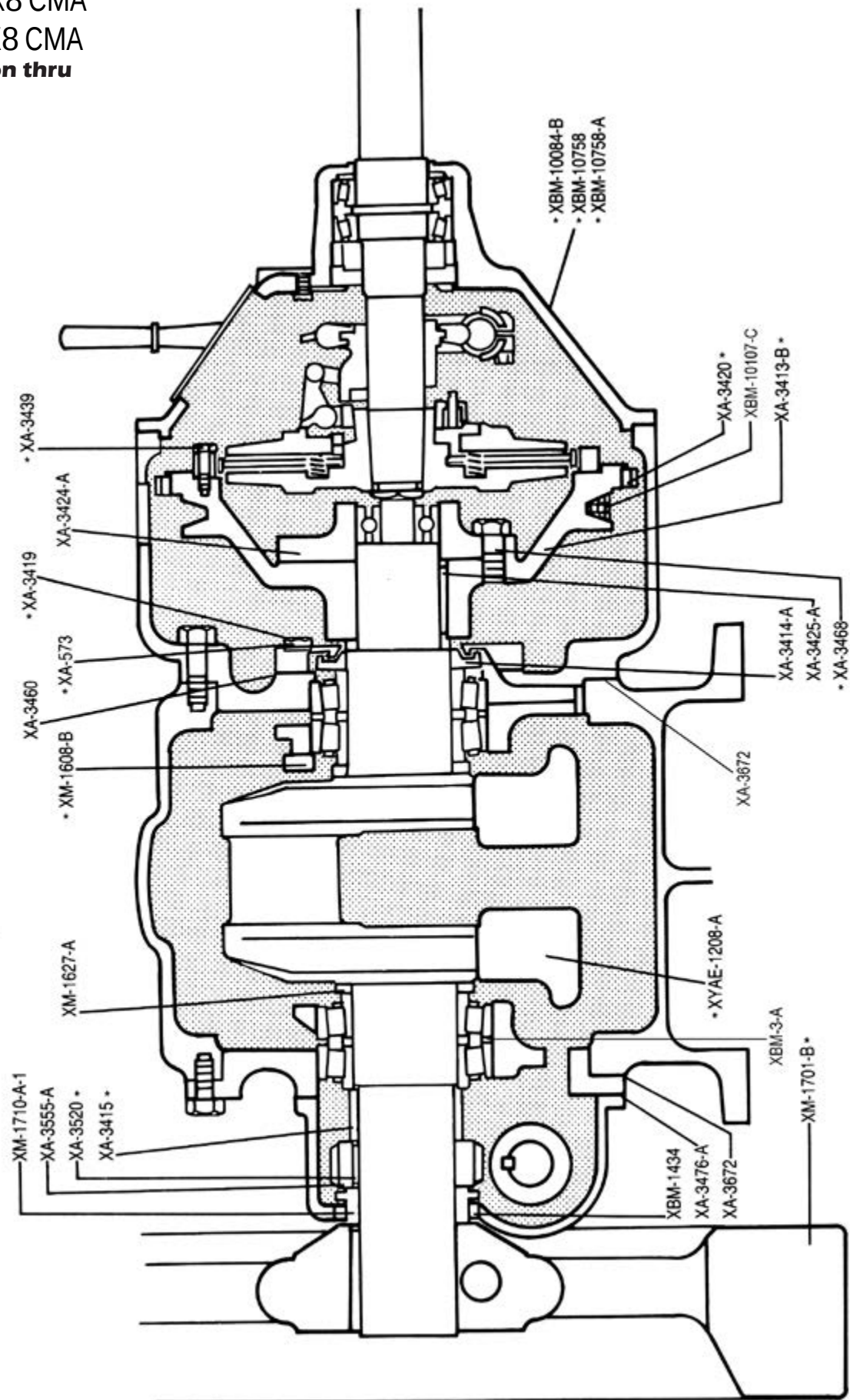
Arrow Part No.	EA-22	EA-30	6½X8 CMA	7¼X8 CMA	Description	No. Req.
XA-3023-A	X	X	X	X	Fan Guard, Radiator	1
XA-3044-A	X	X	X	X	Fan Guard, Radiator Support	1
XA-3489-D	X	X	X	X	Water Line, Lower	1
XA-3494-A			X	X	Radiator Support	1
XA-3652	X	X	X	X	Gasket, Water Inlet Plate	1
XA-3972-A	X	X	X	X	Starter Cover Plate	1
XB-815			X	X	Stud, Radiator Support to Bed	2
XBM-10009-C	X	X			Radiator Hose 3" Long	4
XBM-10009-C			X	X	Radiator Hose	2
HC-44	X	X	X	X	Hose Clamps	8
XBM-10018	X	X	X	X	Fan Assembly	1
XM-2654	X	X	X	X	Gasket, Side Cover to Bed	1
S-78	X	X	X	X	Air Cleaner	1
1252-795	X	X	X	X	Temperature Gauge	1

EA-22, 6½X8 CMA

EA-30, 7¼X8 CMA

**Cross Section thru
Crankcase**

Figure 3



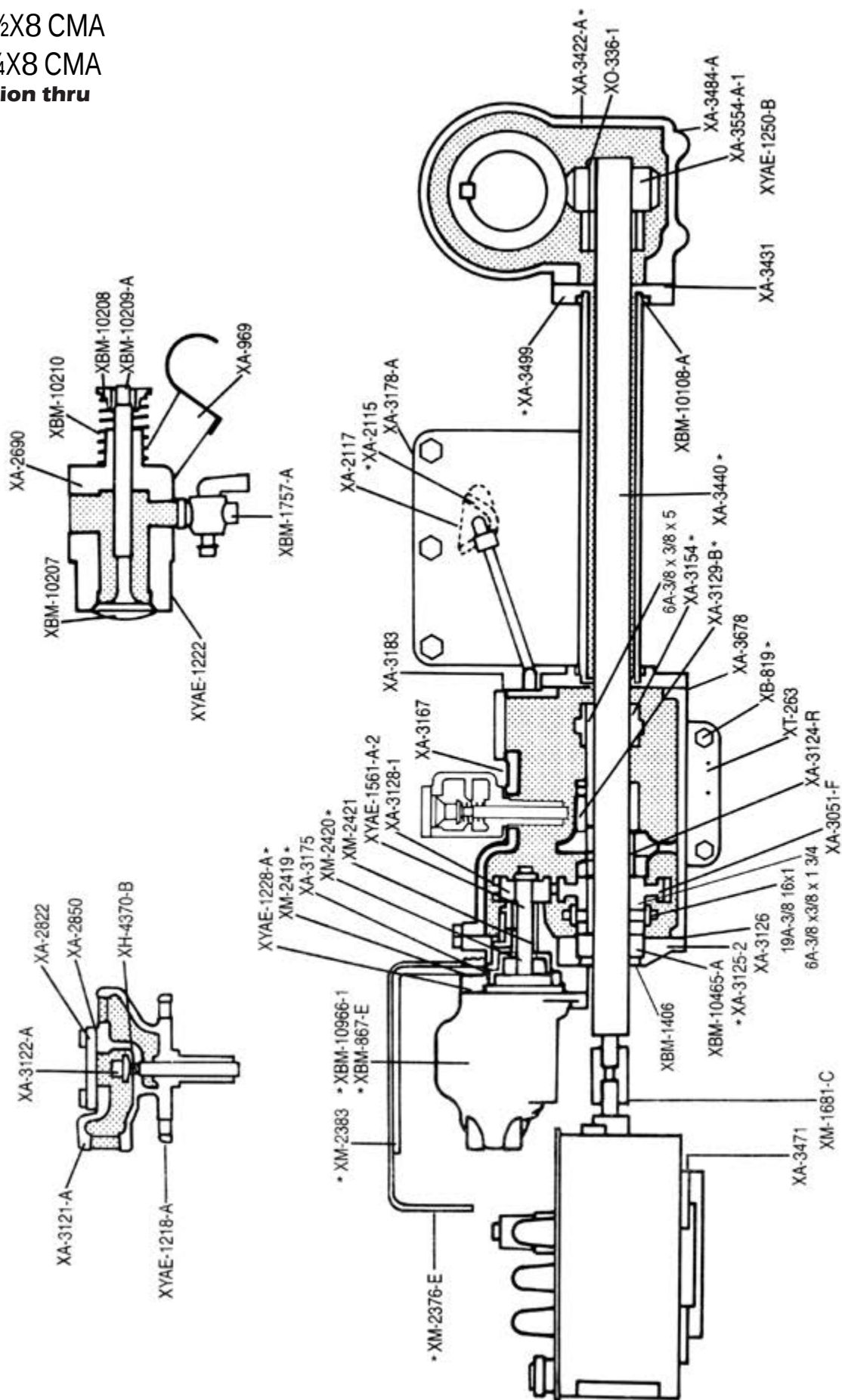
EA-22, 6½X8 CMA
EA-30, 7¼X8 CMA
**Cross Section thru
Crankcase**
Figure 3

Arrow Part No.	EA-22	EA-30	6½X8 CMA	7¼X8 CMA	Description	No. Req.
ASSEMBLY:						
XYAE-1208-A	X	X	X	X	Crankshaft Assembly	1
INDIVIDUAL PARTS:						
XA-573	X	X	X	X	Washer, Bearing Clamp	4
XA-573	X	X			Washer, Elbow to Plate	2
XA-3413-B	X	X	X	X	Clutch Adaptor - 16¼" O.D.	1
XA-3414-A	X	X	X	X	Oil Slinger, Clutch	1
XA-3415	X	X	X	X	Spacer, Crankshaft Gear	1
XA-3419	X	X	X	X	Bearing Clamp Bolt	4
XA-3420	X	X	X	X	Starter Ring Gear	1
XA-3424-A	X	X	X	X	Pilot Bearing Housing	1
XA-3425-A	X	X	X	X	Key, Clutch Adapter	1
XA-3439	X	X	X	X	Cap Screw, Clutch Ring to Adapter	8
XA-3460	X	X	X	X	Gasket Bearing Support Cover	1
XA-3468	X	X	X	X	Cap Screw, Hub to Adapter	6
XA-3476-A	X	X	X	X	Gasket, Spiral Gear Shield	1
XA-3520	X	X	X	X	Key Crankshaft Gear	1
XA-3555-A	X	X	X	X	Crankshaft Gear	1
XA-3672	X	X	X	X	Gasket, Bearing Retainer to Bed	2
XBM-1434	X	X	X	X	Oil Seal, Spiral Gear Shield	1
XBM-10084-B			X	X	Clutch Assembly	1
XBM-10107-C	X	X	X	X	Fan Belt	1
XBM-10758	X				Clutch Assembly	1
XBM-10758-A		X			Clutch Assembly	1
XM-1608-B	X	X	X	X	Bearing Clamps	2
XM-1627-A	X	X	X	X	Bearing Spacer, Crankshaft Cheek	2
XM-1701-B	X	X	X	X	Flywheel Key	1
XM-1710-A-1	X	X	X	X	Oil Slinger, Governor Side	1
XA-3672	X	X	X	X	Gasket	1
XBM-3-A	X	X	X	X	Bearing Crankshaft Assy. EA2	2

EA-30, 7¼X8 CMA

Cross Section thru Layshaft

Figure 4



EA-22, 6½X8 CMA
EA-30, 7¼X8 CMA
**Cross Section thru
Layshaft**
Figure 4

Arrow Part No.	EA-22	EA-30	6½X8 CMA	7¼X8 CMA	Description	No. Req.
ASSEMBLIES:						
XYAE-1218-A	X	X			Air Start Valve	1
XYAE-1222	X	X			Relief Valve Body	
XYAE-1228-A	X	X	X	X	Magneto Bracket Assembly	1
XYAE-1250-B	X	X	X	X	Front Layshaft Bearing Assembly	1
XYAE-1561-A-2	X	X	X	X	Magneto Shaft & Coupling Assy.	1
INDIVIDUAL PARTS:						
XA-969	X	X			Valve Opener	1
XA-2115	X	X			Oil Trough	1
XA-2117	X	X			Gasket, Oil Trough	1
XA-2690	X	X			Relief Valve Body	1
XA-2822	X	X			Cover Plate	1
XA-2850	X	X			Gasket, Cover Plate	1
XA-3051-F	X	X	X	X	Layshaft Drive Gear	1
XA-3121-A	X	X			Valve	1
XA-3122-A	X	X			Air Starting Drive Body	1
XA-3124-R	X	X	X	X	Bushing	1
XA-3125-2	X	X	X	X	Control Box Flange	1
XA-3126	X	X	X	X	Gasket, Control Box Flange	1
XA-3128-1	X	X	X	X	Pinion, Magneto Drive	1
XA-3129-B	X	X	X	X	Air Starting Cam	1
XA-3154	X	X	X	X	Gas Injected Cam	1
XA-3167	X	X	X	X	Gasket, Valve Body	1
XA-3175	X	X	X	X	Gasket, Magneto Bracket	1
XA-3178-A	X	X	X	X	Gasket, Side Cover Plate	1
XA-3183	X	X	X	X	Gasket Cover Plate	1
6A-3/8 x 3/8 x 1¾	X	X	X	X	Key, Air Start Cam	1
XA-3422-A			X	X	Cover Plate, Spiral Gear Shield	1
XA-3431	X	X	X	X	Gasket, Oil Seal Flange	1
XA-3438	X	X	X	X	Cover Plate, Control Box	1
XA-3440	X	X	X	X	Layshaft	1
XA-3471	X	X			Gasket, Lubricator Bracket	1
XA-3484-A			X	X	Gasket, Cover Plate for 3422-A	1
XA-3499	X	X	X	X	Oil Seal Flange	1
XA-3554-A-1	X	X	X	X	Layshaft Gear	1
XA-3678	X	X	X	X	Gasket, Control Box Flange	1
XB-819	X	X	X	X	Studs, Control Box to Bed	3
XBM-867-E	X	X	X	X	Magneto	1
XBM-1757-A	X	X			Air Cock	1

Continued

EA-22, 6½X8 CMA

EA-30, 7¼X8 CMA

Cross Section thru

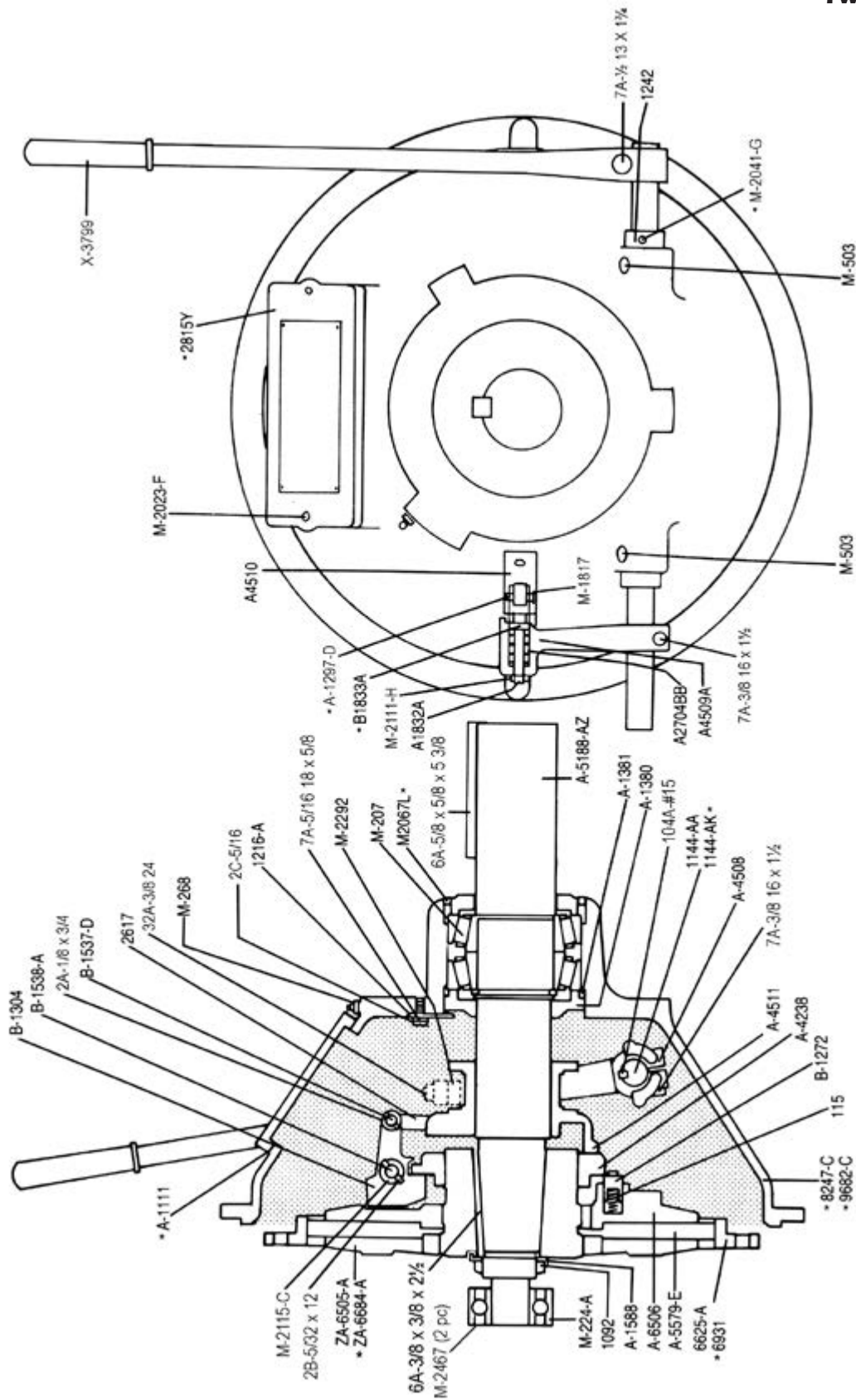
Layshaft

Figure 4

Continued from page 27

Arrow Part No.	EA-22	EA-30	6½X8 CMA	7¼X8 CMA	Description	No. Req.
XBM-10108-A	X	X	X	X	Oil Seal, Layshaft Guard	2
XBM-10207	X	X			Relief Valve Assembly	1
XBM-10208	X	X			Valve Spring Cap	1
XBM-10209-A	X	X			Cap Lock	1
XBM-10210	X	X			Valve Spring	1
XBM-10465-A	X	X			Oil Seal, Layshaft	1
19A-3/8 16x1	X	X	X	X	Set Screw, Layshaft Drive Gear	2
XBM-10966-1	X	X			Low Tension Magneto	1
XH-4370-B	X	X			Air Starting Valve Spring	1
XM-1681-C	X	X	X	X	Coupling, Lubricator to Layshaft	1
XM-2376-E	X	X	X	X	Magneto Cover	1
XM-2383	X	X	X	X	Magneto Cover Bracket	1
XM-2419			X	X	Magneto Coupling	1
XM-2420			X	X	Magneto Drive Shaft	1
XM-2421	X	X	X	X	Magneto Drive Shaft Bushing	1
XO-336-1	X	X	X	X	Key, Layshaft Gear to Layshaft	1
XT-263	X	X	X	X	Dowel Pins, Control Box	2
ARO-6789			X		Comp. Gasket Set	1
ARO-6789-A				X	Comp. Gasket Set	1
ARO-6789-B	X				Comp. Gasket Set	1
ARO-6789-C		X			Comp. Gasket Set	1

EA-22
New Style
Twin Disk Clutch
Figure 5



EA-22
New Style
Twin Disc Clutch
Figure 5

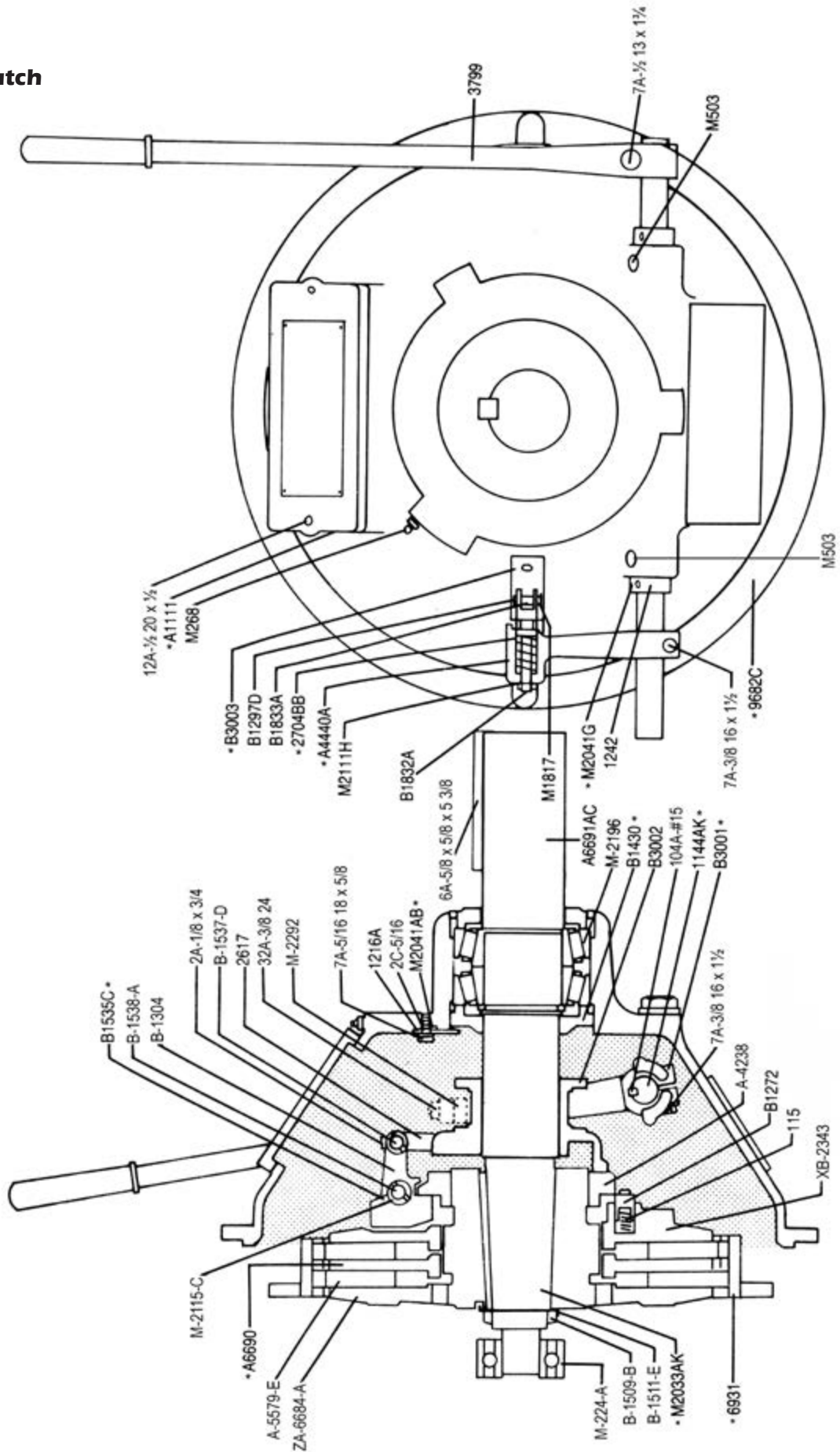
<i>Arrow Part No.</i>	<i>Ajax Engine Size EA-22</i>	<i>Description</i>	<i>No. Req.</i>
BM-10758	X	Twin Disk Power Take-Off Clutch No. X-9582-C, Model SPE-111-HP2, Per Twin Disc Specification 31133 (EA-22 Only)	1
XA-6527	X	Clutch Assy. Per Specification 27822 Composed of:	1
	X	1)ZA-6505-A Hub & Back Plate	
	X	1)A-6506 Floating Plate	
	X	1)Y-43 Group Composed of:	
	X	3)B-1304 Finger Levers	
	X	3)B-1538-A Lever Pins	
	X	3)2B-5/32 x 12 Cotter Pins	
	X	1)B-1272 Adjusting Lock Pin	
	X	1)115 Adjusting Lock Pin Spring	
	X	6)M-2115-C Spring Washer	
	X	1)S-651 Sliding Sleeve Assy Composed of:	
	X	1)A-4511 Sliding Sleeve	
	X	6)2617 Lever Links	
	X	6)B-1537-D Lever Links Pins	
	X	6)2A-1/8 x 3/4 Cotter Pins	
	X	1)A-5579-E Driving Plate	
	X	1)A-4238 Adjusting Ring	
A-4510	X	Detent Locator	1
M-2002-D	X	Hex Head Cap Screw	1
M-2002-G	X	Hex Head Cap Screw	1
A-2888-B	X	Washer	1
M-503	X	Fitting (Operating Shaft)	1
1242	X	Stop Collar (not shown)	2
8247-C	X	Housing #2 SAE	1
A-5188-AZ	X	Shaft	1
6A-5/8 x 5/8 x 5 3/8	X	Key	1
1144-AA	X	Operating Shaft	1
X-3799	X	Hand Lever	1
7A-1/2 13 x 1 3/4	X	Hex Head Cap Screw - Hand Lever	1
M-224-A	X	Pilot Bearing	1
6625-A	X	Driving Ring	1
M-268	X	Hydraulic Fitting	1

Continued

EA-22
New Style
Twin Disk Clutch
Figure 5
Continued from page 30

<i>Arrow Part No.</i>	<i>Ajax Engine Size EA-22</i>	<i>Description</i>	<i>No. Req.</i>
Z-977	X	Misc. P.T.O. Parts Composed of:	1
	X	2)M-207 Timken Bearings	
	X	1)A-1381 Bearing Spacer	
	X	1)6A-3/8 x 3/8 x 2½ Hub Key	
	X	1)1092 Hub Nut	
	X	1)A-1588 Lock Washer (Hub Nut)	
	X	1)A-1380 Bearing Retainer	
	X	1)1216-A Bearing Retainer Lock	
	X	1)7A-5/16 18 x 5/8 Hex Head Cap Screw	
	X	1)2C-5/16 Lock Washer	
	X	1)A-4508 Throwout Yoke	
	X	2)7A-3/8 16 x 1½ Hex Head Cap Screw	
	X	2)104A-#15 Woodruff Key	
	X	1)2815-Y Hand Hole Plate	
	X	2)M-2023-F Button Head Cap Screw	
	X	1)A-1111 Gasket	
	X	2)M-2041-G Set Screw	
	X	1)M-2041-AB Set Screw	
	X	2)M-2067-L Plastic Protector	
	X	1)A-4509-A Neutral Lack Arm	
	X	2)M-2292 McGill Camrols	
	X	2)32A-3/8 24 Hex Nut	
	X	1)A-1832-A Roller Pin	
	X	1)A-1297-D Headed Pin	
	X	1)B-1833-A Detent Roller	
	X	1)M-2111-H Snap Ring	
	X	1)M-1817 Retaining Ring	
	X	1)A-2704-BB Spring	
	X	1)M-2002-AG Hex Head Cap Screw	
	X	2)M-2467 Bearing Blanket Mach	

EA-30
New Style
Twin Disk Clutch
Figure 6



EA-30
New Style
Twin Disk Clutch
Figure 6

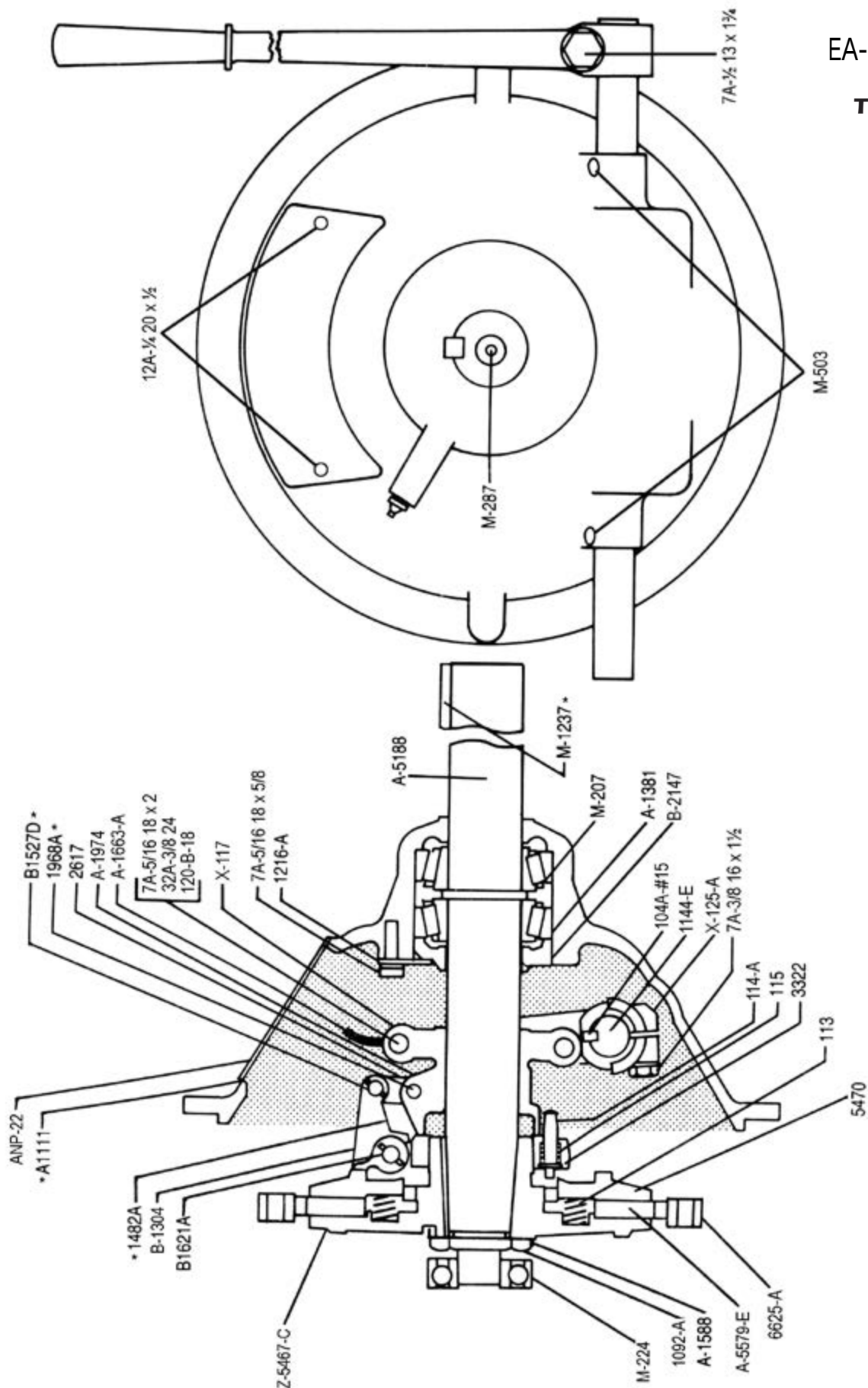
<i>Arrow Part No.</i>	<i>Ajax Engine Size EA-30</i>	<i>Description</i>	<i>No. Req.</i>
BM-10758-A	X	Twin Disc Power Take-Off No. X-9834 Model SPE-211-HP2, Per Twin Disc Specification 31132 (EA-30 Only)	1
XA-6527	X	Clutch Assy. Per Specification 30985 Composed of:	
	X	1)ZA-6684-A Hub and Back Plate	
	X	1)S-704 Sliding Sleeve Assy. Composed of:	
	X	1)B-3002 Sliding Sleeve	
	X	6)2617 Lever Links	
	X	6)B-1537-D Lever Links Pins	
	X	6)2A-1/8 x 3/4 Cotter Pins	
	X	2)A-5579-E Driving Plate	
	X	3)B-1304 Lever	
	X	3)B-1538-A Lever Pin	
	X	3)B-1535-C Cotter Pin	
	X	1)XB-2343 Floating Plate	
	X	1)A-6690 Center Plate	
	X	1)A-4238 Adjusting Ring	
	X	1)B-1272 Adjusting Lock Pin	
	X	1)115 Adjusting Lock Pin Spring	
	X	6)M-2115-C Spring Washer	
9682-C	X	Housing #2 SAE	1
A-6691-AC	X	Shaft	1
6A-5/8 x 5/8 x 5 3/8	X	Key	1
1144-AK	X	Operating Shaft	1
3799	X	Hand Lever	1
7A-1/2 13 x 1 3/4	X	Hex Head Cap Screw - Hand Lever	1
M-224-A	X	Pilot Bearing	1
6931	X	Driving Ring	1
M-268	X	Hydraulic Fitting	1
B-3003	X	Detent Locator	1
M-2002-D	X	Hex Head Cap Screw	2

Continued

EA-30
New Style
Twin Disk Clutch
Figure 6
Continued from page 30

Arrow Part No.	Ajax Engine Size EA-30	Description	No. Req.
Z-975	X	Misc. P.T.O. Parts Composed of:	1
	X	2)M-2196	
	X	1)B-1509-B	
	X	1)B-1430	
	X	1)1216-A	
	X	1)7A-5/16 18 x 5/8	
	X	1)2C-5/16	
	X	1)B-3001	
	X	2)7A-3/8 16 x 1½	
	X	2)104A-#15	
	X	2)12A-½ 20 x ½	
	X	1)A-1111	
	X	1)M-2033-AK	
	X	2)M-2041-G	
	X	1)M-2041-AB	
	X	2)M-2067-L	
	X	1)A-4440-A	
	X	1)2704-BB	
	X	1)B-1511-E	
	X	2)1242	
	X	2)M-2292	
	X	2)32A-3/8 24	

6½X8 CMA
EA-30, 7¼X8 CMA
Old Style
Twin Disk Clutch
Figure 7



6½X8 CMA

EA-30, 7¼X8 CMA

Old Style

Twin Disk Clutch

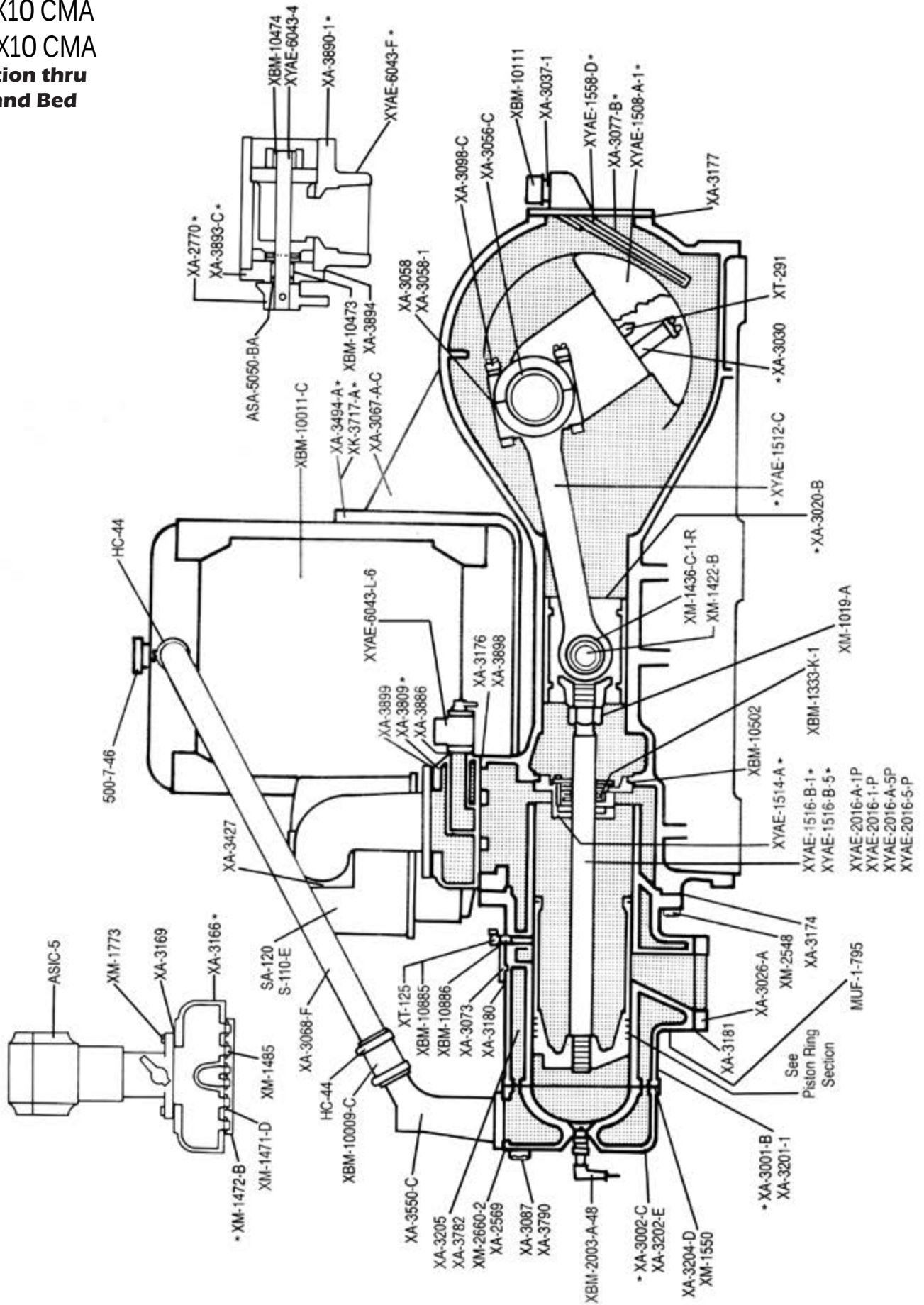
Figure 7

Arrow Part No.	6½X8 CMA	7¼X8 CMA	Description	No. Req.
6625-A	X	X	Driving Ring	1
M-224	X	X	Pilot Bearing	1
1092-A	X	X	Hub Nut	1
A-1588	X	X	Lock, Hub Nut	1
A-5579-A	X	X	Plate, Driving	1
Z-5467-C	X	X	Hub	1
5470	X	X	Plate, Floating	1
113	X	X	Spring	6
3322	X	X	Yoke, Adjusting	1
115	X	X	Spring, Lock Pin Adj.	1
114-A	X	X	Pin, Lock	1
7A-3/8 16 x 1½	X	X	Capscrew	2
X-125-A	X	X	Yoke	1
1144-E	X	X	Shaft	1
104A-#15	X	X	Key	2
B-2147	X	X	Bearing Retainer	1
A-1381	X	X	Spacer, Bearing	1
M-207	X	X	Bearing	2
M-287	X	X	Grease Fitting	1
A-5188	X	X	Shaft	1
M-1237	X	X	5/8 X 5/8 X 5¾ Key	1
1216-A	X	X	Lock, Bearing Retainer	1
7A-5/16 18 x 5/8	X	X	Capscrew	1
X-117	X	X	Throwout Collar	1
120-B-18	X	X	Shim	2
7A-5/16 18 x 2	X	X	Capscrew	2
32A-3/8 24	X	X	Nut	2
A-1663-A	X	X	Hose	1
A-1974	X	X	Sliding Sleeve	1
2617	X	X	Link, Lever	6
M-642	X	X	Ring	1
1968-A	X	X	Adaptor	1
B-1527-D	X	X	Pin	6
B-1621-A	X	X	Pin	3
B-1304	X	X	Lever	3
1482-A	X	X	Spring	3
ANP-22	X	X	Plate, Hand Hole	1
A-1111	X	X	Gasket	1
12A-¼ 20 x ½	X	X	Screw RD HD Mach	2
7A-½ 13 x 1¾	X	X	Capscrew HX HD	1
M-503	X	X	Shaft Grease Fitting	2



EA-30, 7½x10 CMA
EA-42, 8½x10 CMA

E-30, 7½X10 CMA
E-42, 8½X10 CMA
**Cross Section thru
Cylinder and Bed**
Figure 1



E-30, 7½X10 CMA
E-42, 8½X10 CMA
**Cross Section thru
Cylinder and Bed**
Figure 1

Arrow Part No.	EA-30	EA-42	7½X10 CMA	8½X10 CMA	Description	No. Req.
ASSEMBLY:						
XBM-2003-A-48	X	X	X	X	Spark Plug Cable Assembly	1
ASIC-5			X	X	Impco Carburator	1
XYAE-1512-C	X	X	X	X	Connecting Rod Assembly	1
XYAE-1514-A	X	X			Stuffing Box Assembly	1
XYAE-1516-A-1	X		X		Piston & Rod Assembly	2
XYAE-1516-B-5	X				Piston & Rod Assembly	1
XYAE-1538			X	X	Gov. Assy. (not shown, see Old style Gov. pg)	1
XYAE-1558-D	X	X	X	X	Oil Gauge Bayonet	1
XYAE-2016-A-1-P		X		X	Piston & Rod Assy. 4 Ring Std.	1
XYAE-2016-1-P		X		X	Piston & Rod Assy. Std 5 Rings	1
XYAE-2016-A-5-P		X		X	Piston & Rod Assy. 4 Ring Semi Finish	1
XYAE-2016-5-P		X		X	Piston & Rod Assy. Semi Finish	1
XYAE-2038-T	X	X	X	X	Gov. Assy. (not shown, see New style Gov. pg)	1
XYAE-6043-F	X	X			Throttle Valve Assy.	1
XYAE-6043-4	X	X			Throttle Valve & Shaft Assy.	1
INDIVIDUAL PARTS:						
500-46	X	X	X	X	Radiator Cap	1
XA-2569	X	X			Gasket, Water Outlet	1
XA-2770	X	X			Lever	1
XA-3001-B	X		X		Cylinder	1
XA-3002-C	X		X		Head	1
XA-3020-B	X	X	X	X	Crosshead	1
XA-3026-A	X	X	X	X	Exhaust Flange	1
XA-3030	X	X	X	X	Stud	4
XA-3037-1	X	X	X	X	Breather Connection	1
XA-3056-C	X	X	X	X	Crankpin Bearing	1
XA-3058	X	X	X	X	Shim	2
XA-3058-1	X	X	X	X	Shim	2
XA-3067-A-C	X	X	X	X	Fan Belt Guard	1
XA-3068-F	X	X	X	X	Water Line	1
XA-3073	X	X	X	X	Cover Plate	1
XA-3077-B	X	X	X	X	Oil Gauge Pipe	1
XA-3087			X	X	Stud, Cylinder Head to Cylinder	1
XA-3098-C	X	X	X	X	Crankpin Bearing Bolt	2
XA-3166			X	X	Mixer Valve Manifold	1
XA-3169			X	X	Gasket, Manifold to Carb.	1
XA-3174	X	X	X	X	Gasket, Cylinder to Bed	1

Continued

E-30, 7½X10 CMA

E-42, 8½X10 CMA

**Cross Section thru
Cylinder and Bed**

Figure 1

Continued from page 39

Arrow Part No.	EA-30	EA-42	7½X10 CMA	8½X10 CMA	Description	No. Req.
XA-3176			X	X	Gasket, Mixer Valve Manifold	1
XA-3177	X	X	X	X	Gasket, Beather Plate to Bed	1
XA-3180	X	X	X	X	Gasket, Inlet Port Cover Plate	1
XA-3181	X	X	X	X	Gasket, Exhaust Flange to Cylinder	1
XA-3182			X	X	Gasket, Cylinder Head Plate (not shown)	1
XA-3201-1		X		X	Cylinder	1
XA-3202-E		X		X	Cylinder Head	1
XA-3204-D		X			Gasket, Cylinder Head	1
PISTON RINGS	X				See Piston Ring Section	
XA-3427	X	X			Gasket	4
XA-3494-A			X	X	Radiator Support	1
XA-3550-C	X	X	X	X	Water Outlet Connection	1
XA-3790	X	X			Stud, Cylinder Head	8
XA-3809	X	X			Mixer Valve Manifold	1
XA-3886	X	X			Gasket	1
XA-3890-1	X	X			Throttle Valve Body	1
XA-3893-C	X	X			Throttle Valve Cover	1
XA-3894	X	X			Gasket, Throttle Valve Cover	1
XA-3898	X		X		Gasket, Manifold to Bed	1
XA-3899	X	X			Gasket, Air Cleaner Support	1
XBM-1333-K-1	X	X	X	X	Packing & Springs	1
SA-120	X		X	X	Vortex Air Cleaner	1
XBM-10009-C	X	X	X	X	Radiator Hose	4
HC-44	X	X			Hose Clamp	8
XBM-10011-C	X	X	X	X	Radiator & Fan Guard	1
XBM-10058-A			X	X	Air Duct Hose (not shown)	4
XBM-10059	X	X	X	X	Hose Clamp (not shown)	1
XBM-10111	X	X	X	X	Breather Cap	1
ASA-5050-BA	X	X			"O"-Ring	2
XBM-10473	X	X			Bearing	1
XBM-10474	X	X			Bearing	1
XBM-10502	X	X	X	X	Gasket, Stuffing Box to Bed	1
S-110-E	X	X			Air Cleaner	1
XBM-10885	X	X	X	X	Angle Check Valve	1
XBM-10886	X	X			Adaptor, Angle Check Valve	1
XBM-10930	X	X	X	X	Spark Plug Terminal	1
XBM-10931	X	X	X	X	Spark Plug Insulator	1
XK-3717-A	X	X			Radiator Support	1
XM-1550-F	X		X		Cylinder Head Gasket	1
XM-2660-2			X	X	Gasket	1
XM-1471-D	X	X	X	X	Mixer Valve	6
XM-1485	X	X	X	X	Valve Spring	12
XM-2548	X	X	X	X	Stud	10
XM-1019-A	X	X	X	X	Piston Rod Nut	1
XM-1436-C-1-R	X	X	X	X	Crosshead Pin Bushing	1

Continued

E-30, 7½X10 CMA

E-42, 8½X10 CMA

**Cross Section thru
Cylinder and Bed**

Figure 1

Continued from page 40

Arrow Part No.	EA-30	EA-42	7½X10 CMA	8½X10 CMA	Description	No. Req.
XA-3176			X	X	Gasket, Mixer Valve Manifold	1
XA-3177	X	X	X	X	Gasket, Beather Plate to Bed	1
XA-3180	X	X	X	X	Gasket, Inlet Port Cover Plate	1
XA-3181	X	X	X	X	Gasket, Exhaust Flange to Cylinder	1
XA-3182			X	X	Gasket, Cylinder Head Plate (not shown)	1
XA-3201-1			X	X	Cylinder	1
XA-3202-E		X		X	Cylinder Head	1
XA-3204-D		X			Gasket, Cylinder Head	1
PISTON RINGS	X				See Piston Ring Section	
XA-3427	X	X			Gasket	4
XA-3494-A			X	X	Radiator Support	1
XA-3550-C	X	X	X	X	Water Outlet Connection	1
XA-3790	X	X			Stud, Cylinder Head	8
XA-3809	X	X			Mixer Valve Manifold	1
XA-3886	X	X			Gasket	1
XA-3890-1	X	X			Throttle Valve Body	1
XA-3893-C	X	X			Throttle Valve Cover	1
XA-3894	X	X			Gasket, Throttle Valve Cover	1
XA-3898	X		X		Gasket, Manifold to Bed	1
XA-3899	X	X			Gasket, Air Cleaner Support	1
XBM-1333-K-1	X	X	X	X	Packing & Springs	1
XBM-10004	X		X	X	Vortex Air Cleaner	1
XBM-10009-C	X	X	X	X	Radiator Hose	4
XBM-10010-D	X	X			Hose Clamp	8
XBM-10011-C	X	X	X	X	Radiator & Fan Guard	1
XBM-10058-A			X	X	Air Duct Hose (not shown)	4
XBM-10059	X	X	X	X	Hose Clamp (not shown)	1
XBM-10111	X	X	X	X	Breather Cap	1
XBM-10364	X	X			"O"-Ring	2
XBM-10473	X	X			Bearing	1
XBM-10474	X	X			Bearing	1
XBM-10502	X	X	X	X	Gasket, Stuffing Box to Bed	1
XBM-10733	X	X			Air Cleaner	1
XBM-10885	X	X	X	X	Angle Check Valve	1
XBM-10886	X	X			Adaptor, Angle Check Valve	1
XBM-10930	X	X	X	X	Spark Plug Terminal	1
XBM-10931	X	X	X	X	Spark Plug Insulator	1
XK-3717-A	X	X			Radiator Support	1
XA-3782	X	X	X	X	Gasket	1
XA-3205	X	X	X	X	Gasket	1
XT-125			X	X	Check Valve Straight	1
XT-291	X	X	X	X	Dowell Pin	1
500-7-46	X	X	X	X	7 lb Radiator Cap	1
XYAE-6043-L-6	X	X	X	X	Throttle Valve	1
MUF-1-795	X	X	X	X	Muffler	1

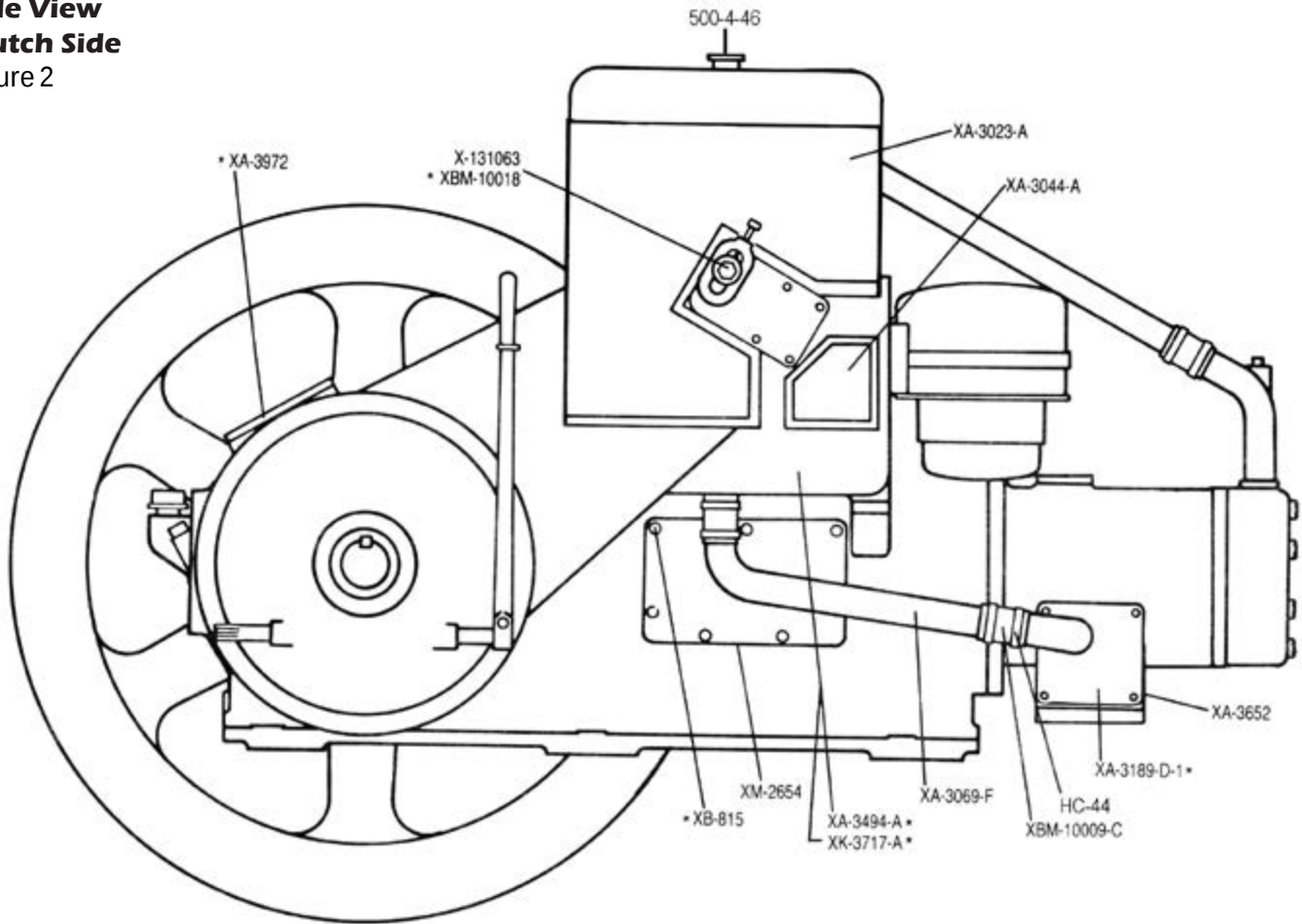
E-30, 7½X10 CMA

E-42, 8½X10 CMA

Side View

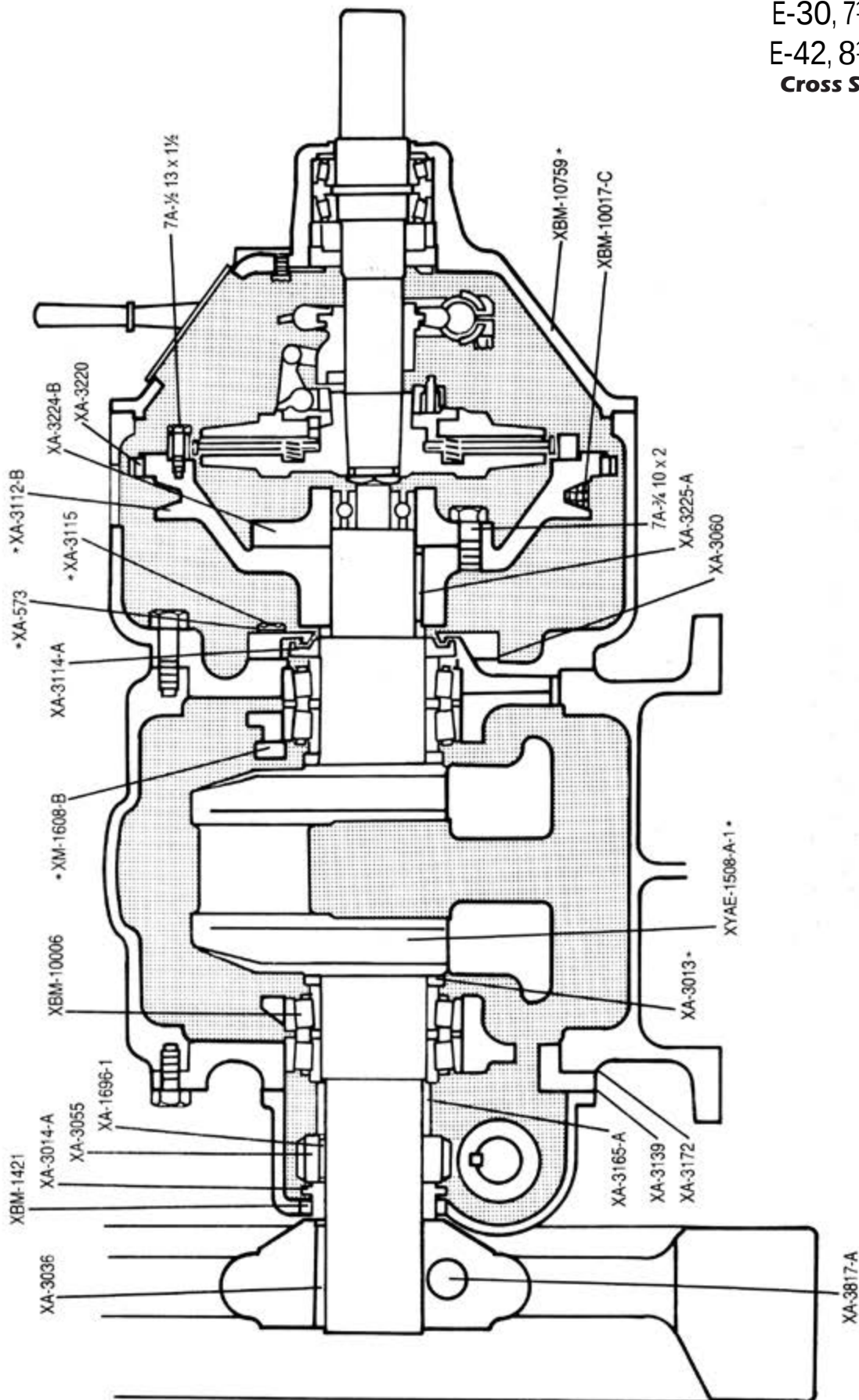
Clutch Side

Figure 2



Arrow Part No.	EA-30	EA-42	7½X10 CMA	8½X10 CMA	Description	No. Req.
X-131063	X	X	X	X	Fan Hub Assembly	1
XA-3023-A	X	X	X	X	Fan Guard Radiator	1
XA-3044-A	X	X	X	X	Fan Guard, Radiator Support	1
XA-3069-F	X	X	X	X	Water Line	1
XA-3189-D-1	X	X	X	X	Water Line Connection	1
XA-3494-A			X	X	Radiator Support	1
XA-3652	X	X	X	X	Gasket, Water Inlet Plate	1
XA-3972		X	X	X	Starter Cover Plate	1
XB-815	X	X	X	X	Stud	2
XBM-10009-C	X	X	X	X	Radiator Hose	4
HC-44	X	X	X	X	Hose Clamps	8
XBM-10018	X	X	X	X	Fan Assembly	1
XK-3717-A	X	X			Radiator Support	1
XM-2654	X	X	X	X	Gasket, Radiator Support	1
500-4-46	X	X	X	X	4lb Radiator Cap	1

E-30, 7½X10 CMA
E-42, 8½X10 CMA
**Cross Section thru
Crankcase**
Figure 3



E-30, 7½X10 CMA

E-42, 8½X10 CMA

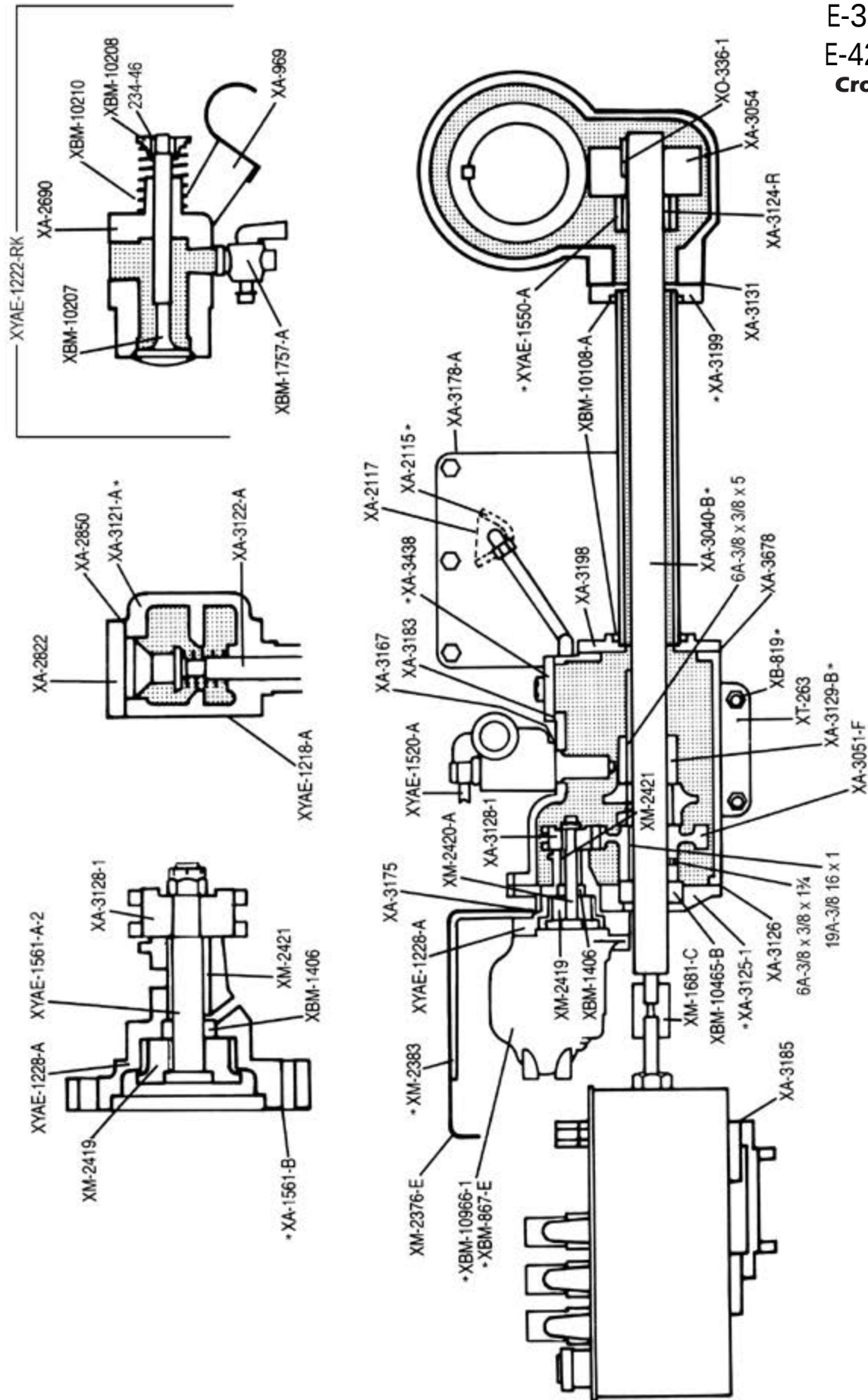
**Cross Section thru
Crankcase**

Figure 3

Continued from page 43

Arrow Part No.	EA-30	EA-42	7½X10 CMA	8½X10 CMA	Description	No. Req.
ASSEMBLIES:						
XYAE-1508-A-1	X	X	X	X	Crankshaft Assembly	1
INDIVIDUAL PARTS:						
XA-573	X	X	X	X	Washer	4
XA-1696-1	X	X	X	X	Key	1
XA-3013	X	X	X	X	Bearing Spacer	2
XA-3014-A	X	X	X	X	Oil Slinger, Flywheel Side	1
XA-3036	X	X	X	X	Key, Flywheel	1
XA-3055	X	X	X	X	Crankshaft Gear	1
XA-3060	X	X	X	X	Gasket, Bearing Support Cover	1
XA-3112-B	X	X	X	X	Clutch Adaptor	1
XA-3114-A	X	X	X	X	Oil Slinger	1
XA-3115	X	X	X	X	Screw, Bearing Clamp to Retainer	4
XA-3139	X	X	X	X	Gasket, Gear Shield	1
XA-3165-A	X	X	X	X	Spacer	1
7A-¾ 10 x 2	X	X	X	X	Cap Screw, Clutch Adapter Hub	6
XA-3172	X	X	X	X	Gasket, Bearing Retainer to Bed	2
XA-3220	X	X	X	X	Starter Ring Gear	1
XA-3224-B	X	X	X	X	Housing, Pilot Bearing	1
XA-3225-A	X	X	X	X	Key	1
XA-3817-A	X	X	X	X	Flywheel Stud	1
XBM-1421	X	X	X	X	Oil Seal	1
XBM-10006	X	X	X	X	Main Bearing	2
XBM-10017-C	X	X	X	X	Fan Drive Belt	1
XBM-10759	X	X	X	X	Power Take-Off (see clutch parts sheet)	1
7A-½ 13 - 1½	X	X	X	X	Cap Screw	8
XM-1608-B	X	X	X	X	Bearing Clamps	2

E-30, 7½X10 CMA
E-42, 8½X10 CMA
**Cross Section thru
Layshaft**
Figure 4



E-30, 7½X10 CMA

E-42, 8½X10 CMA

Cross Section thru

Layshaft

Figure 4

Continued from page 45

Arrow Part No.	EA-30	EA-42	7½X10 CMA	8½X10 CMA	Description	No. Req.
ASSEMBLY:						
XYAE-1218-A	X	X	X	X	Air Start Valve Assembly	1
XYAE-1222-RK	X	X	X	X	Repair Kit	1
XYAE-1228-A	X	X	X	X	Magneto Bracket Assembly	1
XYAE-1520-A	X	X	X	X	Air Starting Line Assembly	1
XYAE-1550-A	X	X	X	X	Layshaft Bearing Assembly	1
XA-1561-A-2	X	X	X	X	Magneto Drive	1
INDIVIDUAL PARTS:						
XA-969	X	X	X	X	Valve Opener	1
XA-2115	X	X			Oil Trough	1
XA-2117	X	X			Gasket, Oil Trough	1
XA-2690	X	X	X	X	Relief Valve Body	1
XA-2822	X	X	X	X	Cover Plate	1
XA-2850	X	X	X	X	Gasket, Cover Plate	1
XA-3040-B	X	X	X	X	Layshaft	1
XA-3051-F	X	X	X	X	Layshaft Drive Gear	1
XA-3054	X	X	X	X	Layshaft Gear	1
XA-3121-A	X	X	X	X	Valve Body	1
XA-3122-A	X	X	X	X	Valve, Air Start	1
XA-3124-R	X	X	X	X	Layshaft Bushing	1
XA-3125-1	X	X	X	X	Control Box Flange	1
XA-3126	X	X	X	X	Gasket	1
XA-3128-1	X	X	X	X	Pinion, Magneto Drive	1
XA-3129-B	X	X	X	X	Air Starting Cam	1
XA-3131	X	X	X	X	Gasket, Oil Seal Flange	1
XA-3167	X	X	X	X	Gasket, Cover Plate	1
XA-3175	X	X	X	X	Gasket, Magneto Bracket	1
XA-3178-A	X	X	X	X	Gasket, Side Cover	1

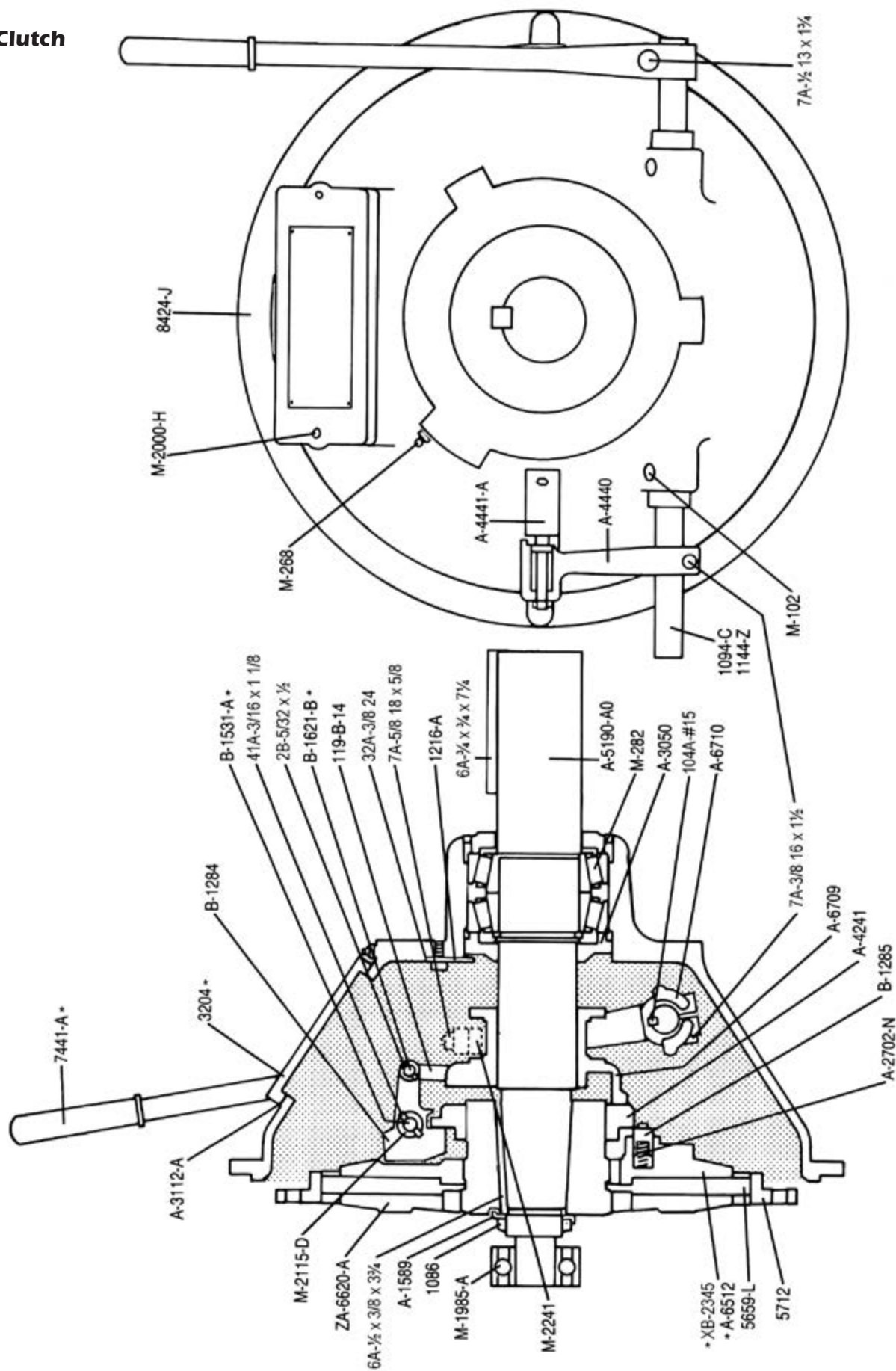
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E-30, 7½X10 CMA
E-42, 8½X10 CMA
**Cross Section thru
Layshaft**
Figure 4

Continued from page 46

Arrow Part No.	EA-30	EA-42	7½X10 CMA	8½X10 CMA	Description	No. Req.
XA-3183	X	X	X	X	Gasket, Control Box Cover	1
XA-3185	X	X	X	X	Gasket, Lub. Bracket	1
6A-3/8 x 3/8 x 5	X	X	X	X	Key	1
XA-3198	X	X	X	X	Flange, Control Box	1
XA-3199	X	X	X	X	Oil Seal Flange	1
XA-3438	X	X	X	X	Cover Plate	1
XA-3678	X	X	X	X	Gasket, Control Box	1
XB-819	X	X	X	X	Stud, 5/8 X 2¼	3
XBM-867-E	X	X	X	X	Bosch Magneto	1
XBM-1406	X	X	X	X	Perfect Oil Seal	1
XBM-1757-A	X	X	X	X	Air Cock	1
XBM-10108-A	X	X	X	X	Oil Seal	2
XBM-10207	X	X	X	X	Relief Valve Assembly	1
XBM-10208	X	X	X	X	Valve Spring Cap	1
234-46	X	X	X	X	Cap Lock	1
XBM-10210	X	X	X	X	Valve Spring	1
XBM-10465-B	X	X			Oil Seal Control Box Flange	1
6A-3/8 x 3/8 x 1¾	X	X			Set Screw	2
XBM-10966-1	X	X			Magneto, Low Tension (not shown)	1
19A-3/8 16 x 1	X	X	X	X	Key	1
XM-1681-C	X	X	X	X	Coupling, Lub to Layshaft	1
XM-2376-E	X	X	X	X	Magneto Cover	1
XM-2383	X	X	X	X	Bracket, Magneto Cover	1
XM-2419			X	X	Magneto Coupling	1
XM-2421	X	X	X	X	Bushing, Magneto Driveshaft	1
XO-336-1	X		X	X	Key	1
XT-263	X	X	X	X	Dowel Pin	2
1560-333						

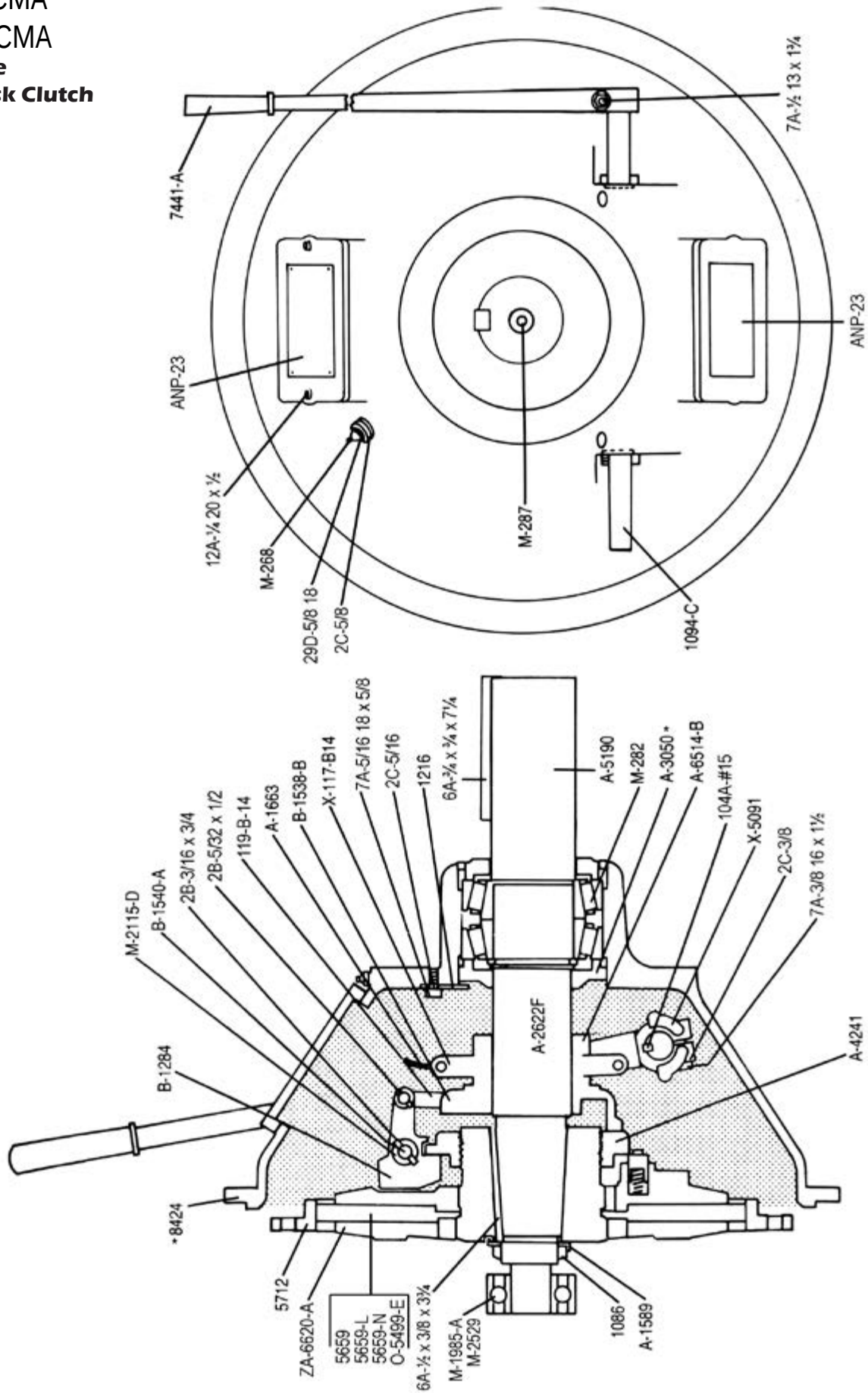
E-30, E-42
New Style
Twin Disk Clutch
 Figure 5



E-30, E-42
New Style
Twin Disc Clutch
 Figure 5

Arrow Part No.	E-30	E-42	Description	No. Req.
A-1589	X	X	Lockwasher, Hub Nut	1
A-2702-N	X	X	Adjusting Lock Pin Spring	1
A-3050	X	X	Bearing Retainer	1
A-3112-A	X	X	Gasket	1
A-4241	X	X	Adjusting Ring	1
A-4440	X	X	Neutral Lock Arm	1
A-4441	X	X	Detent Locator	1
A-5190-A0	X	X	Shaft	1
A-6512	X	X	Floating Plate	1
A-6709	X	X	Sliding Sleeve	1
A-6710	X	X	Throwout Yoke	1
B-1284	X	X	Lever	1
B-1285	X	X	Adjusting Lock Pin	1
B-1531-A	X	X	Lever Pins	4
B-1621-B	X	X	Lever Link Pins	8
F-2	X	X	Floating Plate Assy. (incl. parts A-6512, B-1284, B-1531-A, M-1927-A, B-1285, A-2702-N, M-2115-D)	1
M-102	X	X	Oil Caps	2
M-268	X	X	Hydraulic Fitting 1/8" Male	1
M-282	X	X	Timken Bearings	2
2B-5/32 x 1/2	X	X	Roll Pins	8
41A-3/16 x 1 1/8	X	X	Roll Pin (not used)	4
7A-5/8 18 x 5/8	X	X	Hex Nut	1
M-1985-A	X	X	Pilot Bearing	1
M-2000-H	X	X	Hex Head Cap Screw	2
32A-3/8 24	X	X	Hex Head Cap Screw	2
7A-3/8 16 x 1 1/2	X	X	Hex Head Cap Screw	1
7A-1/2 13 x 1 3/4	X	X	Hex Head Cap Screw, Hand Lever	1
104A-#15	X	X	Woodruff Key	2
6A-3/4 x 3/4 x 7 1/4	X	X	Key	1
6A-1/2 x 3/8 x 3 3/4	X	X	Key	1
M-2115-D	X	X	Spring Washer	1
M-2241	X	X	McGill Camrols	2
S-641	X	X	Sliding Sleeve Assy. (incl parts A-6709, 119-B-14, B-1621-B, M-1927-AD)	1
SPE-114	X	X	Clutch Assy. (incl. parts A-6620-A, M-2035-AB, F-2, S-641, 5659-L, A-4241)	1
ZA-6620-A	X	X	Hub and Back Plate	1
119-B-14	X	X	Lever Links	8
1086	X	X	Hub Nut	1
1094-C	X	X	Operating Shaft	1
1144-Z	X	X	Operating Shaft	1
1216-A	X	X	Bearing Retainer	1
3204	X	X	Hand Hole Plate	1
5659-L	X	X	Driving Plate	1
5712	X	X	Driving Ring	1
7441-A	X	X	Hand Lever	1
8424-J	X	X	Housing	1
XB-2345	X	X	Pressure Plate	1

7½X10 CMA
8½X10 CMA
Old Style
Twin Disk Clutch
Figure 6



7½X10 CMA
8½X10 CMA
Old Style
Twin Disk Clutch
Figure 6

Arrow Part No.	7½X10 CMA	8½X10 CMA	Description	No. Req.
119-B-14	X	X	Link, Lever	8
192-A-2702-BE	X	X	Spring, Pin, Lock, Adjusting	1
1086	X	X	Nut, Hex, Hub	1
1094-C	X	X	Shaft, Operating	1
1216	X	X	Lock, Retainer, Bearing	1
5712	X	X	Ring, Driving	1
7441-A	X	X	Hand Lever	1
8424	X	X	Housing, Clutch #1SAE	1
A-1589	X	X	Washer, Lock, Nut, Hub	1
A-1663	X	X	Hose Assembly	1
A-2622-F	X	X	Ring, Snap, External	1
A-3050	X	X	Retainer, Bearing	1
A-4241	X	X	Adjusting Ring	1
ANP-23	X	X	Plate, Cover, Instruction	2
A-5190	X	X	Shaft, Clutch	1
A-6512-C	X	X	Plate, Floating	1
A-6514-B	X	X	Plate, Cover, Instruction	1
B-1284	X	X	Lever	4
2B-5/32 x ½	X	X	Pin, Cotter	8
2B-3/16 x ¾	X	X	Pin, Cotter	4
B-1538-B	X	X	Pin, Link, Lever	8
B-1540-A	X	X	Pin, Headed, Lever	4
B-2341	X	X	Pin, Lock, Ring, Adjusting	1
M-268	X	X	Fitting, Hydraulic 1/8"	1
M-282	X	X	Tapered Roller Bearing	2
M-287	X	X	Fitting, Hydraulic ¼"	2
M-1283	X	X	Fitting, Hose	1
M-1284	X	X	Fitting, Hose	1
M-1292-A	X	X	Hose	1
M-1985-A	X	X	Ball Bearing, Pilot	1
7A-5/16 18 x 5/8	X	X	Screw, Cap, Hex Head 5/16 - 18 X 5/8	1
7A-3/8 16 x 1½	X	X	Screw, Cap, Hex Head 3/8 - 16 X 1½	2
7A-½ 13 x 1¾	X	X	Screw, Hand Lever ½ - 13 X 1¾	1
104A-#15	X	X	Key, Woodruff #15	2
29D-5/8 18	X	X	Nut, Jam 5/8"	1
12A-¼ 20 x ½	X	X	Screw, Round Head ¼ - 20 X ½	2
6A-¾ x ¾ x 7¼	X	X	Key, ¾ X ¾ X 7¼	1
6A-½ x 3/8 x 3¾	X	X	Key, ½ X 3/8 X 3¾	1
2C-5/8	X	X	Washer, Lock 5/8"	1
2C-5/16	X	X	Washer, Lock 5/16"	1
2C-3/8	X	X	Washer, Lock 3/8"	2
M-2115-D	X	X	Washer, Spring	8
O-5499-E	X	X	Plate, Driving (solid w/SS Teeth)	1
S-620-A	X	X	Sleeve Assembly	1
X-117-B-14	X	X	Collar Assembly	1
X-5091	X	X	Yoke, Throwout	1
XA-9644	X	X	Clutch Assembly	1

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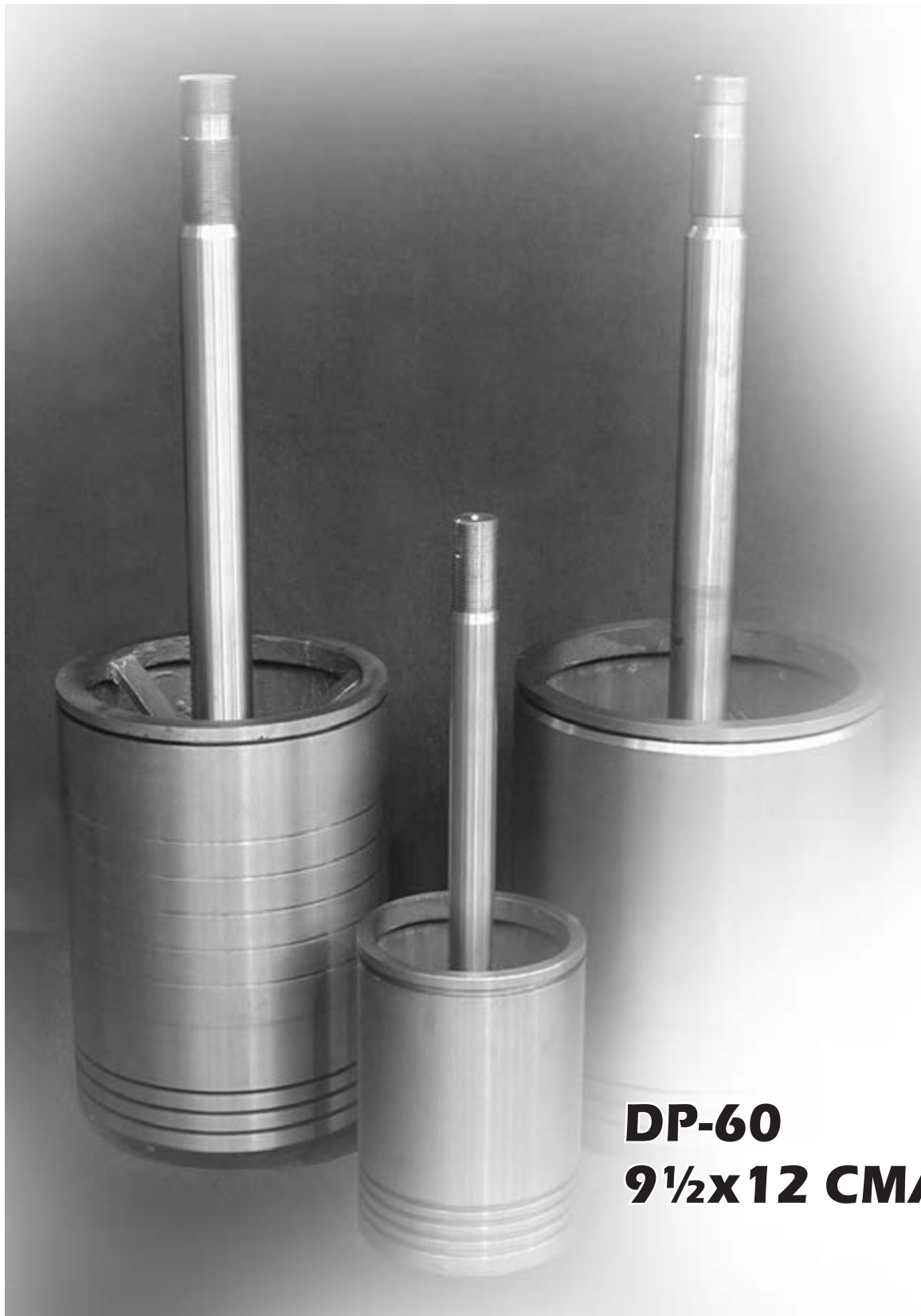
7½X10 CMA
8½X10 CMA
Old Style
Twin Disk Clutch
Figure 6

Continued from page 51

Arrow Part No.	7½X10 CMA	8½X10 CMA	Description	No. Req.
ZA-6620-A	X	X	Plate, Hub and Back	1
3/8-24 X 2¼	X	X	Cap, Hex Head	2
	X	X	1/8" Hydraulic Fitting	1
	X	X	1/8" Pipe Plug	1
	X	X	Gasket, Flat, Plate, Cover, Instruction	1
5659	X	X	Plate, Driving (solid)	1
5659-L	X	X	Plate, Driving (3 pc)	1
5659-N	X	X	Plate, Driving (3 pc)	1
M-2529	X	X	Bearing Pilot - Easy Slip	1

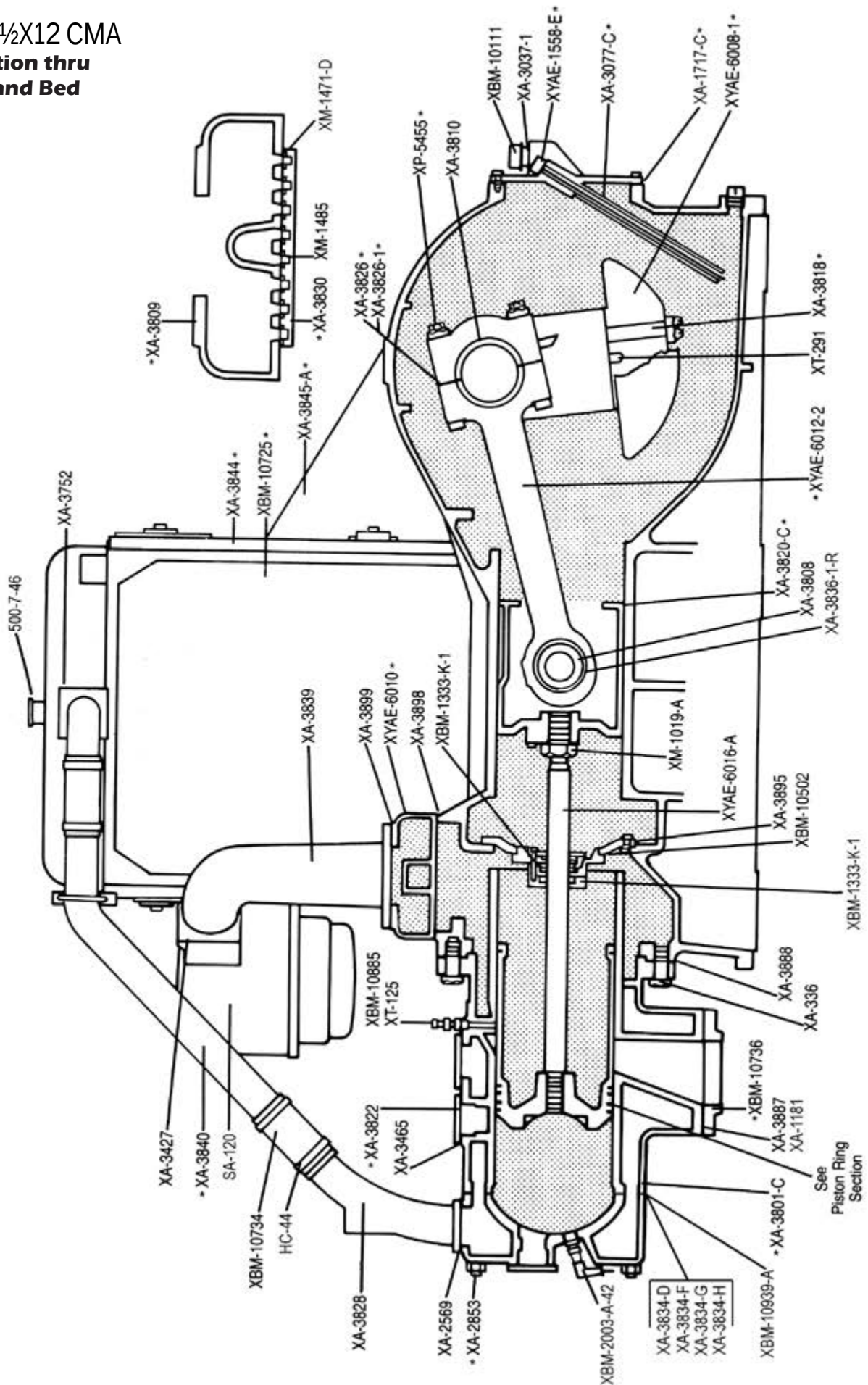
E-30, 7½X10 CMA
E-42, 8½X10 CMA
Not Shown on
Figures

Arrow Part No.	EA-30	EA-42	7½X10 CMA	8½X10 CMA	Description	No. Req.
ASSEMBLY:						
XYAE-1254			X	X	Fitting Assy., Gov. Lub	1
XYAE-1536			X	X	Gas Inlet Line	1
XYAE-5097-E-1					Barrell and Plunger Assy.	
INDIVIDUAL PARTS:						
#2 X 1¼	X	X			Taper Pin, Mixer Valve Manifold	12
XA-2346-A	X	X			Stud, Throttle Linkage	6
XA-3075					Cover Plate	1
XA-3184-A	X	X	X	X	Gasket, Cover Plate	1
XA-3190			X	X	Gasket Combustion Chamber	1
XA-3196	X		X		Gas Inlet Connection	1
XA-3205			X	X	Gasket, Cylinder Head Plate	1
XBM-1414-D			X	X	Oil Seal, Control Box Flange	1
XBM-1703			X	X	Terminal Rajah	1
XBM-1728-A			X	X	Stop Cock	1
XBM-2594			X	X	Male Connector	2
XBM-10012			X	X	Radiator Hose	1
XBM-10051	X	X	X	X	Cable Terminal	1
XBM-10191	X	X			¼ Huglock Nut, Rod End	12
XBM-10473	X	X			Needle Bearing, Throttle Valve	2
XBM-10474	X	X			Needle Bearing, Throttle Valve	1
XBM-10576-A					Roll Pin, Coupling to Magneto Shaft	
XBM-10879	X	X			Rod End	6
XBM-10967	X	X			Coil	1
XBM-10993-10-8	X	X			Male Connector, Air Start Line	1
XBM-10994-10-8	X	X			Elbow, Air Start Line	1
XT-181	X	X	X	X	Flywheel Wedge	1
ARO-6790		X			Complete Gasket Set	1
ARO-6790-A			X		Complete Gasket Set	1
ARO-6790-B				X	Complete Gasket Set	1
ARO-6790-C	X				Complete Gasket Set	1



DP-60
9½x12 CMA

DP-60, 9½X12 CMA
**Cross Section thru
 Cylinder and Bed**
 Figure 1



DP-60, 9½X12 CMA
Cross Section thru
Cylinder and Bed
Figure 1

<i>Arrow Part No.</i>	<i>Ajax Engine Size 9½X12</i>	<i>Description</i>	<i>No. Req.</i>
ASSEMBLY:			
XYAE-1558-E	X	Oil Gauge, Bayonet Assembly	1
XYAE-6008-1	X	Crankshaft Assembly	1
XYAE-6010	X	Mixer Manifold Assembly	1
XYAE-6012-2	X	Connecting Rod Assembly, Complete	1
XYAE-6016-A	X	Piston & Rod Assembly	1
INDIVIDUAL PARTS:			
XBM-2003-A-42	X	Spark Plug Cable Assembly	1
500-7-46	X	Radiator Cap	1
XA-336	X	Studs, Cylinder to Bed	10
XA-1181	X	Gasket, Exhaust Flange to Cylinder	1
XA-1717-C	X	Gasket, Breather Plate to Bed	1
XA-2569	X	Gasket, Water Outlet Connection	1
XA-2853	X	Stud, Cylinder Head to Cylinder	10
XA-3037-1	X	Breather Connection, End of Bed	1
XA-3077-C	X	Oil Gauge Pipe	1
XA-3427	X	Gasket, Air Cleaner Elbow to Air Cleaner	1
XA-3465	X	Gasket, Cylinder Cover Plate	1
XA-3752	X	Gasket, Radiator Inlet/Outlet	1
XA-3801-C	X	Cylinder	1
XA-3808	X	Crosshead Pin	1
XA-3809	X	Mixer Valve Manifold	1
XA-3810	X	Crankpin Bearing	1
XA-3818	X	Stud Counterweight to Crankshaft	4
XA-3820-C	X	Crosshead	1
XA-3822	X	Cover Plate Cylinder Top	1
XA-3826	X	Shims, Crank Pin Bearing (Laminated)	2
XA-3826-1	X	Shims, Crank Pin Bearing (Solid)	2
XA-3828	X	Water Outlet Connection	1
XA-3830	X	Mixer Valve Stop	2
PISTON RINGS:	X	See Piston Ring Section	
XA-3834-D	X	Gasket, Cylinder Head to Cylinder	1
XA-3834-F	X	Gasket, Cylinder Head to Cylinder	1
XA-3834-G	X	Gasket, Cylinder Head to Cylinder	1
XA-3834-H	X	Gasket, Cylinder Head to Cylinder	1
XA-3836-R-1-R	X	Crosshead Pin Bearing	1
XA-3839	X	Air Horn	1
XA-3840	X	Waterline, Top	1
XA-3844	X	Radiator Support	1
XA-3845-A	X	Fan Belt Guard	1
XA-3887	X	Gasket, Exhaust Flange to Cylinder	1
XA-3888	X	Gasket, Cylinder to Bed	1
XA-3895	X	Gasket, Stuffing Box Adapter to Bed	1
XA-3898	X	Gasket, Mixer Valve Manifold to Bed	1
XA-3899	X	Gasket, Air Cleaner Flange to Mixer Valve	1

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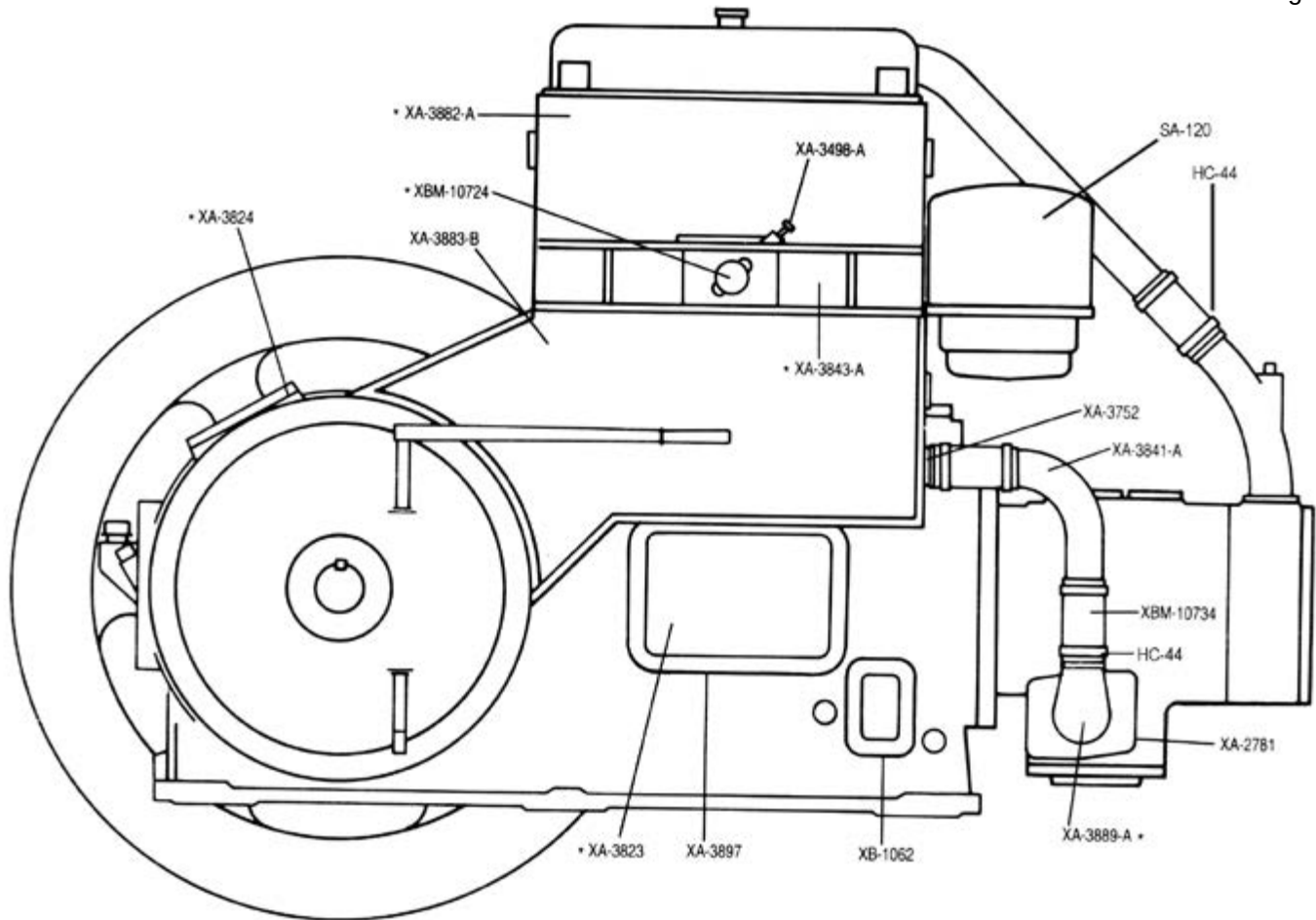
DP-60, 9½X12 CMA

Cross Section thru Cylinder and Bed

Figure 1

Continued from page 55

Arrow Part No.	Ajax Engine Size 9½X12	Description	No. Req.
XBM-1333-K	X	Piston Rod Stuffing Box	1
XBM-1333-K-1	X	Packing Ring & Spring	1
XBM-2003-A	X	Magneto Cable (see AR0-137)	1
XBM-10111	X	Breather Cap	1
XBM-10502	X	Gasket, Stuffing Box to Adaptor	1
XBM-10725	X	Radiator	1
SA-120	X	Air Cleaner	1
XBM-10734	X	Hose, Waterline to Radiator	4
HC-44	X	Hose Clamp	8
XBM-10736	X	Exhaust Pipe Flange	1
XBM-10885	X	Angle Check Valve	3
XBM-10930	X	Spark Plug Terminal	1
XBM-10931	X	Spark Plug Insulator	1
XBM-10939-A	X	Ring Gasket, Cylinder Head	1
XM-1019-A	X	Piston Rod Nut	1
XM-1471-D	X	Mixer Valve	6
XM-1485	X	Mixer Valve Springs	12
XP-5455	X	Crank Bearing Bolt	2
XT-125	X	Check Valve	3
XT-291	X	Dowel Pins	2

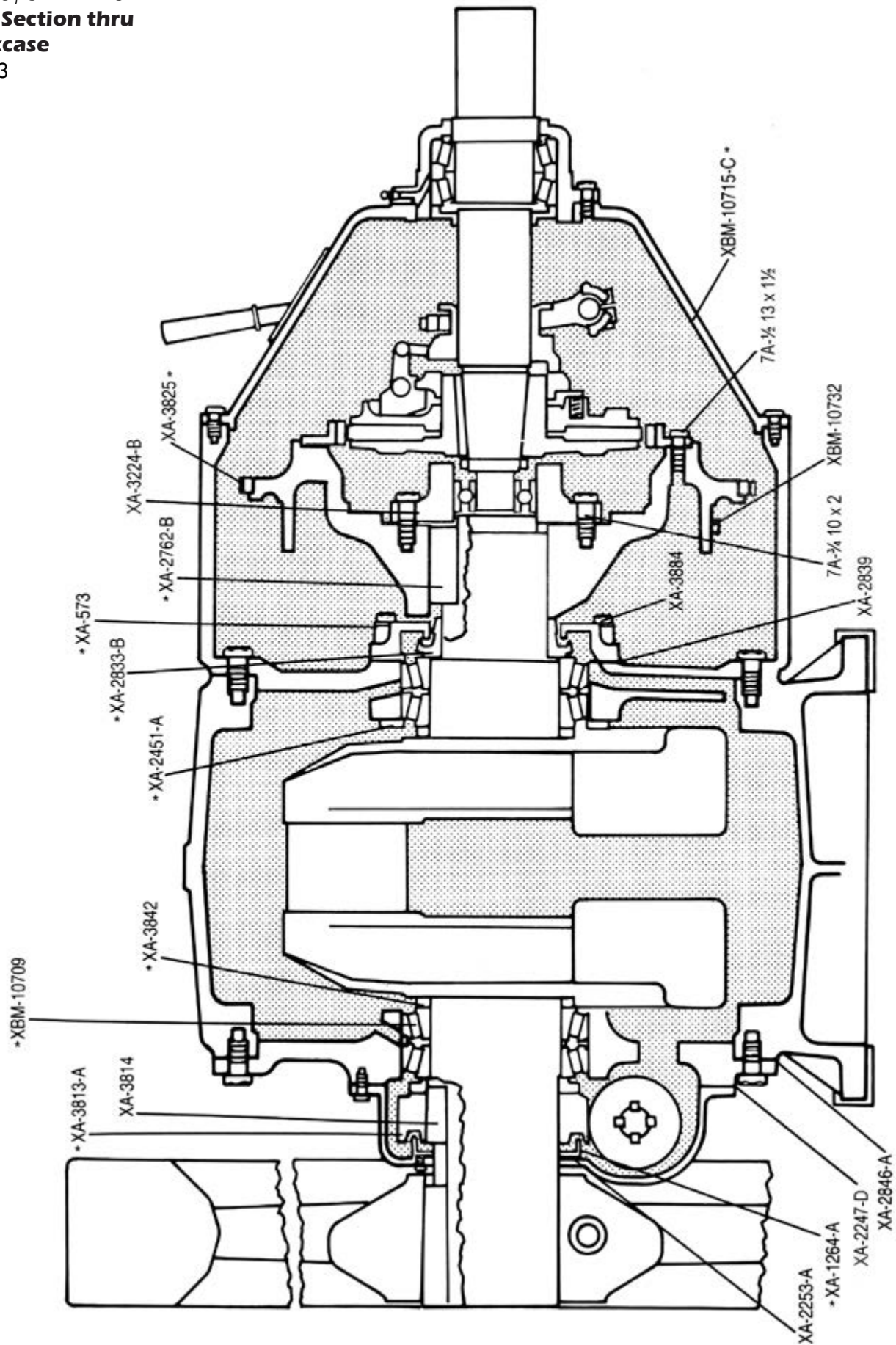


Arrow Part No.	Ajax Engine Size 9½X12	Description	No. Req.
XA-2781	X	Gasket, Water Inlet to Cylinder	1
XA-3498-A	X	Fan Adjustment Screw	1
XA-3752	X	Gasket, Radiator Inlet and Outlet	1
XA-3823	X	Side of Bed Cover Plate	1
XA-3824	X	Starting Cover Plate	1
XA-3841-A	X	Water Line, Bottom	1
XA-3843-A	X	Fan Bracket	1
XA-3882-A	X	Fan Guard, Upper	1
XA-3883-B	X	Fan Guard, Lower	1
XA-3889-A	X	Water Inlet Connection	1
XA-3897	X	Gasket, Cover Plate	1
XB-1062	X	Gasket, Cleanout Hole	1
XBM-10724	X	Fan Assembly	1
XBM-10734	X	Hose	4
HC-44	X	Hose Clamp	8
SA-120	X	Air Cleaner	1

DP-60, 9½X12 CMA

**Cross Section thru
Crankcase**

Figure 3



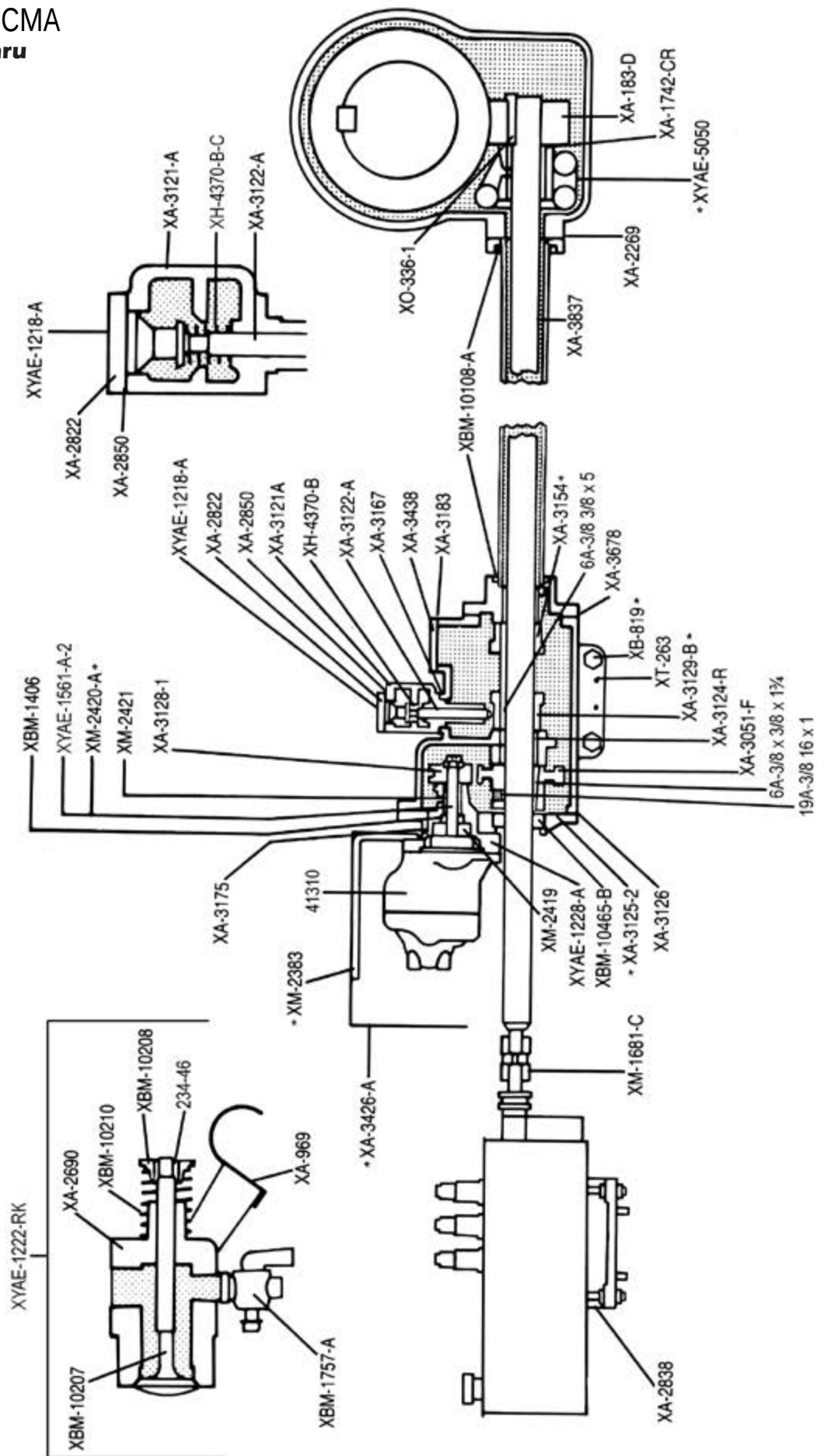
DP-60, 9½X12 CMA
Cross Section thru
Crankcase
Figure 3

<i>Arrow Part No.</i>	<i>Ajax Engine Size 9½X12</i>	<i>Description</i>	<i>No. Req.</i>
XA-573	X	Washer, Clamp Bolt to Bearing Support Cover	4
XA-1264-A	X	Oil Slinger, Governor Side	1
XA-2247-D	X	Gasket, Gear Shield	1
XA-2253-A	X	Gasket, Oil Slinger to Gear Shield	1
XA-2451-A	X	Bearing Clamp	2
XA-2762-B	X	Key, Clutch Adaptor Hub to Crankshaft	1
XA-2833-B	X	Oil Slinger, Clutch Side	1
XA-2839	X	Gasket, Bearing Support Cover	1
XA-2846-A	X	Gasket, Bearing Retainer to Bed	1
7A-¾ 10 x 2	X	Cap Screw	6
XA-3224-B	X	Housing, Pilot Bearing	1
XA-3813-A	X	Crankshaft Gear	1
XA-3814	X	Key, Crankshaft Gear	1
XA-3825	X	Ring Gear	1
XA-3842	X	Bearing Spacer, Crankshaft Cheek	2
XA-3884	X	Bearing Clamp Bolt	4
XBM-10709	X	Main Bearings	2
XBM-10732	X	"V" Belt, Matched Pair	1
7A-½ 13 x 1½	X	Cap Screw	8

DP-60, 9½X12 CMA

**Cross Section thru
Layshaft**

Figure 4



DP-60, 9½X12 CMA
Cross Section thru
Layshaft
Figure 4

<i>Arrow Part No.</i>	<i>Ajax Engine Size 9½X12</i>	<i>Description</i>	<i>No. Req.</i>
ASSEMBLIES:			
XYAE-1218-A	X	Air Starting Valve Assembly	1
XYAE-1222-RK	X	Repair Kit	1
XYAE-1228-A	X	Magneto Bracket Assembly	1
XYAE-1561-A-2	X	Magneto Drive Assembly	1
XYAE-5050	X	Layshaft Bearing Assembly	1
INDIVIDUAL PARTS:			
XA-183-D	X	Layshaft Gear	1
XA-969	X	Opener, Relief Valve	1
XA-1742-CR	X	Front Layshaft Bushing	1
XA-2269	X	Gasket, Oil Seal Plate to Gear Shield	1
XA-2690	X	Relief Valve Body	1
XA-2822	X	Cap	1
XA-2838	X	Gasket, Lub, Bracket	1
XA-2850	X	Gasket	1
XA-3051-F	X	Layshaft Drive Gear	1
XA-3121-A	X	Valve Body	1
XA-3122-A	X	Valve, Air Starting	1
XA-3124-R	X	Bushing, Control Box	1
XA-3125-2	X	Flange, Control Box	1
XA-3126	X	Gasket, Control Box Flange	1
XA-3128-1	X	Pinion, Magneto Drive	1
XA-3129-B	X	Cam, Air Start	1
XA-3154	X	Gas Injected Cam	1
XA-3167	X	Gasket, Air Start Valve	1
XA-3175	X	Gasket, Magneto Brackets to Control Box	1
XA-3183	X	Gasket, Control Box Cover Plate	1
6A-3/8 x 3/8 x 5	X	Key, Air Starting & Fuel Pump Cam	1
XA-3426-A	X	Magneto Cover	1
XA-3438	X	Cover Plate, Air Starting	1
XA-3678	X	Gasket, Control Box Flange	1
XA-3837	X	Layshaft	1
XB-819	X	Stud, Control Box to Bed	3
41310	X	Magneto	1
XBM-1406	X	Oil Seal, Magneto Drive	1
XBM-1757-A	X	Stop Cock	1
XBM-10108-A	X	Oil Seal, Layshaft Guard	2
XBM-10207	X	Valve	1
XBM-10208	X	Valve Spring Cup	1

Continued

DP-60, 9½X12 CMA

Cross Section thru

Layshaft

Figure 4

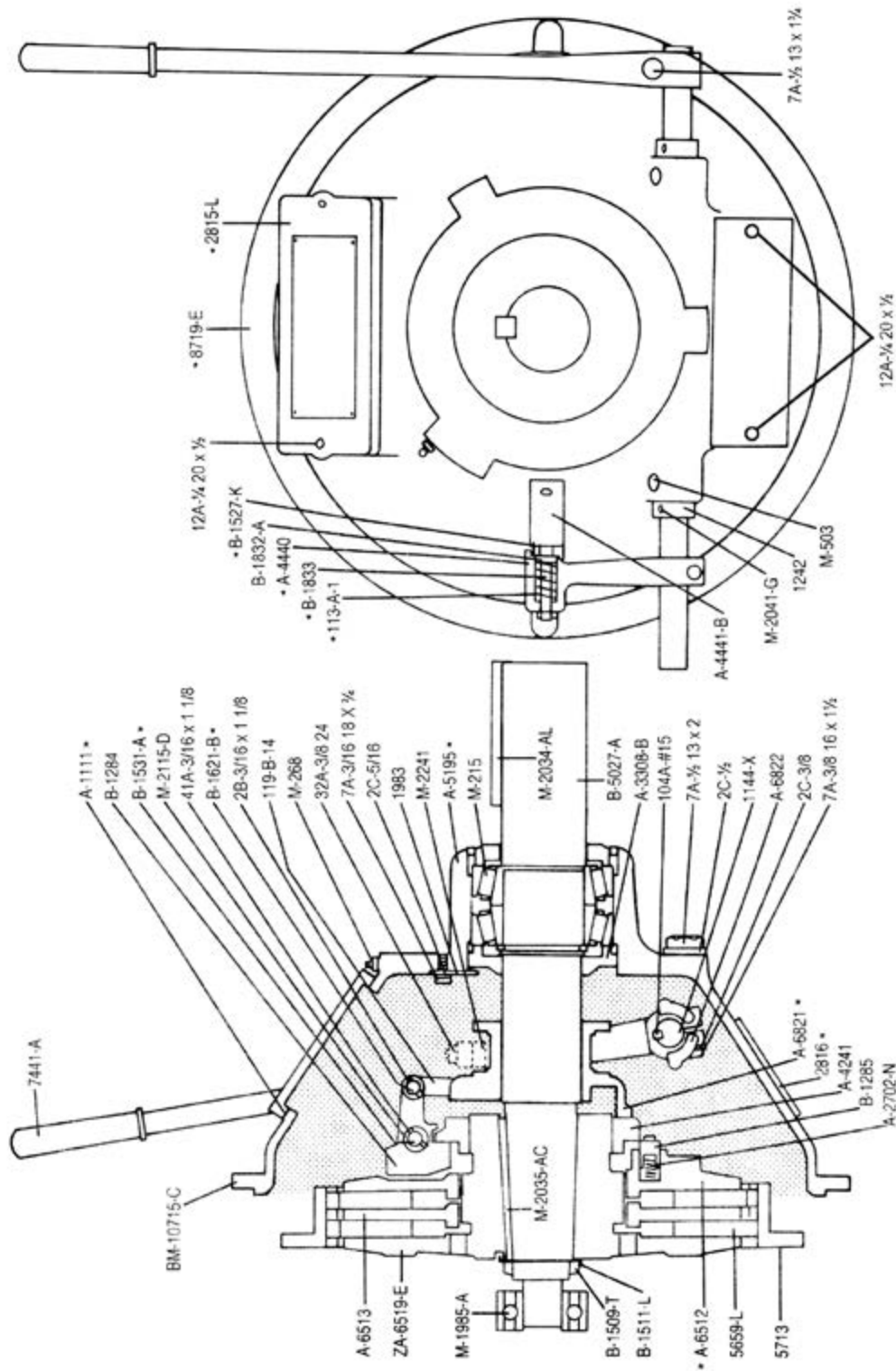
Continued from page 61

Arrow Part No.	Ajax Engine Size 9½X12	Description	No. Req.
234-46	X	Cap Lock	1
XBM-10210	X	Spring	1
XBM-10465-B	X	Oil Seal, Control Box Flange	1
19A-3/8 16 x 1	X	Set Screw, Layshaft Drive Gear to Layshaft	2
6A-3/8 x 3/8 x 1¾	X	Key, Layshaft Drive Gear	1
XH-4370-B-C	X	Spring	1
XM-1681-C	X	Coupling Lubricator to Layshaft	1
XM-2383	X	Bracket, Magneto Cover	1
XM-2419	X	Magneto Coupling	1
XM-2420-A	X	Magneto Drive Shaft	1
XM-2421	X	Bushing Magnet Brackets	3
XO-336-1	X	Key, Layshaft Gear to Layshaft	1
XT-263	X	Dowel Pin	1
ARO-157	X	Gasket Set, Complete	1

DP-60, 9½X12 CMA

**New Style
Twin Disc Clutch**

Figure 5



DP-60, 9½X12 CMA

New Style

Twin Disc Clutch

Figure 5

Continued from page 63

Arrow Part No.	Ajax Engine Size 9½X12	Description	No. Req.
A-1111	X	Gaskets	2
A-2702-N	X	Adjusting Lock Pin Spring	1
A-3308-B	X	Bearing Retainer	1
A-4241	X	Adjusting Ring	1
A-4440	X	Neutral Lock Arm	1
A-4441-B	X	Detent Locator	1
A-5195	X	Bearing Carrier	1
A-6512	X	Floating Plate	1
A-6513	X	Center Plate	1
A-6821	X	Sliding Sleeve	1
A-6822	X	Throw Out Yoke	1
B-1284	X	Levers	4
B-1285	X	Adjusting Lock Pin	1
B-1509-T	X	Hub Nut	1
B-1511-L	X	Hub Nut Lock Washer	1
B-1527-K	X	Roller Pin	1
B-1531-A	X	Lever Pins	4
B-1621-B	X	Lever Link Pins	8
B-1832-A	X	Roller Pin	1
B-1833	X	Roller	1
B-5027-A	X	Shaft	1
BM-10715-C	X	Twin Disc Power Take Off	1
M-215	X	Timken Bearings	2
M-268	X	Hydraulic Fitting	1
M-503	X	Fittings	2
2B-3/16 x 1 1/8	X	Roll Pins	3
41A-3/16 x 1 1/8	X	Roll Pins	4
32A-3/8 24	X	Hex Nuts	2
M-1985-A	X	Pilot Bearing	1
7A-3/16 18 x ¾	X	Hex Head Cap Screw	1
7A-3/8 16 x 1½	X	Hex Head Cap Screw	2
7A-½ 13 x 1¾	X	Hex Head Cap Screw	1
7A-½ 13 x 2	X	Hex Head Cap Screw	6
104A-#15	X	Woodruff Key	2
32A-3/8 24	X	Button Head Cap Screw	4
M-2034-AL	X	Shaft Key	1
M-2035-AC	X	Key	1
M-2041-G	X	Set Screw	2
2C-5/16	X	Lock Washer	1
2C-3/8	X	Lock Washer	2

Continued

DP-60, 9½X12 CMA
New Style
Twin Disc Clutch
Figure 5

Continued from page 64

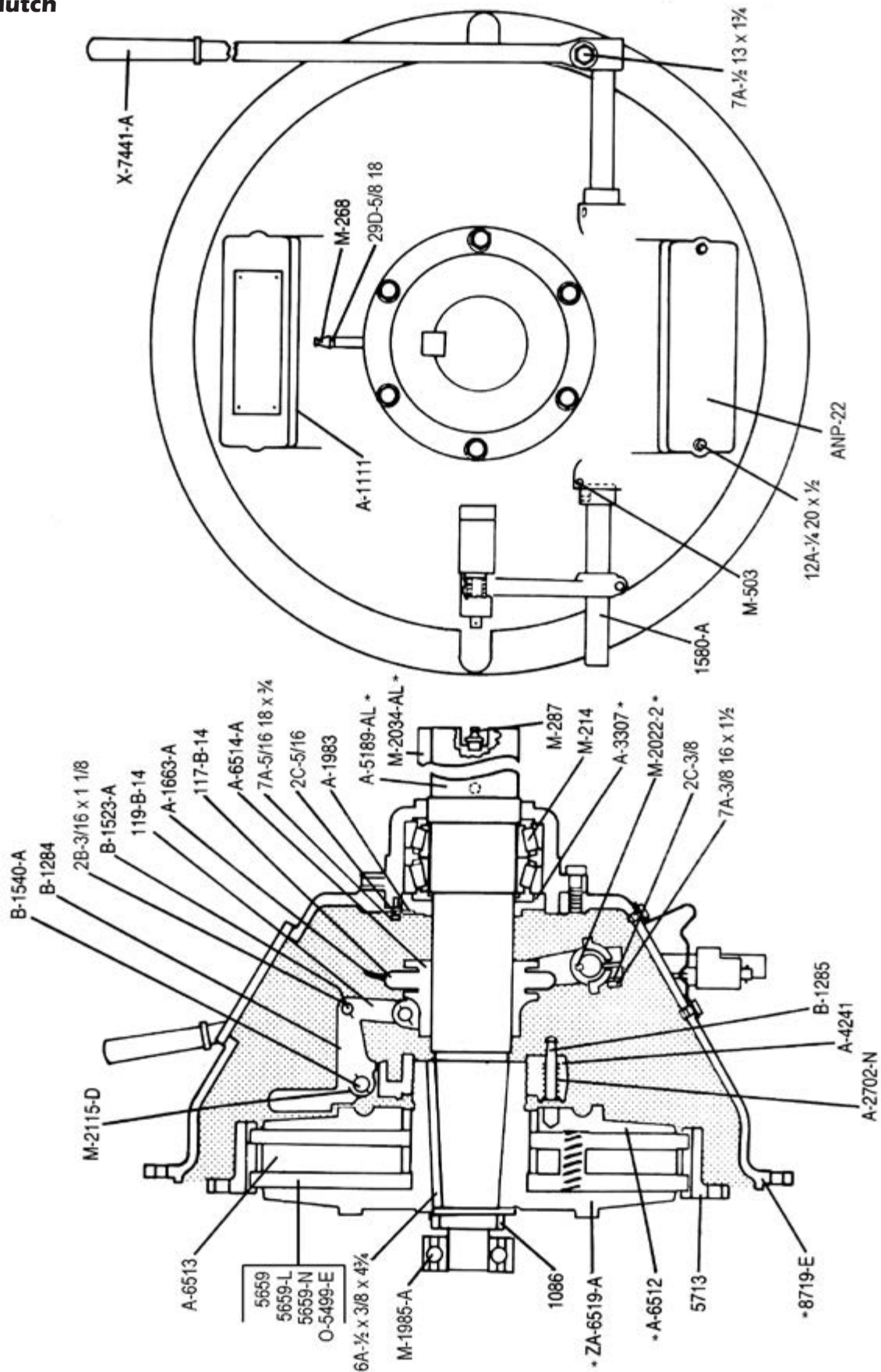
Arrow Part No.	Ajax Engine Size 9½X12	Description	No. Req.
2C-½	X	Lock Washer	
M-2115-D	X	Spring Washer	6
M-2241	X	McGill Camrols	8
S-672	X	Sliding Sleeve Assembly	2
SPE-214	X	Clutch Assembly	1
ZA-6519-E	X	Hub & Back Plate	1
113-A-1	X	Spring	1
119-B-14	X	Lever Links	8
1144-X	X	Operating Shaft	1
1242	X	Stop Collars	2
1983	X	Bearing Retainer Lock	1
2815-L	X	Instruction Cover Plate	1
2816	X	Hand Hole Plate	1
5659-L	X	Driving Plates	2
5713	X	Driving Ring	1
7441-A	X	Hand Lever	1
8719-E	X	Housing #0 SAE	1

DP-60, 9½X12 CMA

Old Style

Twin Disc Clutch

Figure 6



DP-60, 9½X12 CMA
Old Style
Twin Disc Clutch
Figure 6

<i>Arrow Part No.</i>	<i>Ajax Engine Size 9½X12</i>	<i>Description</i>	<i>No. Req.</i>
A-1111	X	Gasket	2
A-1589	X	Lockwasher	1
A-1663-A	X	Flexible Hose (not shown)	1
A-1983	X	Bearing Retainer Lock	1
A-2679-G	X	Roll Pin	4
A-2702-N	X	Lock Pin Spring	1
A-3307	X	Bearing Retainer	1
A-4241	X	Adjusting Ring	1
A-5189-AL	X	Shaft	1
A-6512	X	Floating Plate	1
A-6513	X	Center Plate	1
A-6514-A	X	Sliding Sleeves	1
B-1284	X	Lever	4
B-1285	X	Lock Pin	1
B-1523-A	X	Lever Link Pin	8
B-1540-A	X	Lever Pin	4
F-2	X	Floating Plate Assembly	1
M-214	X	Bearing	1
M-268	X	Hydraulic Fitting	1
M-287	X	Hydraulic Fitting	1
M-503	X	Oil Cup	2
2B-3/16 x 1 1/8	X	Roll Pin	8
M-1930-F	X	Nuts (not shown)	2
M-1985-A	X	Pilot Bearing	1
7A-5/16 18 x ¾	X	Hex Head Cap Screw	1
7A-3/8 16 x 1½	X	Hex Head Cap Screw	2
M-2022-BB	X	Hex Head Cap Screw (not shown)	2
M-2022-2	X	Woodruff Key	4
12A-¼ 20 x ½	X	Screw	4
29D-5/8 18	X	Jam Nut	1
M-2034-AL	X	Key	1
6A-½ x 3/8 x 4¾	X	Hub Key	1
M-2046-AK	X	Lockwasher	1
2C-5/16	X	Lockwasher	1
2C-3/8	X	Lockwasher	2
M-2115-D	X	Spring Washer	8
7A-½ 13 x 1¾	X	Hex Head Cap Screw	1
S-600	X	Sliding Sleeve Assembly	
SP-214	X	Clutch Assembly	1
X-117-B-14	X	Clutch Assembly	1

Continued

DP-60, 9½X12 CMA

Old Style

Twin Disc Clutch

Figure 6

Continued from page 67

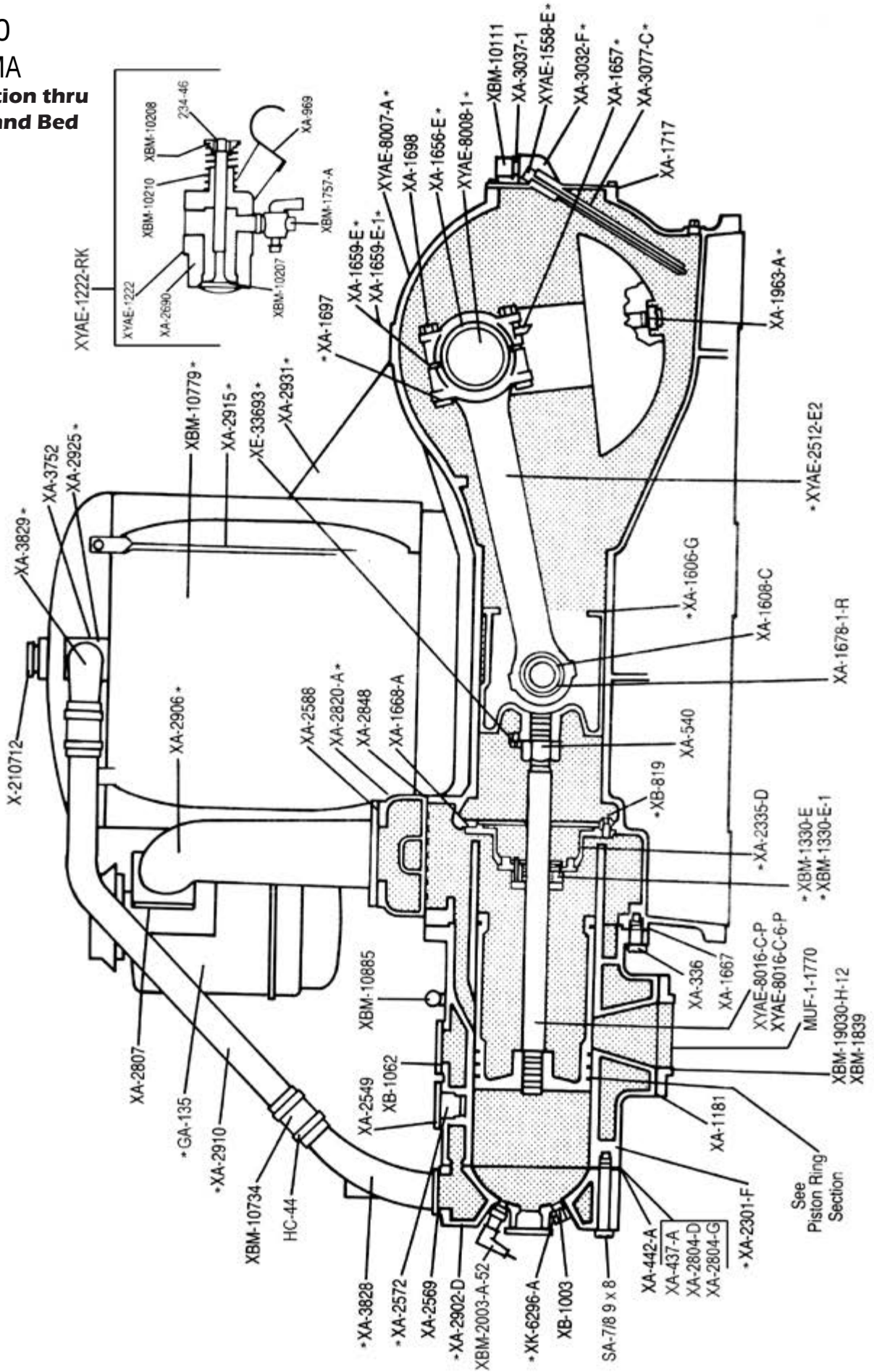
Arrow Part No.	Ajax Engine Size 9½X12	Description	No. Req.
X-5091	X	Throw out Collar	1
X-7441-A	X	Hand Lever	1
ZA-6519-A	X	Hub & Back Plate	1
117-B-14	X	Collar	1
119-B-14	X	Lever Link	8
1086	X	Hub Nut	1
1293	X	Shims (not shown)	2
1580-A	X	Operating Shaft	1
ANP-22	X	Hand Hole Cover	1
5659-L	X	Driving Plate	2
5713	X	Driving Ring	1
8719-E	X	Housing	1

<i>Arrow Part No.</i>	<i>Ajax Engine Size 9½X12</i>	<i>Description</i>	<i>No. Req.</i>
ASSEMBLY:			
XYAE-1254-A	X	Fitting Assembly	1
XYAE-3094-D-1	X	Brass Fitting	1
XYAE-5097-C	X	Plunger, Bushing & Mushroom Assembly	1
XYAE-5097-F-1		Barrell and Plunger Assembly (gas injection)	
XYAE-6020-B	X	Air Starting Line	1
XYAE-6043-E	X	Throttle Valve Assembly	1
INDIVIDUAL PARTS:			
XA-2115	X	Oil Trough	1
XA-2117	X	Gasket, Oil Trough	1
XA-2247-C	X	Gasket	1
XA-2346-A	X	Adjusting Rod, Linkage	2
XA-2573-A		Gasket, Cover to Tank	
XA-2853-D	X	Stud, Cylinder Head to Cylinder	10
XA-3051-F	X	Drive Gear	1
XA-3122-A	X	Air Starting Valve	4
XA-3224-B	X	Pilot Housing	1
XA-3833	X	Gasket	1
XA-3838-B	X	Cover Plate, Governor Side of Bed	1
XA-3886	X	Gasket, Governor Throttle Valve Body	1
XA-3894	X	Gasket, Throttle Valve Cover to Body	1
XA-3896	X	Gasket, Cover Plate, Governor Side of Bed	1
XA-1003	X	Gasket, Spark Plug Hole	1
XA-1050	X	Gasket, Compressor Stuffing Box	1
XBM-1045-A	X	Ball and Socket Joint	2
XBM-1757-A	X	Air Cock, Relief Valve	1
XBM-10191	X	Huglock Nut	2
XBM-10207	X	Relief Valve	1
XBM-10208	X	Valve Spring Cap	1
XBM-10209-A		Cap Lock	
XBM-10210	X	Valve Spring	1
XBM-10223-A	X	Insulation Nipple, Magneto End	1
XBM-10473	X	Bearing, Throttle Valve Assembly	1
XBM-10474	X	Bearing, Throttle Valve Assembly	1
XBM-10560	X	Switch, Ajax Starter	1
XBM-10561	X	Plunger Solenoid Switch	1
XBM-10565-A	X	Button Starter	1
XBM-10583	X	Spring, Plunged Return	1
XBM-10789		Rod End	
XBM-10885-1	X	Check Valve	3
XBM-10936		Angle Valve	
XBM-10994-10-8	X	Elbow, Air Starting Line	2
XM-2631-A	X	Adjusting Screw	1
XT-125	X	Check Valve	3



DP-70/80
DP-160
11x14 CMA

Figure 1

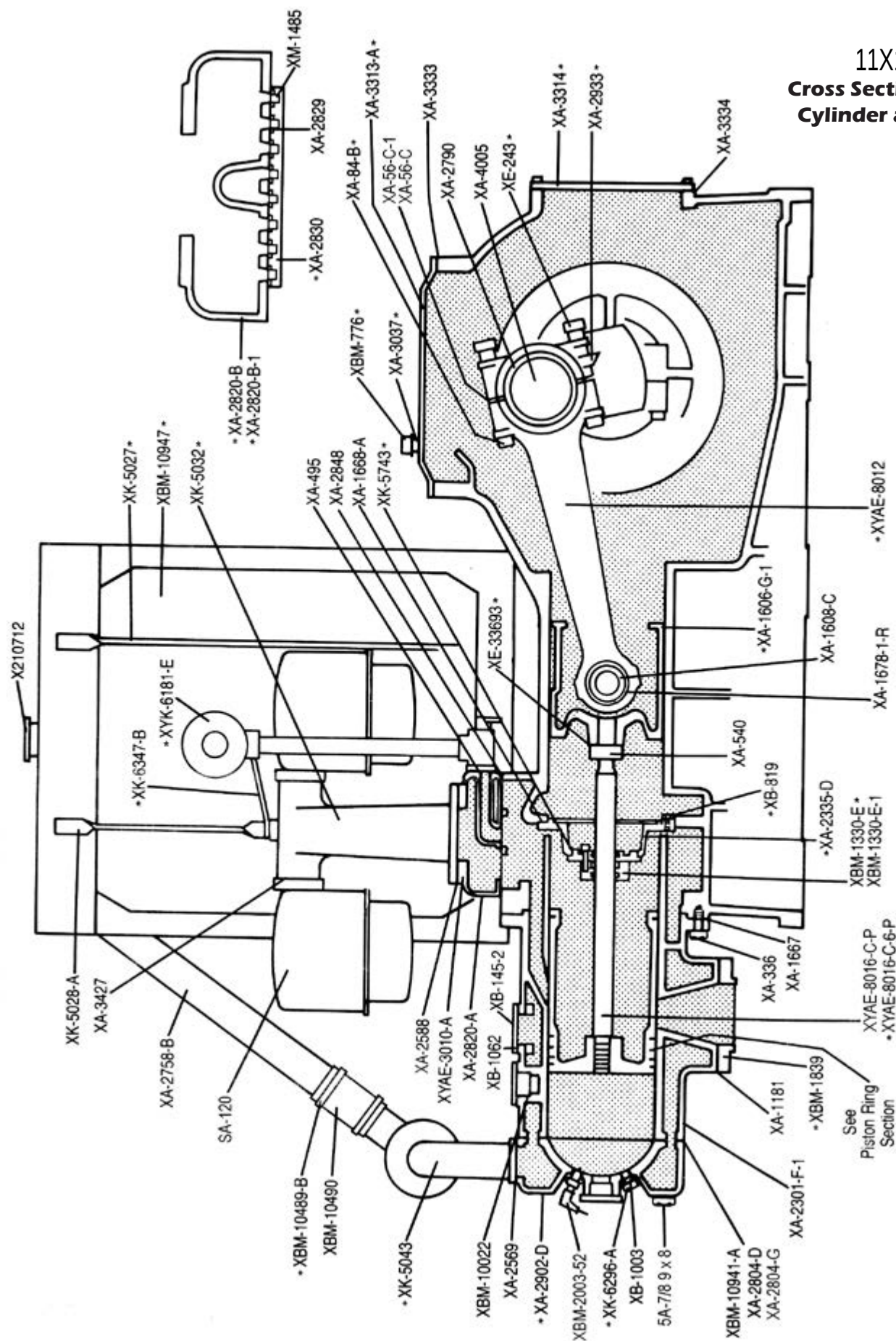


DP-160

11X14 CMA

**Cross Section thru
Cylinder and Bed**

Figure 1a



DP-70/80

DP-160, 11X14 CMA

Cross Section thru Cylinder and Bed

Figure 1 and 1a

Continued from page 73

Arrow Part No.	DP-70/80	DP-160	Description	No. Req.
XBM-2003-A-52	X		Magneto Cable	1
XBM-2003-52		X	Magneto Cable	2
XYAE-1222		X	Relief Valve (not shown)	2
XYAE-1222	X		Relief Valve	1
XYAE-1558-E	X		Oil Gauge Bayonet Assembly	1
XYAE-2512-E-2	X		Connecting Rod and Crosshead Pin Brg. Assy.	1
XYAE-8012		X	Connecting Rod Assembly	2
XYAE-8016-C-P	X	X	Piston and Rod Assembly Std.	2
XYAE-8016-C-6-P	X		Piston and Rod Assembly Semi-Finish	1
XYAE-8016-C-6-P		X	Piston and Rod Assembly	2
INDIVIDUAL PARTS:				
X-210712	X	X	Radiator Cap	1
XA-36-C		X	Shims, Crank Pin Bearing (Laminated)	4
XA-56-C-1		X	Shims, Crank Pin Bearing (Solid)	4
XA-84-B		X	Crankpin Bearing Bolt	4
5A-7/8 9 x 8	X	X	Stud, Cylinder Head to Cylinder	24
XA-336		X	Stud, Cylinder to Bed	24
XA-336	X		Stud, Cylinder to Bed	12
XA-437-A	X		Head Gasket (DP-70)	1
XA-442-A	X		Plate Gasket (DP-70)	1
XA-495		X	Gasket, Throttle Valve to Manifold	2
XA-495	X		Gasket, Throttle Valve to Manifold (not shown)	1
XA-540		X	Piston Rod Nut	2
XA-540	X		Piston Rod Nut	1
XA-969		X	Opener (not shown)	2
XA-969	X		Opener	1
XA-1181		X	Gasket, Exhaust Flange to Cylinder	2
XA-1181	X		Gasket, Exhaust Flange to Cylinder	1
XA-1606-G	X		Crosshead	1
XA-1606-G-1		X	Crosshead	2
XA-1608-C		X	Crosshead Pin	2
XA-1608-C	X		Crosshead Pin	1
XA-1656-E	X		Crankpin Bearing	1
XA-1657	X		Oil Dip, Connecting Rod	2
XA-1659-E	X		Laminated Shims, Crank Pin Bearing	2
XA-1659-E-1	X		Solid Shims, Crank Pin Bearing	2
XA-1667		X	Gasket, Cylinder to Bed	2
XA-1667	X		Gasket, Cylinder to Bed	1

Continued

DP-70/80
DP-160, 11X14 CMA
**Cross Section thru
Cylinder and Bed**
Figure 1

Continued from page 74

Arrow Part No.	DP-70/80	DP-160	Description	No. Req.
XA-1668-A		X	Gasket, Stuffing Box to Bed	2
XA-1668-A	X		Gasket, Stuffing Box to Bed	1
XA-1678-1-R	X		Crosshead Pin Bearing	1
XA-1678-1-R		X	Crosshead Pin Bearing	2
XA-1697	X		Bolt, Crankpin Bearing	2
XA-1698	X		Nut, Crankpin Bearing Bolt	2
XA-1717	X		Gasket, Breather Plate to Bed	1
XA-1963-A	X		Stud, Counterweight to Crankshaft	4
XA-2301-F	X		Cylinder	1
XA-2301-F-1		X	Cylinder	2
XA-2335-D		X	Adaptor, Stuffing Box	2
XA-2335-D	X		Adaptor, Stuffing Box	1
XA-2549	X		Cover Plate	1
XA-2569		X	Gasket, Water Outlet Connection	2
XA-2569	X		Gasket, Water Outlet Connection	1
XA-2572	X		Plug	1
XA-2588		X	Gasket, Air Cleaner Support to Manifold	2
XA-2588	X		Gasket, Air Cleaner Support to Manifold	1
XA-2690		X	Valve Body (not shown)	2
XA-2690	X		Valve Body	1
XA-2758-B		X	Brace	1
XA-2790		X	Crankpin Bearing	2
XA-2803	X		Cylinder Head Plate (DP-70) (not shown)	1
XA-2804-D	X	X	Gasket, Cylinder Head to Cylinder	2
XA-2804-G	X	X	Gasket, Cylinder Head to Cylinder	2
XA-2807	X		Gasket, Air Cleaner to Support	1
XA-2820-B	X		Mixer Valve Manifold	1
XA-2820-B-1		X	Mixer Valve Manifold	2
XA-2829		X	Mixer Valve	14
XA-2829	X		Mixer Valve (not shown)	7
XA-2830		X	Mixer Valve Stop	4
XA-2830	X		Mixer Valve Stop (not shown)	2
XA-2837	X		Gasket, Cylinder Head Plate (DP-80) (not shown)	1
XA-2848		X	Gasket, Mixer Valve to Manifold to Bed	2
XA-2848	X		Gasket, Mixer Valve to Manifold to Bed	1
XA-2902-D		X	Cylinder Head	2
XA-2902-D	X		Cylinder Head	1
XA-2906	X		Elbow, Air Cleaner Support	1
XA-2910	X		Water Line	1
XA-2915	X		Radiator Brace	2

Continued

DP-70/80

DP-160, 11X14 CMA

**Cross Section thru
Cylinder and Bed**

Figure 1

Continued from page 75

Arrow Part No.	DP-70/80	DP-160	Description	No. Req.
XA-2925	X		Adaptor	1
XA-2931	X		Fan Belt Guard	1
XA-2933		X	Oil Dip	2
XA-3032-F	X		Breather Plate	1
XA-3037-1		X	Breather Connection	4
XA-3037-1	X		Breather Connection, End of Bed	1
XA-3077-C	X		Oil Gauge Pipe	1
XA-3313-A		X	Cover	2
XA-3314		X	Crankcase End Cover	2
XA-3333		X	Gasket	2
XA-3334		X	Gasket, Crankcase End Cover	2
XA-3427		X	Gasket, Air Cleaner to Support	2
XA-3752	X		Gasket	1
PISTON BEARINGS	X	X	See Piston Ring Section	
XA-3828	X		Water, Outlet Connection	1
XA-3829	X		Radiator Inlet Connection	1
XA-145-2		X	Cover	
XA-819	X		Stud, Control Box to Bed (not shown)	3
XA-819		X	Stud, Stuffing Box Adaptor to Bed	12
XA-819	X		Stud, Stuffing Box Adaptor to Bed	6
XA-1003		X	Gasket, Spark Plug Hole	2
XA-1003	X		Gasket, Spark Plug Hole	1
XA-1062		X	Gasket, Cover Plate Cylinder, Top	2
XA-1062	X		Gasket, Cover Plate Cylinder, Top	1
GA-135	X		Air Cleaner	1
XBM-776		X	Breather Caps	4
XBM-1330-E		X	Piston Rod Packing, Complete	2
XBM-1330-E	X		Piston Rod Packing, Complete	1
XBM-1330-E-1		X	Packing Rings and Springs	2
XBM-1330-E-1	X		Packing Rings and Springs	1
XBM-1757-A		X	Air Cock (not shown)	2
XBM-1757-A	X		Air Cock	1
XBM-1839		X	6" Standard Pipe Flange Exhaust	2
XBM-10022	X	X	Gasket, Gas Injection Ports	2
XBM-10111	X		Breather Cap, End of Bed	1
XBM-10207		X	Valve (not shown)	2
XBM-10207	X		Valve	1
XBM-10208		X	Cap (not shown)	2
XBM-10208	X		Cap	1

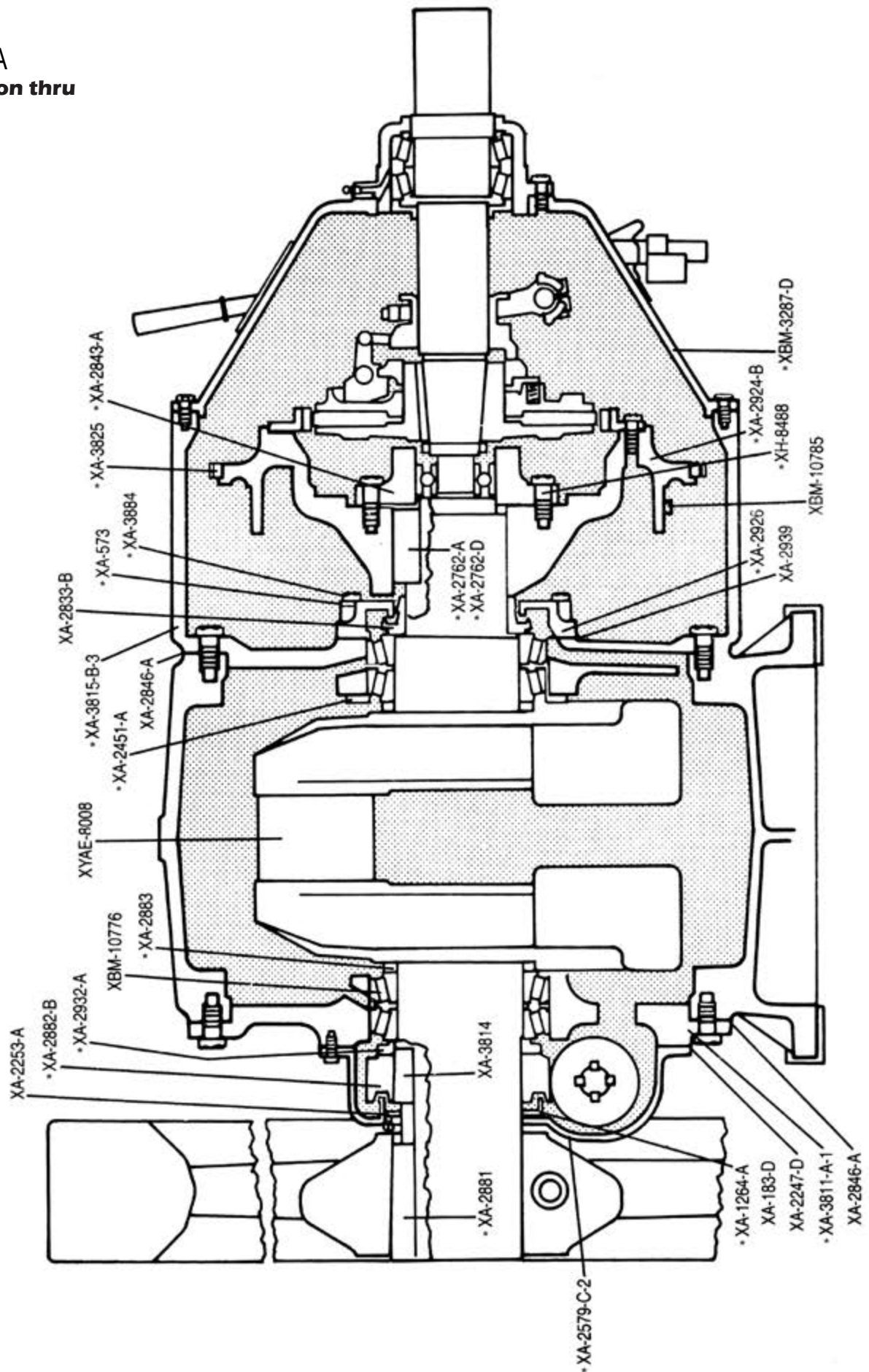
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DP-70/80
DP-160, 11X14 CMA
**Cross Section thru
Cylinder and Bed**
Figure 1

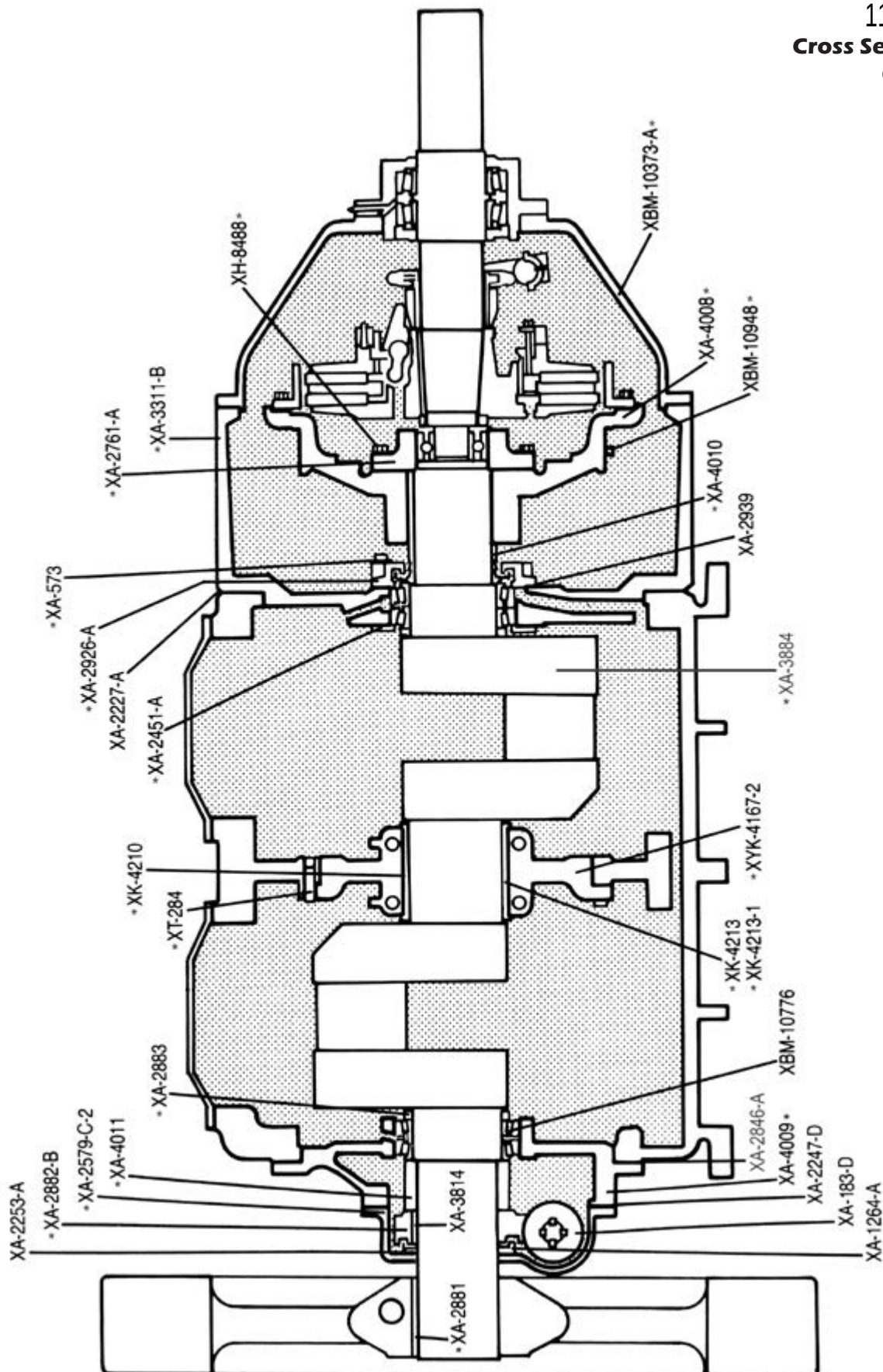
Continued from page 76

Arrow Part No.	DP-70/80	DP-160	Description	No. Req.
234-46	X	X	Cap Lock (not shown)	2
XBM-10210		X	Spring (not shown)	2
XBM-10210	X		Spring	1
XBM-10489-B		X	Hose Clamp	8
XBM-10490		X	Hose, Waterline	3
SA-120		X	Air Cleaner	2
XBM-10734	X		Hose, Waterline to Radiator	4
HC-44	X		Hose Clamp	8
XBM-10779	X		Radiator	1
XBM-10885			Check Valve	
XBM-10941-A			Cylinder Head to Cylinder "O" Ring	
XBM-10947		X	Radiator	1
XBM-19030-H-12	X		Exhaust Flange	2
XE-243		X	Nut, Connecting Rod Bolt	2
XE-33693	X	X	Lock, Piston Rod Nut	2
XK-5027		X	Brace	1
XK-5028-A		X	Brace	1
XK-5032		X	Air Horn	1
XK-5043		X	Water Outlet Manifold	1
XK-5743		X	Oil Baffle	2
XK-6296-A		X	Plug	2
XK-6296-A	X		Plug	1
XK-6347-B		X	Brace	1
XM-1485		X	Springs	28
XM-1485	X		Springs (not shown)	14
XYK-6181-E		X	Manifold Assembly	1

DP-70/80
11X14 CMA
**Cross Section thru
Crankcase**
Figure 2



DP-160
11X14 CMA
**Cross Section thru
Crankcase**
Figure 2a



DP-70/80

DP-160, 11X14 CMA

Cross Section thru

Crankcase

Figure 2 and 2a

Continued from page 79

Arrow Part No.	DP-70/80	DP-160	Description	No. Req.
ASSEMBLY:				
XYAE-1538-B	X		Governor Assembly (old style see gov. sheet)	1
XYAE-2038-J	X	X	Governor Assembly (new style see gov. sheet)	1
XYAE-8008	X		Crankshaft	1
INDIVIDUAL PARTS:				
XA-183-D	X	X	Layshaft Gear	1
XA-573	X	X	Washer, Clamp Bolt to Bearing Support	4
XA-1264-A	X	X	Oil Slinger, Governor Side	1
XA-2227-A		X	Gasket, Bearing Support	1
XA-2247-D	X	X	Gasket, Spiral Gear Shield to Bearing	1
XA-2253-A	X	X	Gasket, Oil Slinger to Spiral Gear Shield	1
XA-2451-A	X	X	Bearing Clamp	2
XA-2579-C-2	X	X	Spiral Gear Shield	1
XA-2761-A		X	Pilot Bearing Housing	1
XA-2762-A	X		Key, Clutch Adaptor	1
XA-2762-D	X		Oil Slinger, Clutch Side	1
XA-2833-B	X		Pilot Bearing Housing	1
XA-2843-A	X		Gasket, Bearing Retainer to Bed	1
XA-2846-A	X	X	Key, Flywheel to Crankshaft	1
XA-2881	X	X	Crankshaft Gear	1
XA-2882-B	X	X	Bearing Spacer, Crankshaft Cheek Flywheel Bolt	2
XA-2883	X	X	Clutch Adaptor	1
XA-2924-B	X		Bearing Support Cover	1
XA-2926	X		Bearing Support Cover	1
XA-2926-A		X	Spacer, Crankshaft Gear	1
XA-2932-A	X		Gasket, Bearing Support Cover	1
XA-2939	X	X	Bearing Support	1
XA-3311-B		X	Bearing Support	1
XA-3811-A-1	X		Key, Crankshaft Gear	1
XA-3814	X	X	Bearing Support	1
XA-3815-B-3	X		Starter Ring Gear	1
XA-3825	X		Bearing Clamp Bolt	1
XA-3884	X	X	Crankshaft	4
XA-4008		X	Clutch Adaptor	1
XA-4009		X	Bearing Support	1
XA-4010		X	Oil Slinger, Clutch Side	1

Continued

DP-70/80
DP-160, 11X14 CMA
Cross Section thru
Crankcase
Figure 2 and 2a
Continued from page 80

Arrow Part No.	DP-70/80	DP-160	Description	No. Req.
XA-4011		X	Spacer	1
XBM-3287-D	X		Twin Disc Clutch	1
XBM-10373-A		X	Clutch Assembly	1
XBM-10776	X	X	Main Bearing	2
XBM-10785	X		Fan Belt, Matched Pair	1
XBM-10948		X	Radiator Fan Belts (set of 3)	1
XH-8488	X	X	Cap Screw, Pilot Bearing Housing	6
XK-4210		X	Center Main Bearing	1
XK-4213		X	Shim (Laminated)	1
XK-4213-1		X	Shim (Solid)	1
XT-284		X	Dowell Pin	2
XYK-4167-2		X	Center Bearing Support	1

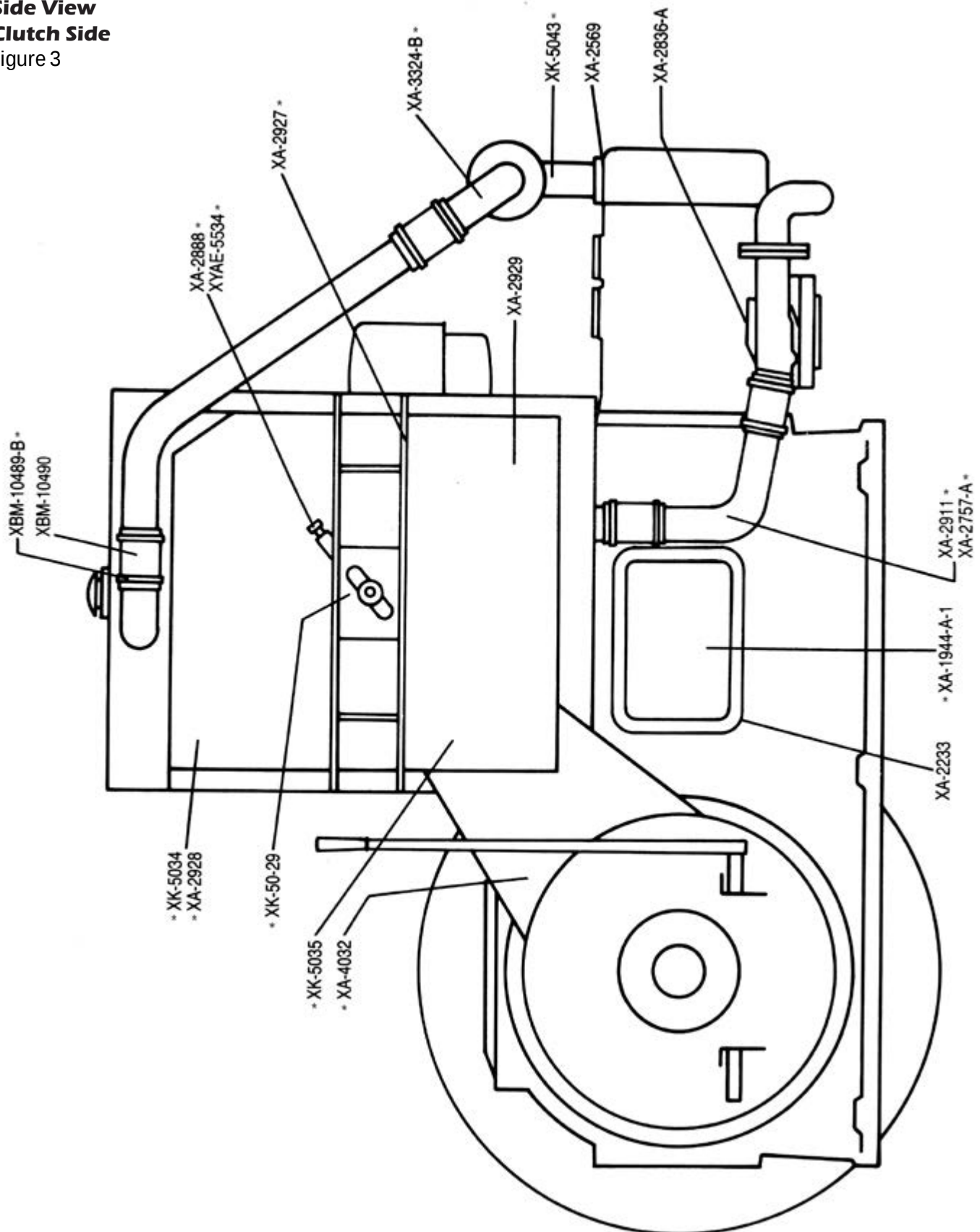
DP-70/80

DP-160, 11X14 CMA

Side View

Clutch Side

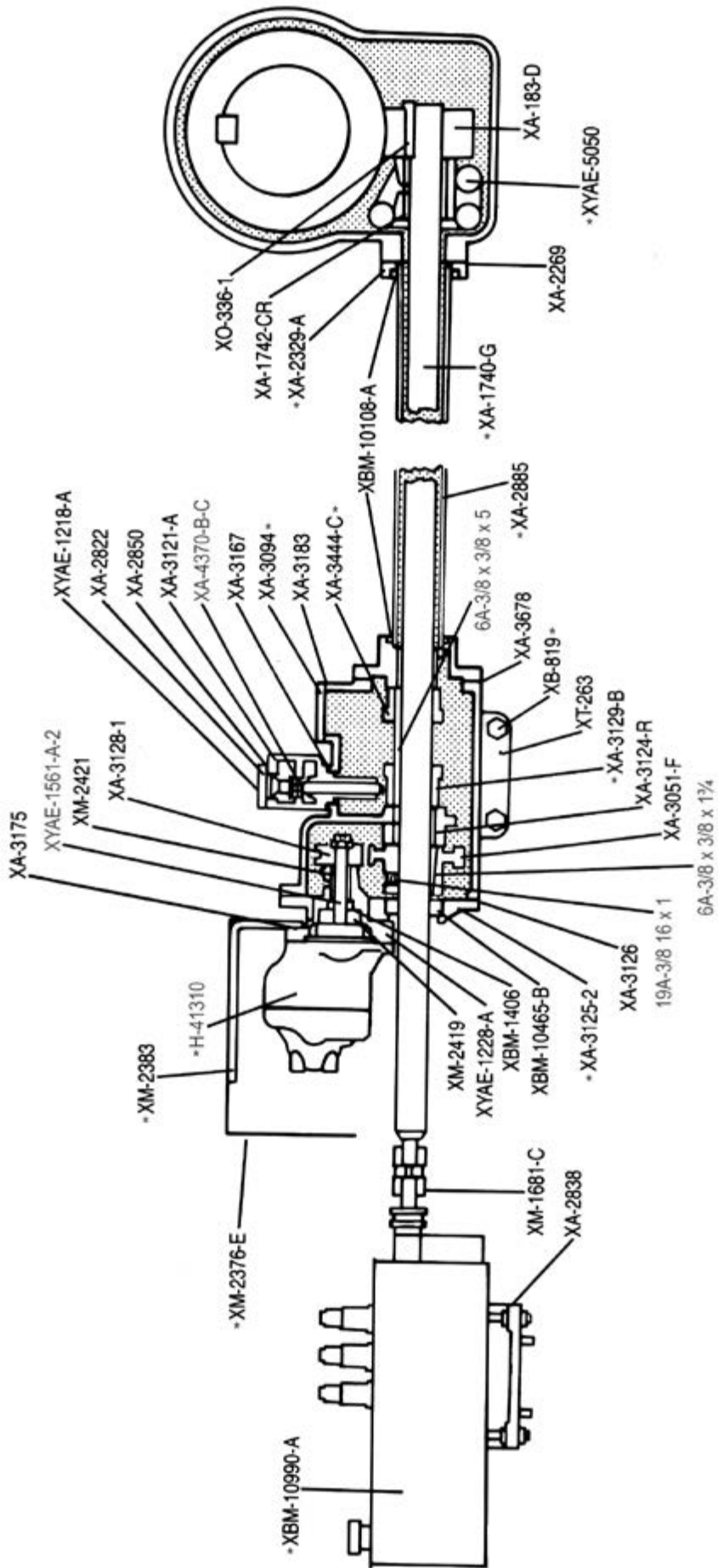
Figure 3



DP-70/80
DP-160, 11X14 CMA
**Cross Section thru
Crankcase**
Figure 2 and 2a

Arrow Part No.	DP-70/80	DP-160	Description	No. Req.
XYAE-5534		X	Fan Adjusting Screw	1
XA-1944-A-1	X		Side Cover	1
XA-2233	X	X	Gasket, Side Cover	1
XA-2757-A		X	Lower Water Line	1
XA-2569	X		Gasket	1
XA-2569		X	Gasket	2
XA-2836-A	X	X	Gasket	1
XA-2888	X		Fan Adjusting Screw	1
XA-2911	X		Lower Water Line	1
XA-2927	X		Fan Support	1
XA-2928	X		Fanguard, Upper	1
XA-2929	X		Fanguard, Lower	1
XA-3324-B		X	Elbow	1
XA-3752	X		Gasket, Lower Outlet (not shown)	1
XA-4032		X	Fanbelt Guard	1
XBM-10489-B		X	Hose Clamp	8
XBM-10490		X	Hose	4
XK-50-29		X	Fan Support	1
XK-5034		X	Fanguard, Upper	1
XK-5035		X	Fanguard, Lower	1
XK-5043		X	Water Connection	1

Figure 4



Exploded view diagram of a mechanical assembly, showing various components and their assembly sequence. The diagram includes the following labeled parts:

- XB-10833
- XH-4370-B-C
- XA-2850
- XA-2822
- XA-3175
- XYAE-1561-A-2
- XB-1406
- XM-2420-A
- XA-3128-1
- XM-2376-E
- XM-2383
- XB-15139-A
- XM-2419
- XYAE-1228-A
- XM-2421
- XB-10465-B
- XM-1681-C
- XA-3125-2
- XA-3126
- 19A-3/8 16 x 1
- XA-2838
- XA-4031
- XB-11010
- XA-3129-F
- XK-6212
- XK-6213
- XA-3678
- XB-6085-2
- XA-3444-C
- X-3154
- XT-249-A
- XA-3051-F
- XA-3124-R
- XA-4050
- XA-4019
- XB-10108-A
- XA-2329-A
- XA-2269
- XO-336-1
- XT-263
- XYAE-5050
- XA-1742-CR
- XA-183-D

6A-3/8 x 3/8 x 1 1/4

DP-70/80

DP-160, 11X14 CMA

**Cross Section thru
Layshaft**

Figure 4 and 4a

Continued from page 85

Arrow Part No.	DP-70/80	DP-160	Description	No. Req.
ASSEMBLY:				
XYAE-1218-A	X		Air Start Valve	1
XYAE-1228-A	X	X	Magneto Bracket Assembly	1
XYAE-1561-A-2	X	X	Magneto Shaft & Coupling Assembly	1
XYAE-3094-D	X	X	Vacuum Relief Valve (not shown)	1
XYAE-5050	X	X	Front Layshaft Bearing Assembly	1
INDIVIDUAL PARTS:				
X-3154		X	Stud, Control Box to Bed (not shown)	4
XA-183-D	X	X	Layshaft Gear	1
XA-1669-A	X		Gasket, Cover Plate (not shown)	1
XA-1740-G	X		Layshaft	1
XA-1742-CR	X	X	Bushing, Front Layshaft Bearing Assembly	1
XA-2115	X	X	Oil Trough (not shown)	1
XA-2117	X	X	Gasket, Oil Trough (not shown)	1
XA-2269	X	X	Gasket, Oil Seal Flange	1
XA-2329-A	X	X	Oil Seal Flange	1
XA-2822		X	Cap Air Starting Valve	2
XA-2822	X		Cap Air Starting Valve	1
XA-2838	X		Gasket, Lubricator Bracket to Cylinder	1
XA-2838		X	Gasket, Lubricator Bracket to Cylinder	2
XA-2850	X		Cover Plate to Air Starting Body	1
XA-2850		X	Cover Plate to Air Starting Body	2
XA-2885	X		Layshaft Guard	1
XA-3051-F	X	X	Layshaft Drive Gear	1
XA-3094	X		Cover Plate, Control Box, Top	1
XA-3121-A	X		Body Air Start Valve	1
XA-3124-R	X	X	Layshaft Bushing	1
XA-3125-2	X	X	Control Box Flange	1
XA-3126	X	X	Gasket, Flange to Control Box	1
XA-3128-1	X	X	Pinion, Magneto Drive	1
XA-3129-B	X		Air Starting Cam	1
XA-3129-F		X	Air Starting Cam	2
XA-3167	X		Gasket, Air Starting Valve Body to Control Box	1
XA-3175	X	X	Gasket, Magneto Bracket to Control Box	1
XA-3183	X		Gasket, Control Box Cover	1
XA-3191	X		Key, Air Starting & Fuel Pump Cam	1
XA-3444-C	X		Gas Injection Cam	1
XA-3444-C		X	Gas Injection Cam	2
XA-3678	X	X	Gasket, Control Box Flange	1

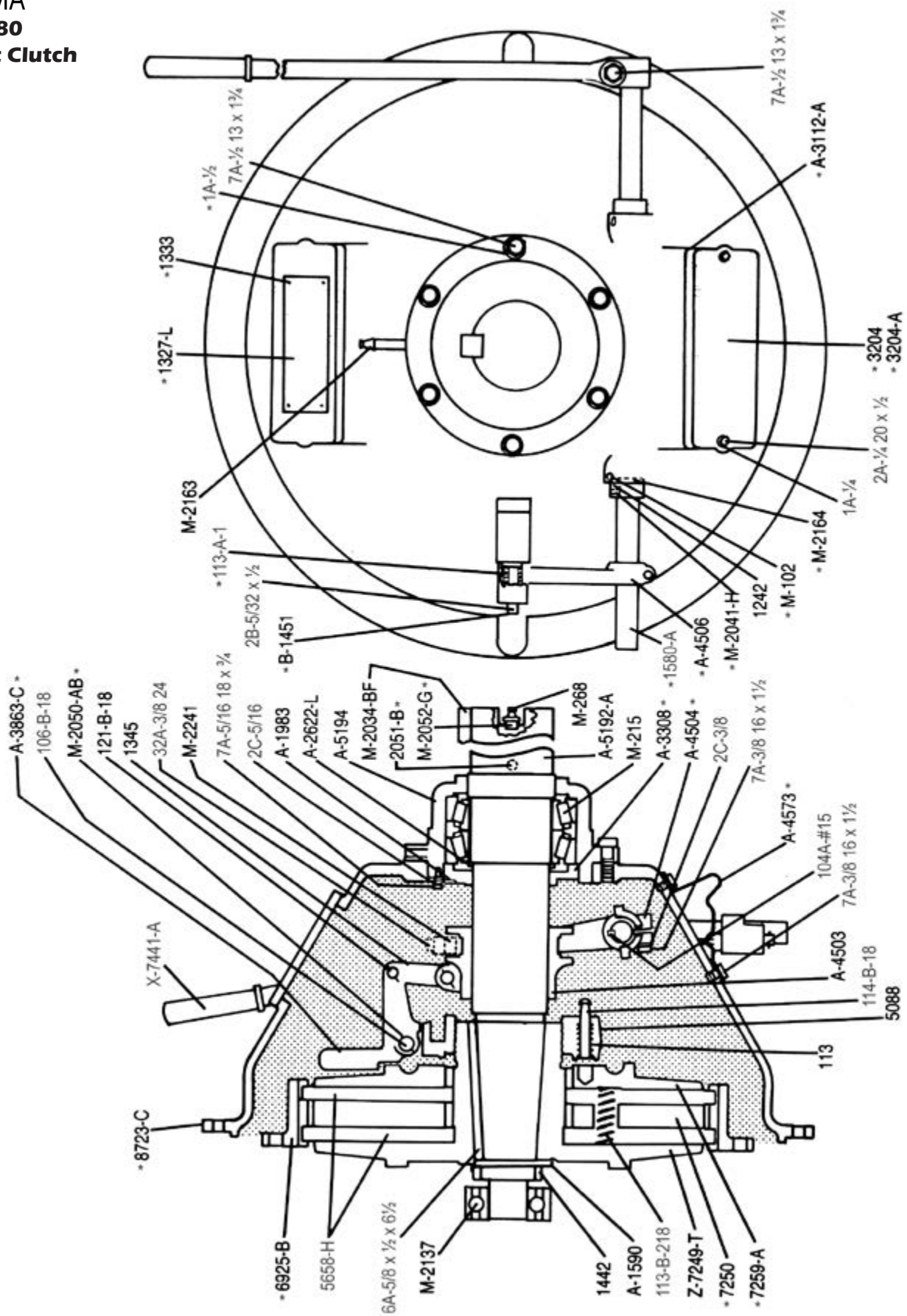
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DP-70/80
DP-160, 11X14 CMA
**Cross Section thru
Layshaft**
Figure 4 and 4a

Continued from page 86

Arrow Part No.	DP-70/80	DP-160	Description	No. Req.
XA-4019		X	Layshaft	1
XA-4031		X	Water Inlet Lub. Bracket	1
XA-4050		X	Layshaft Guard	1
XB-819	X		Stud, Control Box to Bed	3
XBM-1406	X	X	Oil Seal, Magneto Drive	1
XBM-3405	X	X	Connection Line, Valve to Tank (not shown)	1
XBM-10108-A	X	X	Oil Seal, Layshaft Guard	2
XBM-10465-B	X	X	Oil Seal, Control Box Flange	1
19A-3/8 16 x 1	X	X	Set Screw, Layshaft Drive Gear	2
XBM-10833		X	"O" Ring, Air Starting Valve	2
XBM-10990-A	X		Lubricator Assembly	1
XBM-10994-6-4	X		Elbow, Side Cover Plate (not shown)	1
XBM-11010		X	Lubricator Assembly	1
XBM-15139-A		X	Magneto	1
6A-3/8 x 3/8 x 1 3/4	X	X	Key, Layshaft Drive Gear	1
XH-4370-B-C	X	X	Air Start Valve Spring	1
XK-6085-2		X	Key, Layshaft Cams	2
XK-6212		X	Cover Plate, Control Box	1
XK-6213		X	Gasket, Air Starting Body to Control Box	1
XM-1681-C	X	X	Coupling, Lub. to Layshaft	1
XM-2376-E	X	X	Bracket, Magneto Cover	1
XM-2383	X	X	Magneto Cover	1
XM-2419	X	X	Magneto Coupling	1
XM-2420-A	X	X	Magneto Driveshaft	1
XM-2421	X	X	Bushing, Magneto Drive Shaft Bracket	1
XO-336-1	X	X	Key, Layshaft Gear to Layshaft Bed	1
XT-249-A		X	Dowel Pin, Control Box to Bed	2
XT-263	X	X	Dowel Pin, Front Control Box Bearing to Control Box	2
ARO-158	X		Gasket Set Cylinder & Head	1
ARO-158		X	Gasket Set Cylinder & Head	2

DP-70
11X14 CMA
Early DP-80
Twin Disc Clutch
Figure 5



DP-70
11X14 CMA
Early DP-80
Twin Disk Clutch
Figure 5

Arrow Part No.	DP-70	Description	No. Req.
BM-3287-C	X	Twin Disk Power Take-Off No. X-7189-C, Model B-218-P.T.O. with #0 SAE Housing and #5658 K Heavy Duty Molded Driving Plate Assembly (3 way split), Twin Disc Specification 27780 (including drive ring 6925-B) Complete with Key M-2034-BF	
BE-218	X	Clutch Assembly per Spec. 27781, Composed of:	1
	X	1)Z-7249-T Hub & Back Plate 3¼ Taper Bore	
	X	1)6A-5/8 x ½ x 6½ Key (5/8 X ½ X 6½)	
	X	1)A-192 Adjusting Yoke Assembly Composed of:	
	X	1)5088 Adjusting Yoke	
	X	4)A-3863-C Levers	
	X	4)106-B-18 Lever Pins	
	X	4)M-2050-AB Cotter Pins (1/8 X 3/4)	
	X	1)114-B-18 Adjusting Lock Pin	
	X	1)113 Adjusting Lock Pin Spring	
	X	1)S-652 Sliding Sleeve Assembly Composed of:	
	X	1)A-4503 Sliding Sleeve	
	X	8)1345 Lever Links	
	X	8)121-B-18 Lever Link Pins	
	X	8)M-2050-AB Cotter Pins (1/8 X 3/4)	
	X	2)5658-H Heavy Duty Molded Driving Plate Assemblies	
	X	1)7259-A Floating Plate	
	X	1)7250 Center Plate	
	X	6)113-B-218 Release Springs	
8723-C	X	Housing #0 SAE	1
1580-J	X	Operating Shaft	1
A-5192-A	X	Clutch Shaft	1
M-2034-BF	X	Key	1
6925-B	X	Driving Ring	1
M-268	X	Hydraulic Fitting	1
M-287	X	Hydraulic Fitting	1
M-2163	X	Hydraulic Fitting	1
Z-906	X	Miscellaneous P.T.O. Parts, Composed of:	1
	X	1)A-5194 Bearing Carrier	
	X	2)M-215 Timken Bearings (592a-594)	
	X	1)A-3308 Bearing Retainer	
	X	1)A-1983 Retainer Lock	
	X	1)7A-5/16 18 x ¾ Hex Head Cap Screws	
	X	1)1442 Shaft Nut	
	X	1)A-1590 Lock Washer	
	X	2)104A-#15 Woodruff Keys #15	
	X	1)A-4504 Clutch Yoke	
	X	2)7A-3/8 16 x 1½ USS Hex Head Cap Screws	
	X	2)2C-3/8 Lock Washers	
	X	6)1A-½ Lock Washers	
	X	1)1327-L Instruction Plate	
	X	4)1333 Escutcheon Pins	
	X	1)3204 Hand Hole Plate	
	X	1)3204-A Hand Hole Plate	
	X	4)2A-¼ 20 x ½ Hex Head Cap Screws	
	X	4)1A-¼ Lock Washers	
	X	1)A-4506 Neutral Lock Arm	

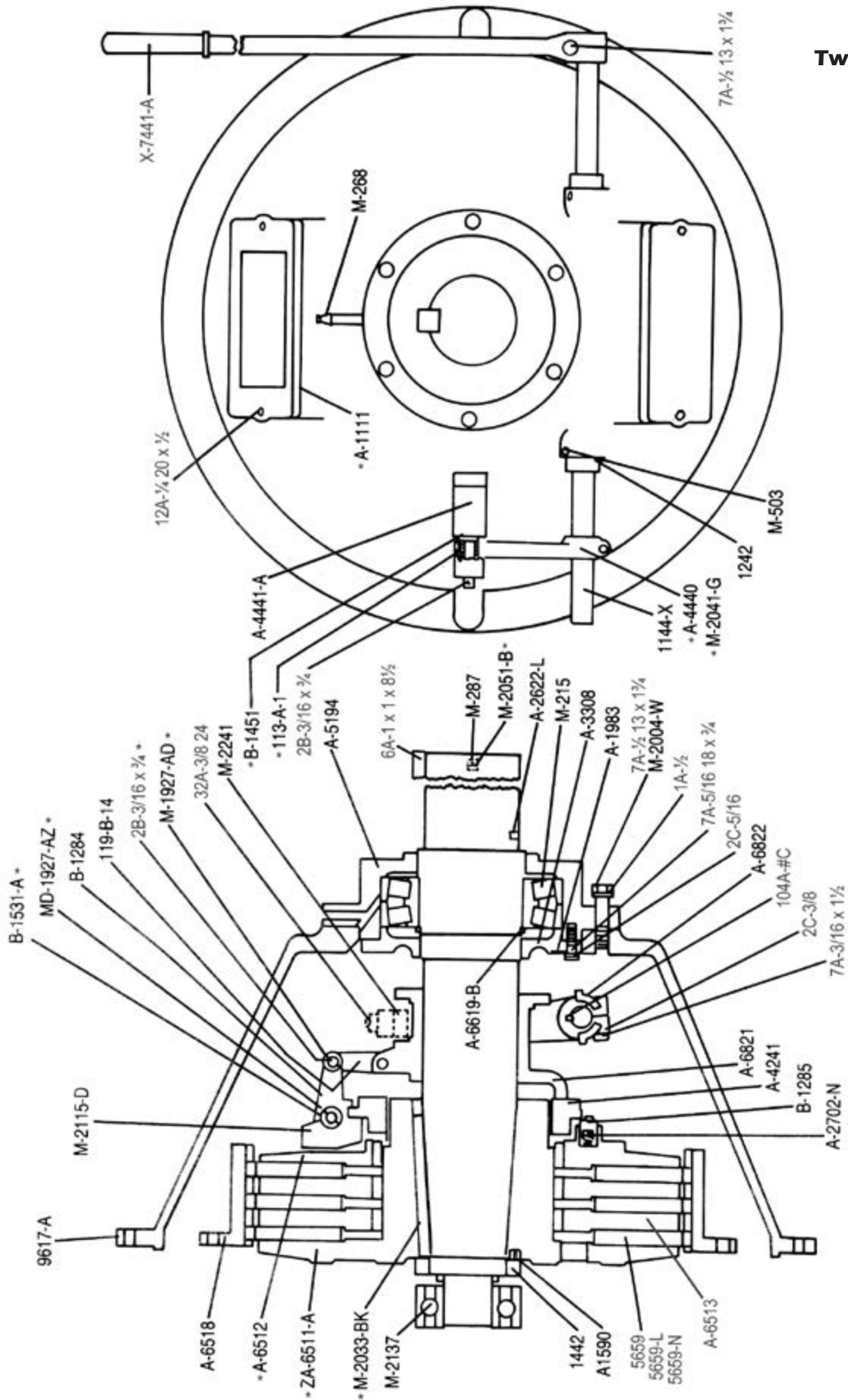
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DP-70
11X14 CMA
Early DP-80
Twin Disc Clutch
Figure 5

Continued from page 89

Arrow Part No.	DP-70	Description	No. Req.
	X	2)M-2241 McGill Camrols	
	X	2)32A-3/8 24 Hex Nut	
	X	2)1242 Stop Collar	
	X	2)M-2041-H Cup Point Set Screw	
	X	2)M-102 Oil Cups	
	X	1)A-2622-L Snap Ring	
	X	1)2C-5/16 Lock Washer	
	X	2)A-3112-A Gaskets	
	X	4)7A-½ 13 x 1¾ Hex Head Cap Screws	
	X	2)7A-½ 13 x 1¾ Hex Head Cap Screws	
	X	2)M-2002-AG Hex Head Cap Screws	
	X	1)B-1451 Detent Pin	
	X	1)113-A-1 Spring	
	X	1)2B-5/32 x ½ Roll Pin	
	X	1)A-4573 Detent Locator	
	X	2)7A-3/8 16 x 1½ Hex Head Cap Screws	
8723-C	X	Pilot Ball Bearing	1
1580-J	X	Hand Lever	1
A-5192-A	X	Hex Head Cap Screws	1
M-2034-BF	X	Hydraulic Fitting, End of Shaft	1
6925-B	X	Seal, Operating Shaft (Lip to Point Outward)	2
M-268	X	Reducer Bushing, End of Shaft	1
M-287	X	Pipe Plug, Side of Shaft	1

DP-80
11X14 CMA
Twin Disk Clutch
Figure 6



DP-80
11X14 CMA
Twin Disc Clutch
Figure 6

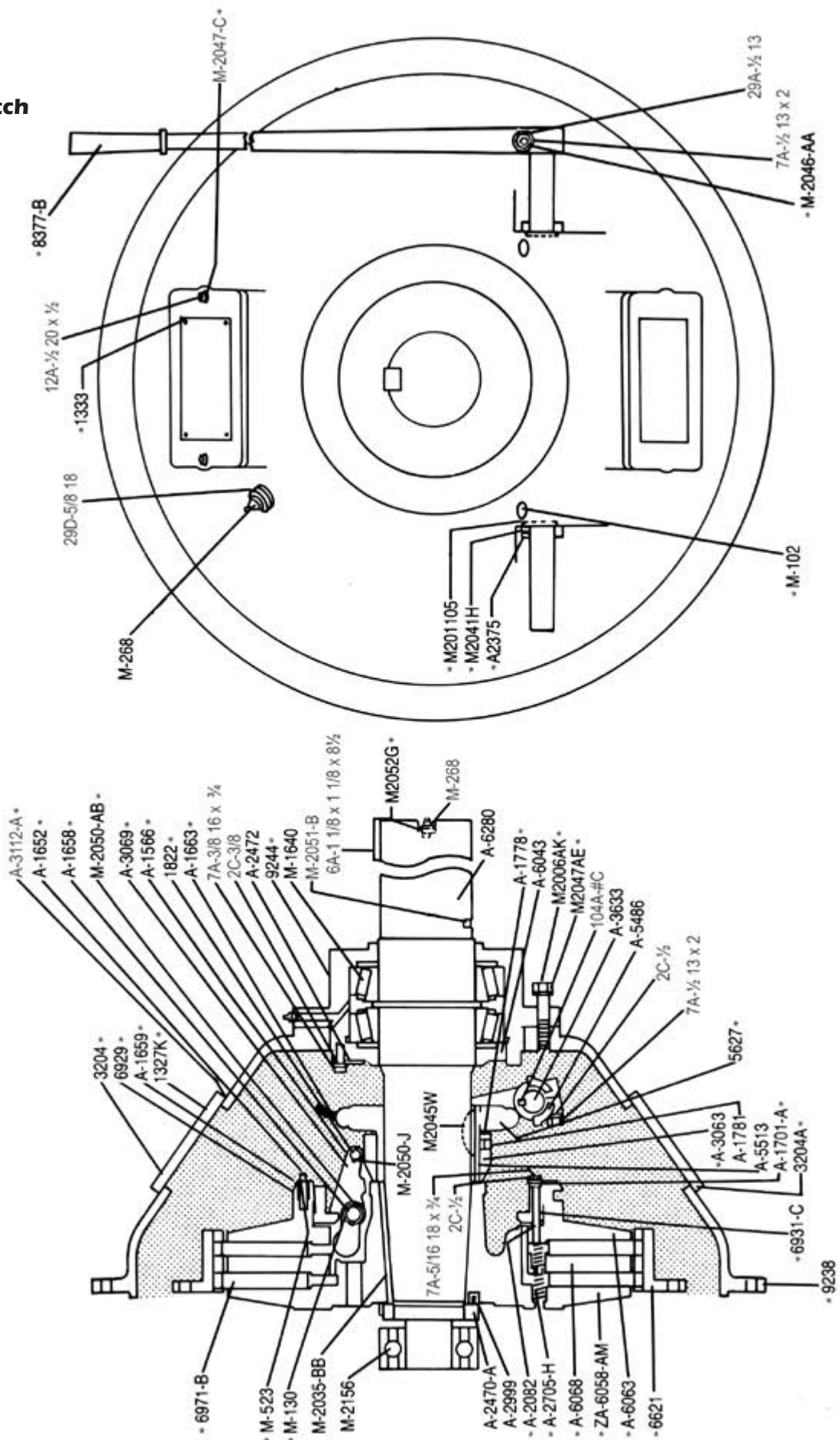
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Arrow Part No.	DP-80	Description	No. Req.
BM-3287-D	X	Complete Twin Disc Power Take-Off #X-9585-C for Limited Attendance Service; Model SPE-314 P.T.O. With #0 SAE Housing, #5659-L Heavy Duty Molded Driving Plate Assy.; All Per Twin Disc Specification 29151	1
SPE-314	X	Clutch Assembly Per Twin Disc Spec. 29306 Composed of	1
	X	3)5659-L Driving Plates	
	X	1)A-2702-N Adjusting Lock Pin Spring	
	X	1)A-4241 Adjusting Ring	
	X	1)A-6512 Floating Plate	
	X	2)A-6513 Center Plate	
	X	4)B-1284 Levers	
	X	1)B-1285 Adjusting Lock Pin	
	X	4)B-1531-A Lever Pins	
	X	4)MD-1927-AZ Roll Pins	
	X	8)M-2115-D Washers	
	X	1)S-672 Sliding Sleeve Assembly Composed of:	
	X	8)119-B-14 Lever Links	
	X	1)A-6821 Sliding Sleeve	
	X	8)2B-3/16 x 3/4 Lever Link Pins	
	X	8)M-1927-AD Roll Pins	
	X	1)ZA-6511-A Hub and Back Plate	
1144-X	X	Operating Shaft	1
X-7441-A	X	Hand Lever	1
9617-A	X	#0 SAE Housing	1
A-6518	X	Driving Ring	1
A-6619-B	X	Shaft	1
M-268	X	Hydraulic Fitting	1
M-287	X	Hydraulic Fitting	1
M-2004-R	X	Hex Head Cap Screw	1
6A-1 x 1 x 8 1/2	X	Key	1
M-2051-B	X	Pipe Plug	1
M-2137	X	Pilot Bearing	1
Z-935	X	Miscellaneous P.T.O. Parts Composed of:	
	X	1)113-A-1 Spring	
	X	2)1242 Stop Collars	
	X	1)1442 Hub Nut	
	X	1)2815-L Hand Hole Plate	
	X	1)A-1111 Gasket	
	X	1)A-1590 Lock Washer	
	X	1)A-1983 Bearing Retainer Lock	
	X	1)A-2622-L Snap Ring	
	X	1)A-2885-F Spacer	
	X	1)A-3308 Bearing Retainer	
	X	1)A-4440 Neutral Lock Arm	
	X	1)A-4441-A Detent Locator	
	X	1)A-5194 Bearing Carrier	
	X	1)A-6822 Throwout Yoke	
	X	1)B-1451 Detent Pin	
	X	2)M-215 Timken Bearing	

DP-80
11X14 CMA
Twin Disk Clutch
Figure 6
Continued from page 92

Arrow Part No.	DP-80	Description	No. Req.
	X	2)M-503	Fitting
	X	1)2B-3/16 x 3/4	Roll Pin
	X	2)32A-3/8 24	Hex Nut
	X	1)2C-5/16	Capscrew
	X	3)7A-3/16 x 1 1/2	Capscrew
	X	2)M-2002-D	Capscrew
	X	2)7A-1/2 13 x 1 3/4	Capscrew
	X	4)M-2004-W	Capscrew
	X	2)104A-#C	Woodruff Key
	X	2)12A-1/4 20 x 1/2	Capscrew
	X	1)M-2033-BK	Hub Key
	X	2)M-2041-G	Setscrew
	X	1)7A-5/16 18 x 3/4	Lock Washer
	X	2)2C-3/8	Lock Washer
	X	6)1A-1/2	Lock Washer
	X	2)M-2067-L	Protectors
	X	2)M-2241	Camrols
	X	5659	Plate Drive (solid)
	X	5659-L	Plate Drive (3 pc)
	X	5659-N	Plate Drive (3 pc)

DP-160
11X14 CMA
Twin Disc Clutch
Figure 7



DP-160
11X14 CMA
Twin Disk Clutch
Figure 7

Arrow Part No.	DP-160	Description	No. Req.
BM-10373-A	X	Twin Disk Power Take-Off No. X-9236, Model EH-221-P00, Per Twin disc Spec. #28101	1
EH-221		Clutch Assembly Per Specification 28102 Composed of:	1
	x	1)ZA-6058-AM Hub Back and Plate	
	X	1)M-2035-BB Key	
	X	1)A-5513 Cone Sleeve	
	X	1)A-3063 Cone Ring	
	X	1)X-5627 Collar Assembly Composed of:	
	X	1)5627 Collar	
	X	2)M-2004-AU Hex Head Cap Screw	
	X	2)M-193-OD Hex Nuts	
	X	2)120-B-18 Shims	
	X	1)A-6063 Floating Plate	
	X	1)A-6068 Center Plate	
	X	8)A-2705-H Release Springs	
	X	2)6971-B Driving Plate	
	X	1)Y-17 Misc. Parts Composed of:	
	X	4)A-3069 Levers	
	X	4)A-1658 Lever Pins	
	X	8)M-2050-AB Cotter Pins - 1/8" x 3/4"	
	X	8)M-130 Needle Bearings	
	X	4)A-1566 Lever Rollers	
	X	4)1822 Lever Roller Pins	
	X	4)M-2050-J Cotter Pins	
	X	2)A-1778 Cone Lock Pins	
	X	1)A-1781 Snap Ring	
	X	1)6929 Adjusting Ring	
	X	1)A-1652 Adjusting Lock Pin	
	X	1)A-1659 Adjusting Lock Pin Spring	
	X	1)M-523 Snap Ring	
	X	1)6931-C Pressure Ring	
	X	2)A-1701-A Retainer Clips	
	X	2)A-2082 Pilot Pins	
	X	4)7A-5/16 18 x 3/4 Hex Head Cap Screws 5/16" x 3/4"	
	X	4)2C-1/2 Lock Washers - 5/16"	
9238-A	X	Housing #00 SAE	1
A-6280	X	Clutch Shaft	1
6A-1 1/8 x 1 1/8 x 8 1/2	X	Key	1
M-2051-B	X	Flush Pipe Plug	1
M-2052-G	X	Reducer	1
M-268	X	Fitting	3
M-201105	X	Seal for Operating Shaft	2
A-3633	X	Operating Shaft	1
A-2375	X	Stop Collar	2
M-2041-H	X	Cup Point Set Screw	2
6621	X	Driving Ring	1
Z-925	X	Miscellaneous P.T.O. Parts Consisting of:	
	X	1)M-2156 Pilot Bearing	
	X	2)M-1640 Timken Bearing	
	X	1)A-2470-A Hub Nut	
	X	1)A-2999 Lock Washer	

Continued

DP-160
11X14 CMA
Twin Disc Clutch
Figure 7

Continued from page 95

Arrow Part No.	DP-160	Description	No. Req.
	X	1)M-2045-W Cone Sleeve Key	
	X	1)9244 Bearing Carrier	
	X	6)M-2006-AK Hex Head Cap Screw	
	X	6)M-2047-AE Lock Washer	
	X	1)A-6043 Bearing Retainer	
	X	1)A-2472 Bearing Retainer Lock	
	X	1)7A-3/8 16 x 3/4 Hex Head Cap Screw	
	X	1)2C-3/87A-1/2 13 x 2 Lock Washer	
	X	1)A-5486 Throw-out Yoke	
	X	2)M-2004-W Hex Head Cap Screw	
	X	2)M-2046-AA Lock Washer	
	X	2)104A-#C Woodruff Key	
	X	1)8377-B Hand Lever	
	X	1)7A-1/2 13 x 2 Hex Head Cap Screw	
	X	1)M-2046-AA Lock Washer	
	X	1)29A-1/2 13 Hex Nut	
	X	1)3204 Hand Hole Plate	
	X	1)3204-A Hand Hole Plate	
	X	4)12A-1/2 20 x 1/2 Hex Head Cap Screws	
	X	4)M-2047-C Lock Washer	
1144-X	X	2)A-3112-A Gasket	
7441-A	X	1)1327-K Instruction Plate (Special)	
9617-A	X	4)1333 Drive Pin	
A-6518	X	1)A-1663 Flexible Hose	
A-6619-B	X	1)29D-5/8 18 Jam Nut	
M-268	X	1)2C-1/2 Lock Washer	
M-287	X	2)M-102 Oil Cup	

DP-70/80
DP-160, 11X14 CMA
Not Shown on Figures

Arrow Part No.	DP-70/80	DP-160	Description	No. Req.
ASSEMBLY:				
XYAE-1247-1		X	Switch Assembly	1
XYAE-1254-A	X		Fitting	1
XYAE-3020-A	X		Air Starting Line Assembly	1
XYAE-3095-D			Hydraulic Inlet Line	
XYAE-3096-D	X		Hydraulic Inlet Line	1
XYAE-5097-C	X		Barrell and Plunger Assembly (Oil Pump)	1
XYAE-5097-F-1			Barrell and Plunger Assembly (Gas Injection)	
INDIVIDUAL PARTS:				
X-210712	X	X	Radiator Cap	1
XA-124	X		Gasket	1
XA-394	X		Gasket, Oil Slinger to Spiral Gear Shield	1
XA-442-A			Gasket, Cylinder Head Plate	
XA-1617-A	X		Side Cover, Plate, Clutch Side	1
XA-1670-B	X		Gasket, Side Cover Plate Clutch Side	1
XA-1678-2	X		Bearing	1
XA-1678-2		X	Bearing	2
XA-2104		X	Sight Glass, Oil Lever	1
XA-2105-A			Gasket, Sight Glass Control	
XA-2108		X	Gasket, Cover to Float Control	1
XA-2109-A		X	Gasket, Sight Glass	1
XA-2212	X		Gasket, Cap to Barrell	1
XA-2247-C	X	X	Cylinder Head Gasket	1
XA-2275-A	X		Gasket	1
XA-2346-A	X		Adjusting Rod-Ball Joint	2
XA-2346-A		X	Adjusting Rod-Ball Joint	6
XA-2573-A	X		Gasket, Cover to Tank	1
XA-2728-A	X		Spring, Plunger to Cap	1
XA-2784	X		Gasket, Throttle Valve Cover to Body	1
XA-2784		X	Gasket, Throttle Valve Cover to Body	2
XA-2804-E	X		Gasket	1
XA-2804-E		X	Gasket	2
XA-2810-C	X		Water Line	1
XA-2817	X		Upper Fan Guard	1
XA-2818	X		Lower Fan Guard	1
XA-2839	X		Gasket	1
XA-2847	X		Gasket, Bearing Retainer to Bed	1
XA-2853-D		X	Stud	12
XA-2862-A			Adjusting Collar, Vacuum Relief Valve	
XA-3106		X	Control Rod Shaft to Throttle	1
XA-3122-A	X		Air Starting Valve	1
XBM-914	X		Nipple Nut	1
XBM-1414-D	X		Oil Seal	1
XBM-1759-B	X		Air Cock	1
XBM-10012-B	X	X	Radiator	1
XBM-10784	X	X	Spring	1
XBM-10885-1	X		Check Valve	3
XBM-10885-1		X	Check Valve	6
XBM-10993-14-12	X		Male Connector	2
XBM-10994-10-8	X		Elbow, Air Starting Line	2
XBM-10994-14-12		X	Elbow, Air Starting Line	2

* For Reference Only
† SES Arrow does not currently supply this part

DP-70/80

DP-160, 11X14 CMA

Not Shown on Figures

Continued from page 97

Arrow Part No.	DP-70/80	DP-160	Description	No. Req.
XBM-19030-H-13	X		Flange	1
XBM-19030-H-13		X	Flange	2
XH-5445	X		Timken Roller Bearing	
XM-1356	X		Fuel Pump Tappet Roller	1
XM-1357	X		Fuel Pump Tappet Roller Pine	1
XM-1358	X		Fuel Pump Tappet Roller Bearing	12
XM-2631-A	X		Adjusting Screw	1
XT-125	X		Check Valve	2
XT-125		X	Check Valve	4
XT-181	X		Flywheel Wedge	1
XT-181		X	Flywheel Wedge	2



DP-115
DP-230
13 $\frac{1}{4}$ x16

Cross Section thru Cylinder and Bed

Figure 1

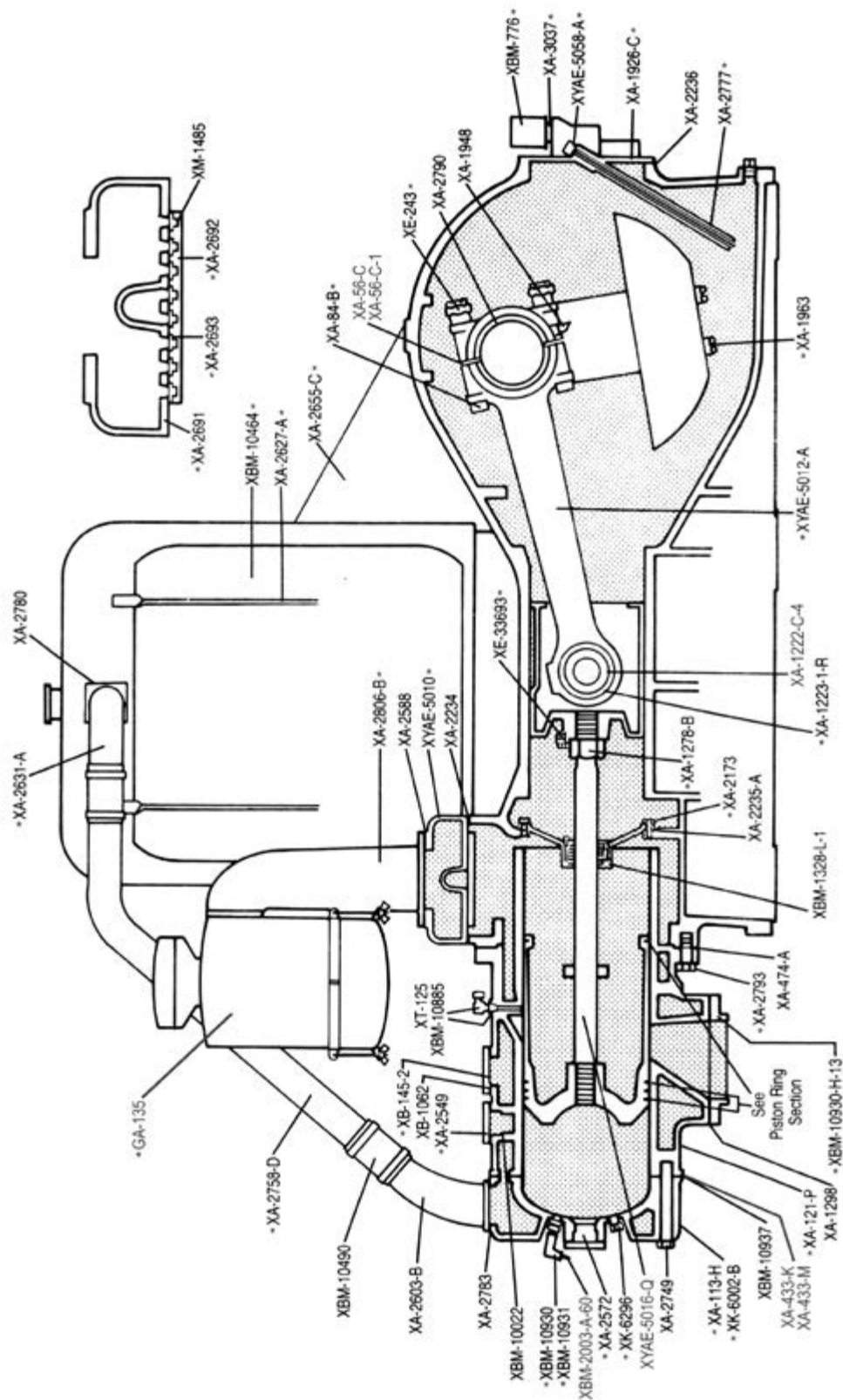


Figure 1a



DP-115, DP-230

Cross Section thru Cylinder and Bed

Figure 1 and 1a

Continued from page 101

Arrow Part No.	DP-115	DP-230	Description	No. Req.
XBM-2003-A-60	X		Sparkplug Cable	1
XBM-2003-A-76		X	Sparkplug Cable	2
XYAE-5010	X		Mixer Valve Manifold Assembly	1
XYAE-5010		X	Mixer Valve Manifold Assembly	2
XYAE-5012-A	X		Connecting Rod Assembly	1
XYAE-5016-Q	X	X	Piston & Rod Assembly, Standard	1
XYAE-5058-A	X		Oil Gauge Bayonett Assembly	1
XYAE-5512-A		X	Connecting Rod Assembly	2
XA-56-C	X		Shim, Crankpin Bearing (laminated)	2
XA-56-C-1	X		Shim, Crankpin Bearing (solid)	2
XA-84-B	X		Crankpin Bearing Bolt	2
XA-84-B		X	Crankpin Bearing Bolt	4
XA-121-P	X		Cylinder	1
XA-433-F	X		Gasket, Cylinder Head to Cylinder	1
XA-121-T-1		X	Cylinder, RH	1
XA-121-T-2		X	Cylinder, LH	1
XA-433-K	X	X	Gasket, Copper Clad (standard)	2
XA-433-M	X	X	Gasket HD Grafoil	2
XA-474-A	X		Gasket, Cylinder to Bed	1
XA-474-A		X	Gasket, Cylinder to Bed	2
XA-495	X		Gasket, (not shown)	1
XA-495		X	Gasket	2
XA-1220-E	X	X	Crosshead	1
XA-1222-C-4	X	X	Crosshead Pin	2
XA-1223-1-R	X		Crosshead Pin Bearing	1
XA-1223-1-R		X	Crosshead Pin Bearing	2
XA-1278-B	X		Piston Rod Nut	1
XA-1298	X		Gasket, Exhaust Flange to Cylinder	1
XA-1926-C	X		Breather Plate	1
XA-1948	X		Oil Dip, Connecting Rod	2
XA-1963	X		Stud	4
XA-2173	X		Stud, Stuffing Box to Bed	8
XA-2173		X	Stud, Stuffing Box to Bed	16
XA-2234	X		Gasket, Mixer Manifold to Bed	1
XA-2234		X	Gasket, Mixer Manifold to Bed	2
XA-2235-A	X		Gasket, Stuffing Box to Bed	1
XA-2235-A		X	Gasket, Stuffing Box to Bed	2
XA-2236	X		Gasket, Breather to Bed	1
XA-2549	X		Cover Plate, Gas Injection Port	2
XA-2549		X	Cover Plate, Gas Injection Port	4
XA-2572	X		Plug	2
XA-2572		X	Plug	4
XA-2588	X		Gasket, Air Cleaner Support to Manifold	1
XA-2588		X	Gasket, Air Cleaner Support to Manifold	2
XA-2603-B	X		Water Outlet Connection	1
XA-2627-A	X		Radiator Brace	2
XA-2631-A	X		Radiator Inlet Elbow	1
XA-2655-C	X		Fan Belt Guard	1

Continued

DP-115, DP-230
Cross Section thru
Cylinder and Bed
 Figure 1 and 1a
Continued from page 102

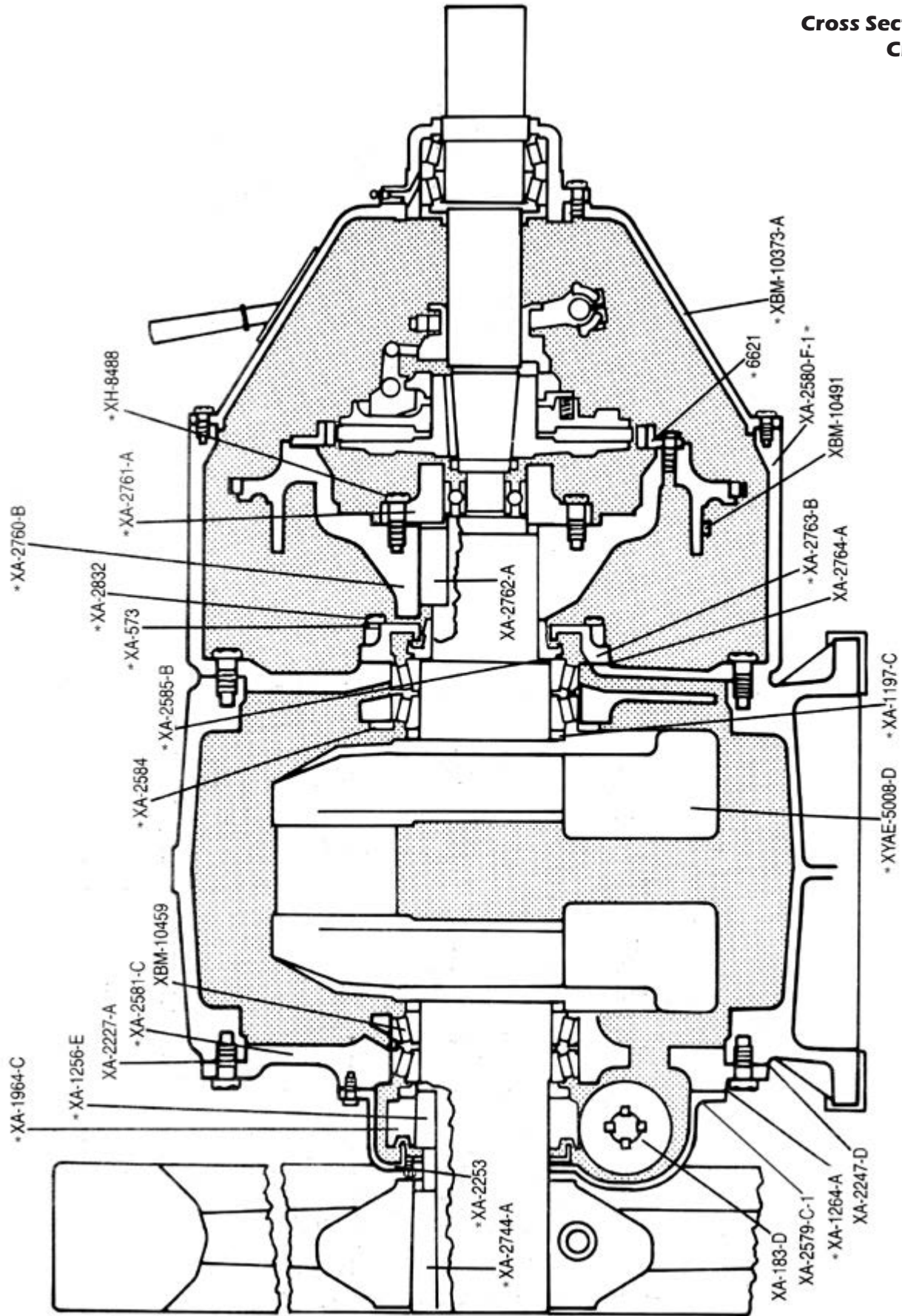
Arrow Part No.	DP-115	DP-230	Description	No. Req.
XA-2691	X		Mixer Valve Manifold	1
XA-2691		X	Mixer Valve Manifold (not shown)	2
XA-2692	X		Mixer Valve Stop	2
XA-2692		X	Mixer Valve Stop (not shown)	4
XA-2693	X		Mixer Valve	8
XA-2693		X	Mixer Valve (not shown)	16
XA-2749	X		Stud, Cylinder Head to Cylinder	12
XA-2758-D	X		Upper Water Pipe	1
XA-2749		X	Stud, Cylinder Head to Cylinder	24
XA-2777	X		Oil Gauge Pipe	1
XA-2780	X		Gasket, Radiator Inlet Elbow	1
XA-2783	X		Gasket, Water Outlet to Cylinder Head	1
XA-2783		X	Gasket, Water Outlet to Cylinder Head	2
XA-2790	X		Crankpin Bearing	1
XA-2793	X		Stud, Cylinder to Bed	14
XA-2793		X	Stud, Cylinder to Bed	22
XA-2806-B	X		Air Cleaner Support	1
XA-2807		X	Gasket, Air Cleaner Support	2
XA-2894		X	Crankpin Bearing	2
XA-2899		X	Shim, Laminated	4
XA-2899-1		X	Shim, Solid	4
XA-2933		X	Con Rod Oil Dip	2
XA-3037	X		Breather Connection, Crankcase Cover	1
XA-3037		X	Breather Connection, Crankcase Cover	4
XA-3313-A		X	Cover	2
XA-3314		X	Cover Plate	1
XA-3333		X	Gasket	2
XA-3334		X	Gasket, Crankcase End Cover	2
XA-3665	X		Stuffing Box Adaptor (not shown)	1
XA-3665		X	Stuffing Box Adaptor	2
XA-3666	X		Stuffing Box Retainer PL. (not shown)	1
XA-3666		X	Stuffing Box Retainer PL.	2
XA-3667	X		Stuffing Box Wiper Cup (not shown)	1
XA-3667		X	Stuffing Box Wiper Cup	2
XA-3668	X		Stuffing Box Vacuum Cup (not shown)	1
XA-3668		X	Stuffing Box Vacuum Cup	2
XB-145-2	X		Cover	1
XB-145-2		X	Cover	2
XB-1062	X		Gasket	1
XB-1062		X	Gasket	2
GA-135		X	Air Cleaner	2
XBM-776	X		Breather Cap	1
XBM-1328-L-1	X		Packing and Springs	1
XBM-10022	X		Gasket	2
XBM-10022		X	Gasket	4
XBM-1328-L-1		X	Packing and Springs	2
XBM-10464	X		Radiator	1
XBM-10489-B	X	X	Hose Clamp	8
XBM-10490	X	X	Hose	4
XBM-10885	X		Check Valve Assembly	2

Continued

DP-115, DP-230
**Cross Section thru
 Cylinder and Bed**
 Figure 1 and 1a

Continued from page 103

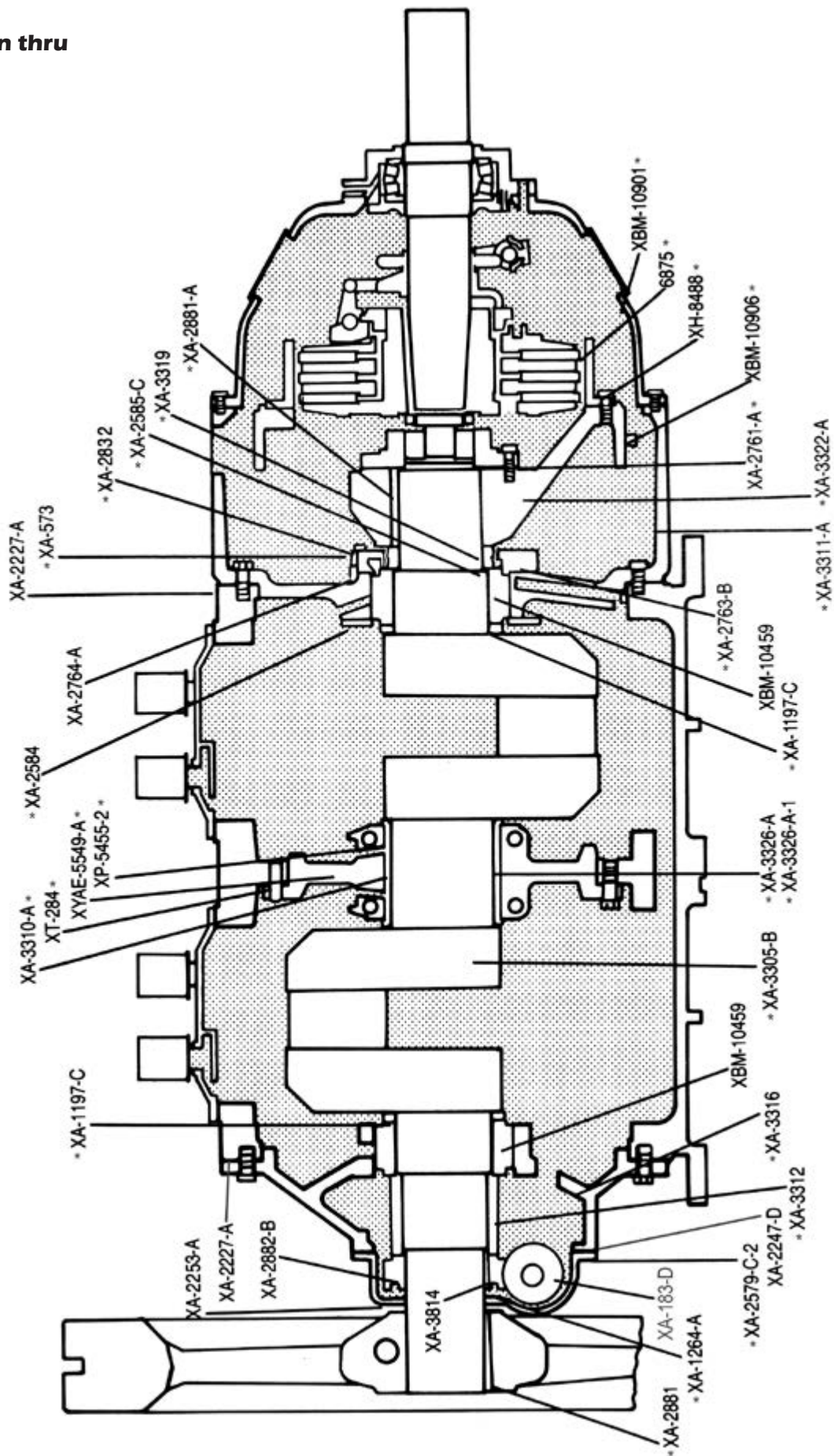
Arrow Part No.	DP-115	DP-230	Description	No. Req.
XBM-10885		X	Check Valve Assembly	6
XBM-10885	X		Check Valve Assembly	3
XBM-10904		X	Radiator	1
XBM-10930	X		Spark Plug Terminal	1
XBM-10930		X	Spark Plug Terminal	2
XBM-10930-H-13	X		Exh. Flange	1
XBM-10930-H-13		X	Exh. Flange	2
XBM-10931	X		Spark Plug Insulator	1
XBM-10931		X	Spark Plug Insulator	2
XBM-10937	X		"O" Ring Cylinder Head to Cylinder	1
XBM-10937		X	"O" Ring Cylinder Head to Cylinder	2
XE-243	X		Nut, Crankpin Bearing Bolt	2
XE-243-1		X	Nut, Crankpin Bearing Bolt	4
XE-33693	X		Lock, Piston Rod Nut	1
XE-33693		X	Lock, Piston Rod Nut	2
XK-6002-B	X		Cylinder Head	1
XK-6002-B		X	Cylinder Head	2
XK-6032-B		X	Air Cleanse Support	1
XK-6243		X	Oil Baffle, Stuffing Box	2
XK-6296	X		Plug	1
XK-6296		X	Plug	2
XM-1485		X	Mixer Valve Spring (not shown)	32
XM-1485	X		Mixer Valve Spring	16
XT-125	X		Check Valve	1
XT-125		X	Check Valve	1



DP-230

Cross Section thru Crankcase

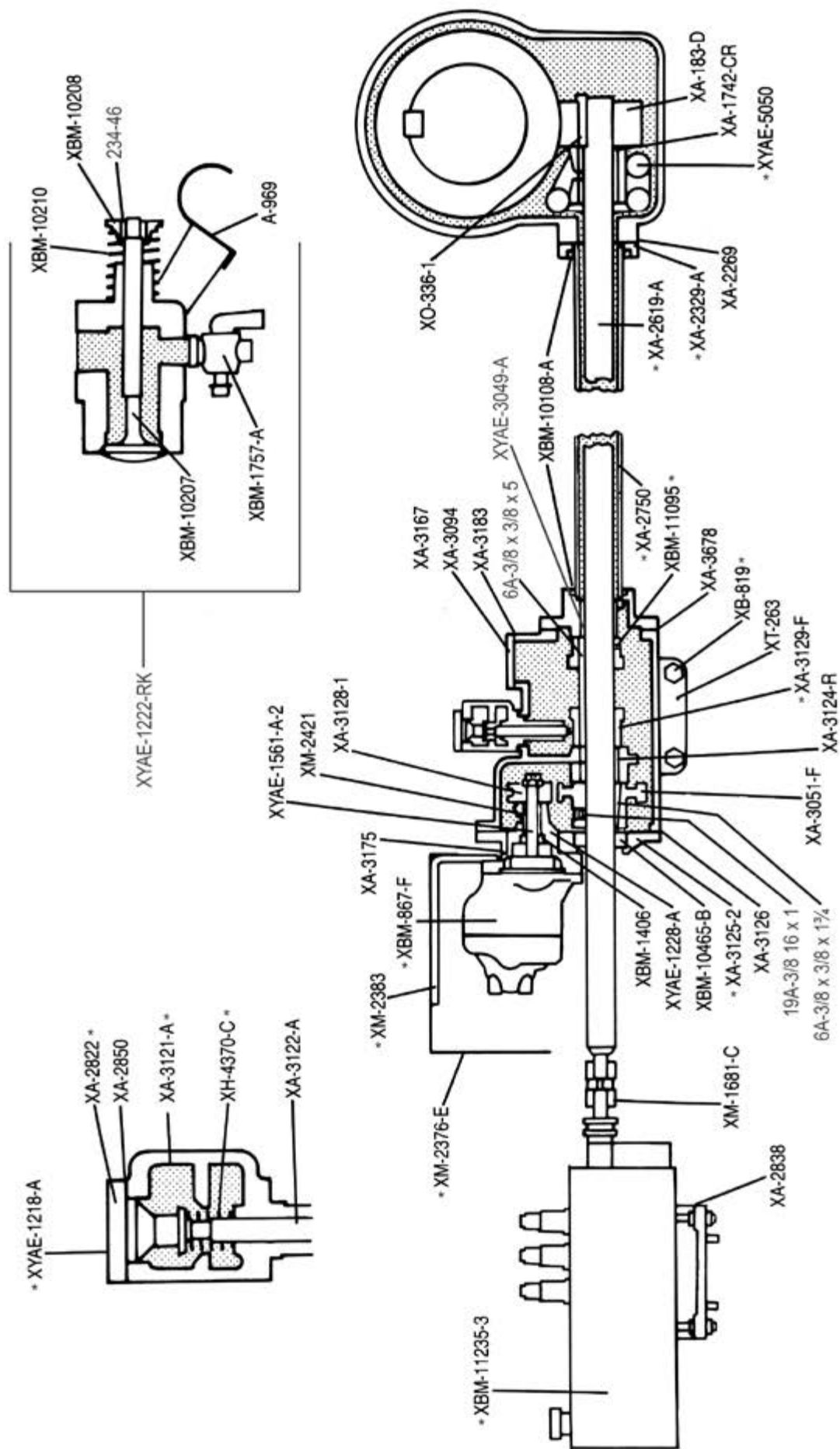
Figure 2a

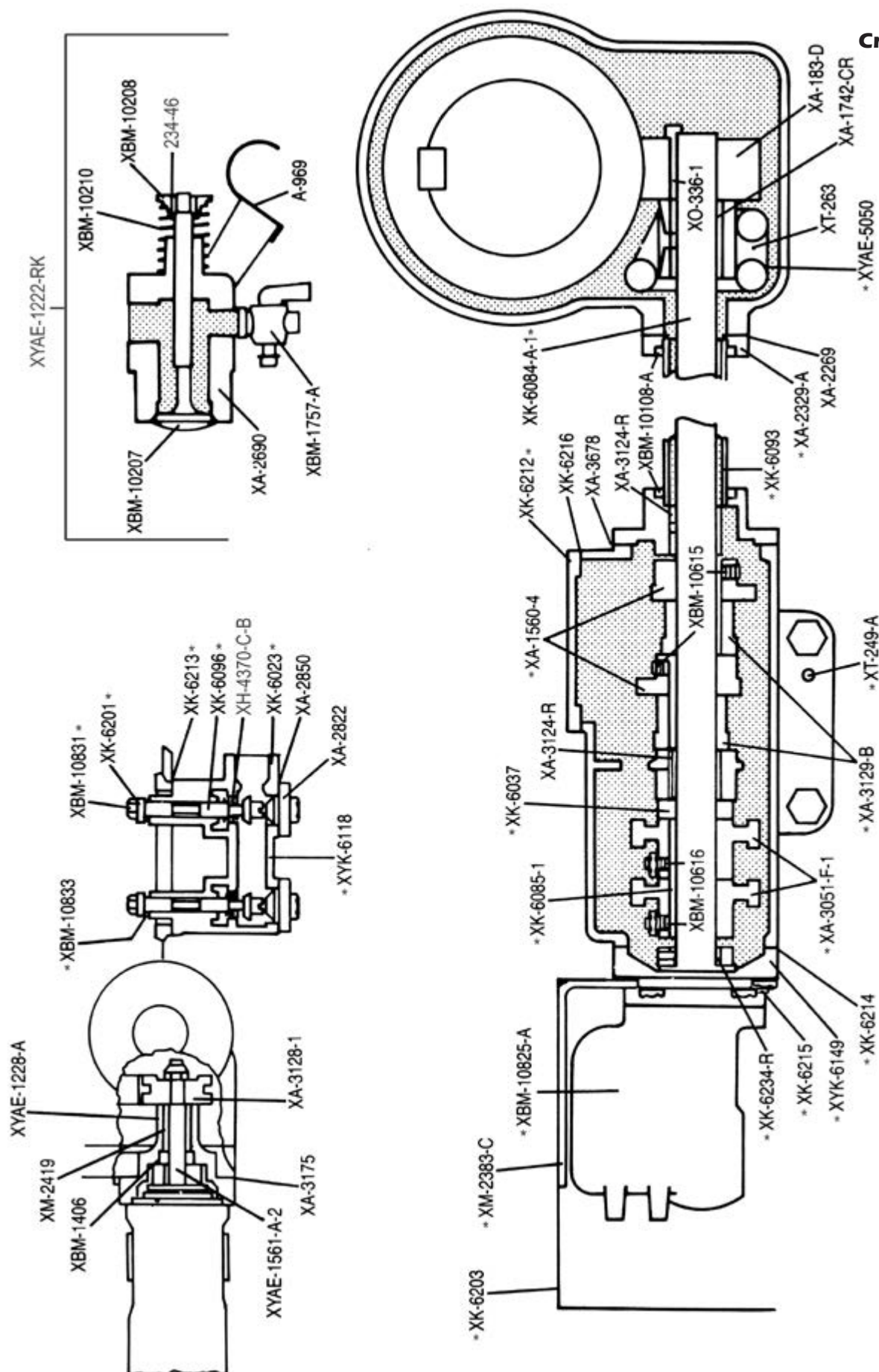


DP-115, DP-230
Cross Section thru
Crankcase
 Figure 2 and 2a

Arrow Part No.	DP-115	DP-230	Description	No. Req.
XYAE-1538			Governor Assy. (fits DP-115) see old gov. sheet	1
XYAE-2038-K			Governor Assy. (fits DP-115) see new gov. sheet	1
XYAE-5008-D	X		Crankshaft	1
XYAE-5549-A		X	Center Bearing Support	1
INDIVIDUAL PARTS:				
XA-183-D	X	X	Layshaft Gear	1
XA-573	X	X	Washer, Clamp Bolt to Bearing Support	4
XA-1197-C	X	X	Spacer, Crankshaft Inner Race	2
XA-1256-E	X		Key, Crankshaft Gear	1
XA-1264-A	X	X	Oil Slinger, Spiral Gear Shield	1
XA-1964-C	X		Crankshaft Gear	1
XA-2227-A	X	X	Gasket, Bearing Support to Bed	2
XA-2247-D	X	X	Gasket, Spiral Gear Shield	1
XA-2253	X	X	Gasket	1
XA-2579-C-1	X		Spiral Gear Cover	1
XA-2579-C-2		X	Spiral Gear Cover	1
XA-2580-F-1	X		Bearing Support	1
XA-2581-C	X		Bearing Support	1
XA-2584	X	X	Bearing Clamp	2
XA-2585-C		X	Oil Baffle	1
XA-2585-B	X		Oil Baffle	1
XA-2477-A	X		Flywheel Key	1
XA-2760-B	X		Clutch Adaptor	1
XA-2761-A	X	X	Pilot Bearing Housing	1
XA-2762-A	X		Key, Clutch Adapter to Crank	1
XA-2763-B	X	X	Bearing Support Cover	1
XA-2764-A	X	X	Gasket, Bearing Support Cover to Bearing Supp.	1
XA-2832	X	X	Bolt	4
XA-2881		X	Flywheel Key	1
XA-2881-A		X	Key, Clutch Adaptor	1
XA-2882-B		X	Crankshaft Gear	1
XA-3305-B		X	Crankshaft	1
XA-3310-A		X	Main Bearing	1
XA-3311-A		X	Bearing Support	1
XA-3312		X	Spacer, Crankshaft Cheek	1
XA-3316		X	Bearing Support	1
XA-3319		X	Slinger Spacer	1
XA-3322-A		X	Clutch Adaptor	1
XA-3326-A		X	Shim, Laminated	1
XA-3326-A-1		X	Shim. Solid	2
XA-3814		X	Key, Crankshaft Gear	1
XBM-10373-A	X		Clutch Assembly	1
XBM-10459	X	X	Main Bearing	2
XBM-10491	X		2 Fan Belts, Matched Pair	1
XBM-10901		X	Twin Disc Power Take Off	1
XBM-10906		X	"V" Belt, Matched Set of Two	1
XH-8488	X	X	Capscrew, Pilot Bearing Housing	6
XP-5455-2		X	Bolts, Center Main	4
XT-284		X	Dowel Pin	2
6621	X		Twin Disc Clutch Driving Ring	1
6875		X	Twin Disc Clutch Driving Ring	1

DP-115
**Cross Section thru
 Layshaft**
 Figure 3





DP-115, DP-230

Cross Section thru Layshaft

Figure 3 and 3a

Continued from pages 108 & 109

Arrow Part No.	DP-115	DP-230	Description	No. Req.
XYAE-1218-A	X		Air Start Valve	1
XYAE-1222	X		Relief Valve	1
XYAE-1222		X	Relief Valve	2
XYAE-1228-A	X	X	Magneto Bracket Assembly	1
XYAE-1561-A-2	X	X	Magneto Drive Assembly	1
XYAE-3049-A	X	X	Bearing Assembly	1
XYAE-5020-B	X	X	Air Start Line Assembly (not shown)	1
XYAE-5050	X		Front Layshaft Bearing Assembly	1
INDIVIDUAL PARTS:				
A-969	X		Valve Opener	1
A-969		X	Valve Opener	1
XYK-6118		X	Air Start Valve Assembly	1
XYK-6149		X	Control Box Rear Plate Assembly	1
XA-183-D	X	X	Layshaft Gear	1
XA-1560-4		X	Gas Injection Cam	2
XA-1742-CR	X	X	Front Layshaft Bearing	1
XA-2269	X	X	Gasket, Oil Seal Plate	1
XA-2329-A	X	X	Oil Seal Plate, Layshaft	1
XA-2619-A	X		Layshaft	1
XA-2690	X		Body (not shown)	1
XA-2690		X	Body (not shown)	2
XA-2750	X		Layshaft Guard	1
XA-2822	X		Cover Plate	1
XA-2822		X	Cover Plate	2
XA-2838	X	X	Gasket, Lubrication Bracket to Cylinder	1
XA-2850	X		Gasket Cover Plate	1
XA-2850		X	Gasket Cover Plate	2
XA-3051-F	X		Layshaft Drive Gear	1
XA-3051-F-1		X	Layshaft Drive Gear	2
XA-3094	X		Cover	1
XA-3121-A	X	X	Valve Body	1
XA-3122-A	X	X	Valve Body	1
XA-3124-R	X	X	Bushing Front Control Box Bearing	1
XA-3125-2	X		Control Box Flange	1
XA-3126	X		Gasket, Control Box Flange	1
XA-3128-1	X		Pinion Magneto Drive	1
XA-3129-F	X		Air Starting Cam	1
XA-3129-B		X	Air Starting Cam	2
XA-3167	X		Gasket, Air Starting Valve to Control Box	1
XA-3175	X	X	Gasket, Magneto Bracket to Control Box Flange	1
XA-3183	X		Gasket, Top Cover to Control Box	1
6A-3/8 x 3/8 x 5	X		Key, Layshaft Cam	1
XA-3678	X	X	Gasket, Front Bearing to Control Box	1
XB-819	X		Stud, Control Box to Bed	3
XBM-867-F	X		Magneto	1
XBM-1406	X	X	Oil Seal, Magneto Drive	1
XBM-1757-A	X		Air Cock	1
XBM-1757-A		X	Air Cock	2
XBM-10108-A	X	X	Oil Seal, Layshaft Guard	2

Continued

DP-115, DP-230
Cross Section thru
Layshaft
 Figure 3 and 3a
Continued from page 110

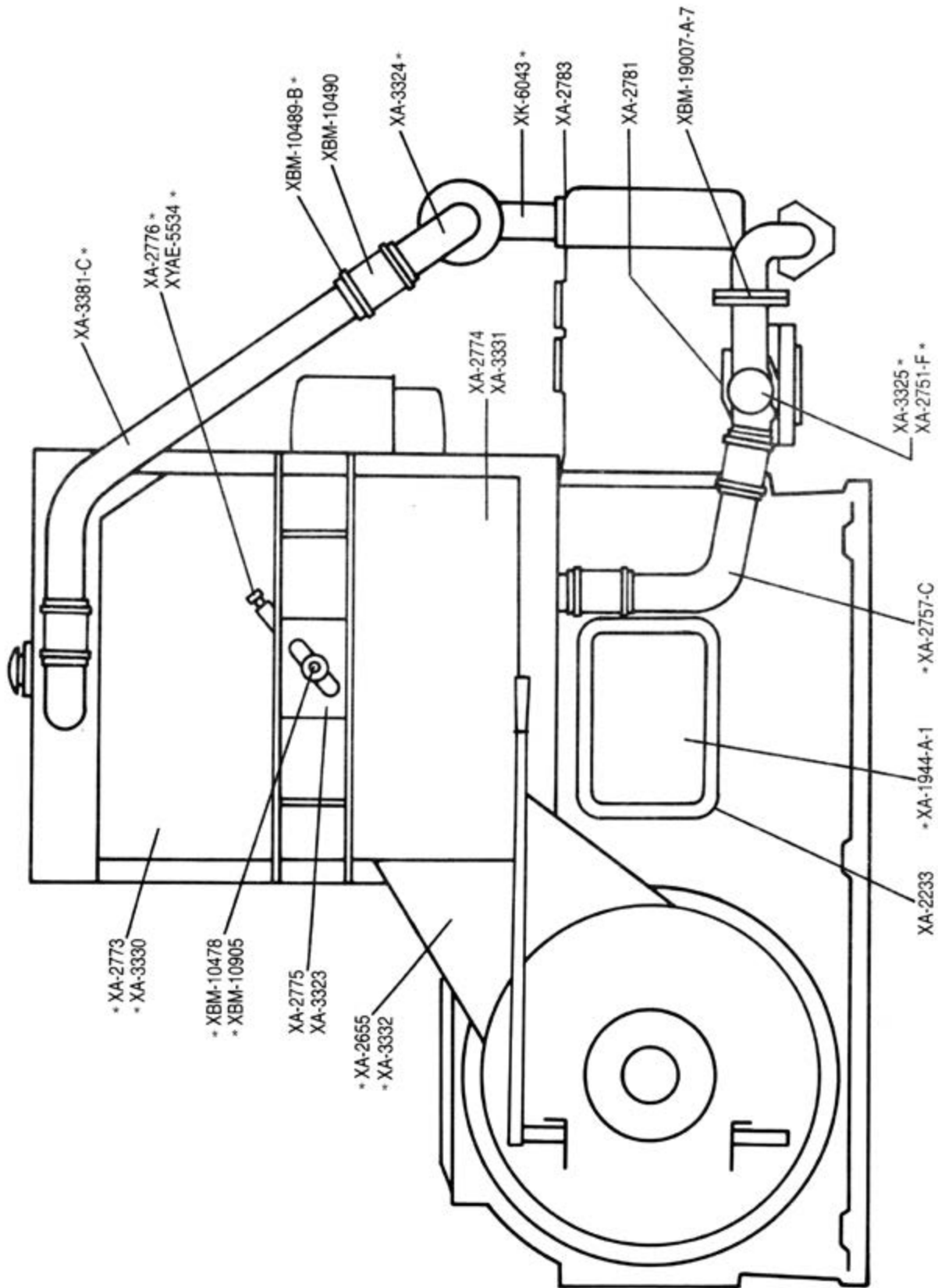
Arrow Part No.	DP-115	DP-230	Description	No. Req.
XBM-10207	X		Relief Valve Assembly	1
XBM-10207		X	Relief Valve Assembly	2
XBM-10208	X		Valve Spring Cap	1
XBM-10208		X	Valve Spring Cap	2
234-46	X		Cap Lock	2
234-46		X	Cap Lock	4
XBM-10210	X		Spring Valve	1
XBM-10210		X	Spring	2
XBM-10465-B	X		Oil Seal, Layshaft	1
XBM-10615		X	Set Screw	2
19A-3/8 16 x 1	X		Set Screw	2
19A-3/8 16 x 1		X	Set Screw	4
XBM-10825-A		X	Magneto	1
XBM-10831		X	Nut	2
XBM-10833		X	"O" Ring	2
XBM-10994-14-12	X		Elbow (not shown)	1
XBM-11095	X		Set Screw	2
XBM-11235-3	X		Lubricator	1
6A-3/8 x 3/8 x 1 3/4	X		Key	1
XH-4370-C-B	X		Spring	1
XH-4370-C-B		X	Spring	2
XK-6023		X	Body	1
XK-6037		X	Spacer	1
XK-6084-A-1		X	Layshaft	1
XK-6085-1		X	Key, Layshaft Gear	3
XK-6093		X	Layshaft Guard	1
XK-6096		X	Valve	2
XK-6201		X	Washer	2
XK-6203		X	Magneto Weather Cover	1
XK-6203		X	Magneto Weather Cover	1
XK-6212		X	Top Cover Plate to Control Box	1
XK-6213		X	Gasket	1
XK-6214		X	Gasket	1
XK-6215		X	Stud	4
XK-6216		X	Gasket, Top Cover Plate to Control Box	1
XK-6234-R		X	Bushing	1
XM-1681-C	X		Coupling Lubrication to Shaft	1
XM-2376-E	X		Magneto Weather Cover	1
XM-2383	X		Bracket, Magneto Cover	1
XM-2383-C		X	Bracket, Magneto Cover	1
XM-2419	X	X	Magneto Coupling (see Magneto page)	1
XM-2420-A	X	X	Magneto Drive Shaft (see Magneto page)	1
XM-2421	X	X	Bushing Magneto Drive	1
X0-336-1	X	X	Key, Layshaft Gear	1
XT-249-A		X	Dowel Pin	2
XT-263	X	X	Dowel Pin	1

DP-115, DP-230

Side View

Clutch Side

Figure 4



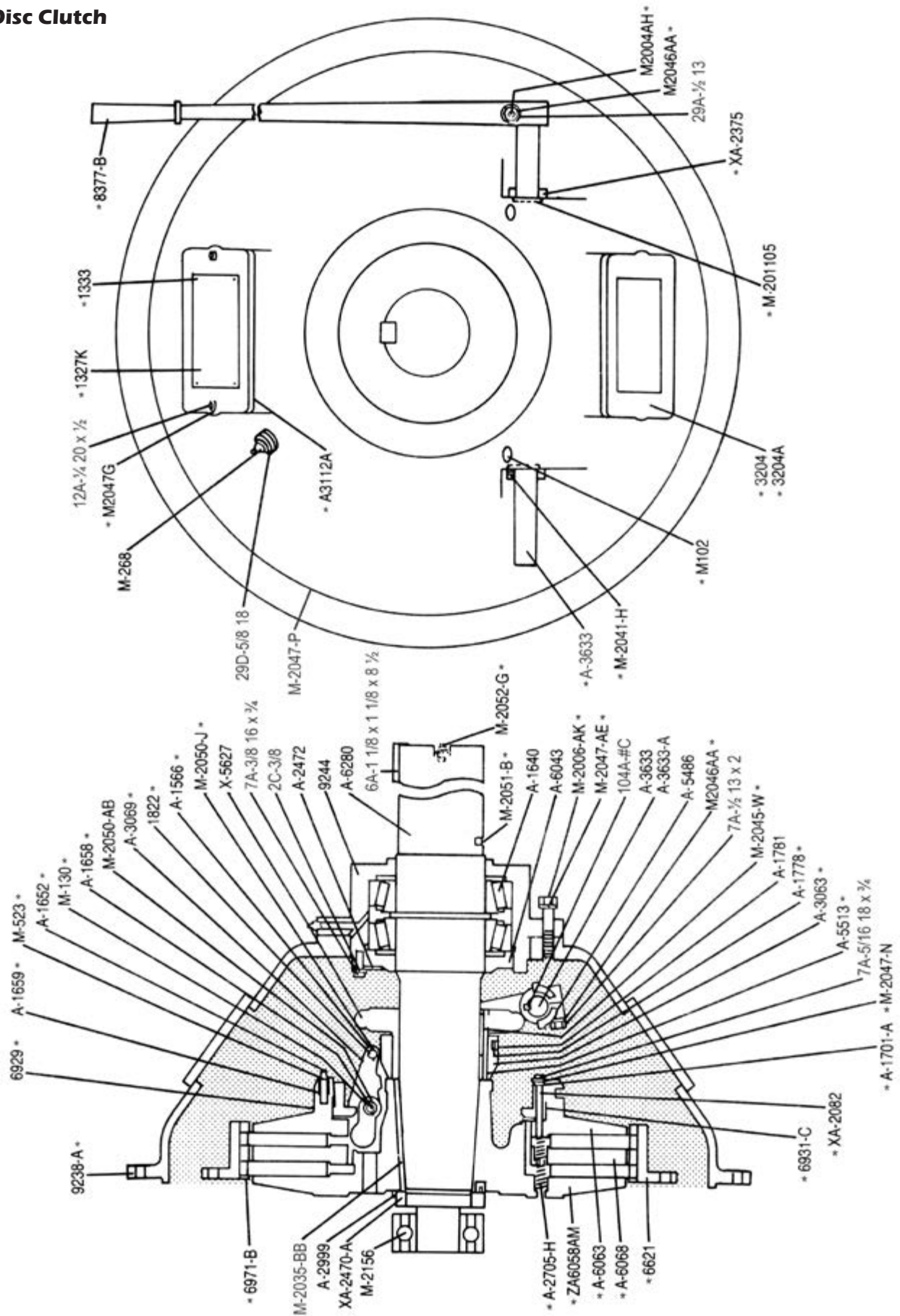
DP-115, DP-230
Side View
Clutch Side
Figure 4

Arrow Part No.	DP-115	DP-230	Description	No. Req.
XYAE-5534		X	Fan Adjustment Screw	1
XA-1944-A-1	X	X	Side Cover Plate	1
XA-2233	X	X	Gasket	1
XA-2655	X		Fan Belt Guard	1
XA-2751-F	X		Water Inlet Connection	1
XA-2757-C		X	Lower Water Line	1
XA-2773	X		Upper Fan Guard	1
XA-2774	X		Lower Fan Guard	1
XA-2775	X		Fan Support	1
XA-2776	X		Fan Adjustment Screw	1
XA-2781	X	X	Gasket	1
XA-2783	X		Gasket	1
XA-2783		X	Gasket	2
XA-3323		X	Fan Support	1
XA-3324		X	Water Connection	1
XA-3325		X	Water Inlet	1
XA-3330		X	Upper Fan Guard	1
XA-3331		X	Lower Fan Guard	1
XA-3332		X	Fan Belt Guard	1
XA-3381-C		X	Upper Water Line	1
XBM-10478	X		Fan Assembly	1
XBM-10489-B	X	X	Hose Clamps	8
XBM-10490	X	X	Hose	4
XBM-10905		X	Fan Assembly	1
XBM-19007-A-7		X	Gasket	2
XK-6043		X	Water Outlet	1
ARO-159	X		Gasket Set Cylinder & Head	1
ARO-159		X	Gasket Set Cylinder & Head	2

DP-115

Twin Disc Clutch

Figure 5



DP-115
Twin Disk Clutch
Figure 5

Arrow Part No.	DP-115	Description	No. Req.
BM-10373-A	X	Twin Disk Power Take-Off No. X-9236, Model EH-221-P00, Per Twin disc Spec. #28101	1
EH-221		Clutch Assembly Per Specification 28102 Composed of:	1
	x	1)ZA-6058-AM Hub Back and Plate	
	X	1)M-2035-BB Key	
	X	1)A-5513 Cone Sleeve	
	X	1)A-3063 Cone Ring	
	X	1)X-5627 Collar Assembly Composed of:	
	X	1)5627 Collar	
	X	2)M-2004-AU Hex Head Cap Screw	
	X	2)M-193-OD Hex Nuts	
	X	2)120-B-18 Shims	
	X	1)A-6063 Floating Plate	
	X	1)A-6068 Center Plate	
	X	8)A-2705-H Release Springs	
	X	2)6971-B Driving Plate	
	X	1)Y-17 Misc. Parts Composed of:	
	X	4)A-3069 Levers	
	X	4)A-1658 Lever Pins	
	X	8)M-2050-AB Cotter Pins - 1/8" x 3/4"	
	X	8)M-130 Needle Bearings	
	X	4)A-1566 Lever Rollers	
	X	4)1822 Lever Roller Pins	
	X	4)M-2050-J Cotter Pins	
	X	2)A-1778 Cone Lock Pins	
	X	1)A-1781 Snap Ring	
	X	1)6929 Adjusting Ring	
	X	1)A-1652 Adjusting Lock Pin	
	X	1)A-1659 Adjusting Lock Pin Spring	
	X	1)M-523 Snap Ring	
	X	1)6931-C Pressure Ring	
	X	2)A-1701-A Retainer Clips	
	X	2)A-2082 Pilot Pins	
	X	4)7A-5/16 18 x 3/4 Hex Head Cap Screws 5/16" x 3/4"	
	X	4)M-2047-N Lock Washers - 5/16"	
9238-A	X	Housing #00 SAE	1
A-6280	X	Clutch Shaft	1
6A-1 1/8 x 1 1/8 x 8 1/2	X	Key	1
M-2051-B	X	Flush Pipe Plug	1
M-2052-G	X	Reducer	1
M-268	X	Fitting	3
M-201105	X	Seal for Operating Shaft	2
A-3633	X	Operating Shaft	1
A-2375	X	Stop Collar	2
M-2041-H	X	Cup Point Set Screw	2
6621	X	Driving Ring	1
Z-925	X	Miscellaneous P.T.O. Parts Consisting of:	
	X	1)M-2156 Pilot Bearing	
	X	2)M-1640 Timken Bearing	
	X	1)A-2470-A Hub Nut	
	X	1)A-2999 Lock Washer	

Continued

DP-115

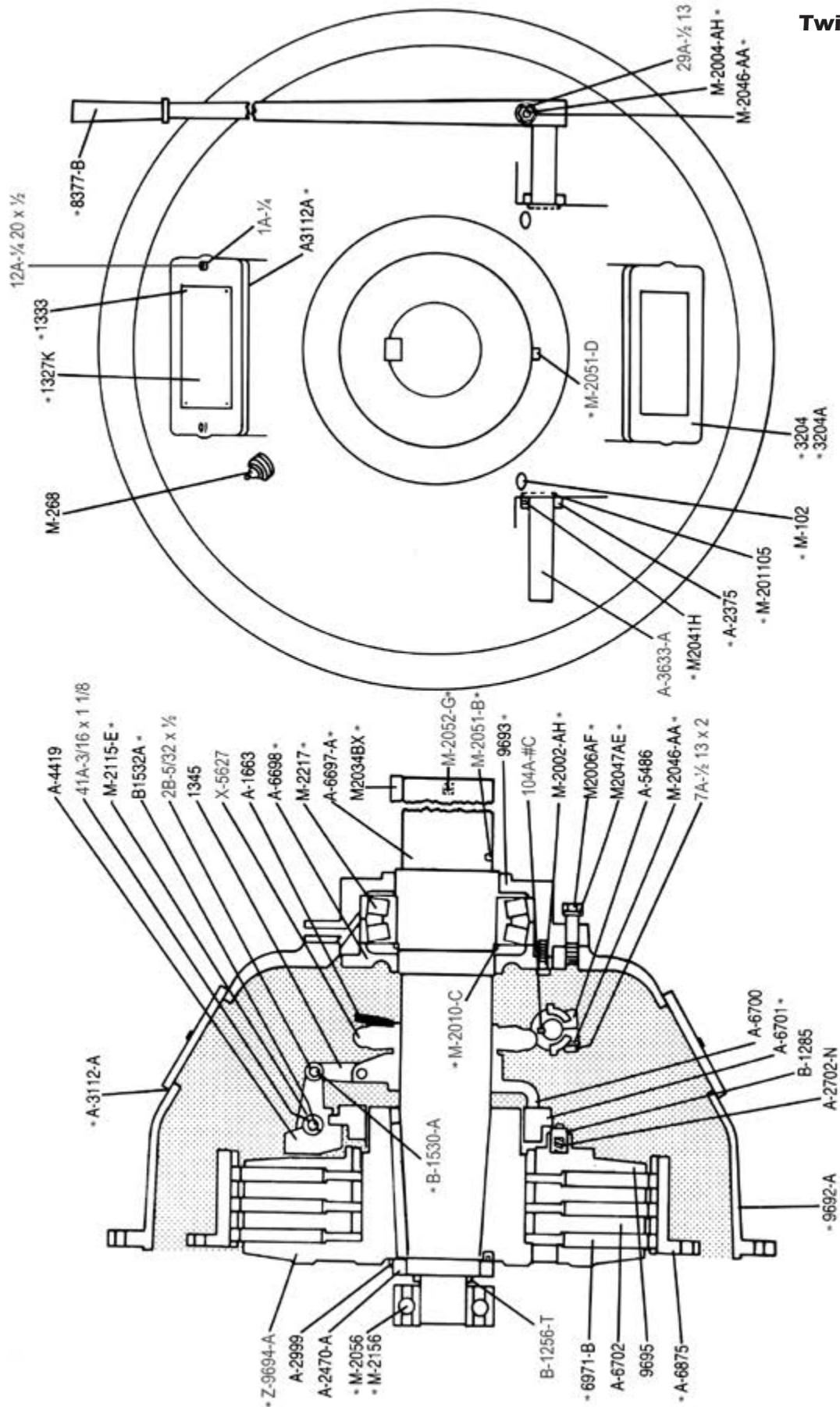
Twin Disc Clutch

Figure 5

Continued from page 115

Arrow Part No.	DP-115	Description	No. Req.
	X	1)M-2045-W Cone Sleeve Key	
	X	1)9244 Bearing Carrier	
	X	6)M-2006-AK Hex Head Cap Screw	
	X	6)M-2047-AE Lock Washer	
	X	1)A-6043 Bearing Retainer	
	X	1)A-2472 Bearing Retainer Lock	
	X	1)7A-3/8 16 x 3/4 Hex Head Cap Screw	
	X	1)2C-3/8 Lock Washer	
	X	1)A-5486 Throw-out Yoke	
	X	2)7A-1/2 13 x 2 Hex Head Cap Screw	
	X	2)M-2046-AA Lock Washer	
	X	2)104A-#C Woodruff Key	
	X	1)8377-B Hand Lever	
	X	1)M-2004-AH Hex Head Cap Screw	
	X	1)M-2046-AA Lock Washer	
	X	1)29A-1/2 13 Hex Nut	
	X	1)3204 Hand Hole Plate	
	X	1)3204-A Hand Hole Plate	
	X	4)12A-1/4 20 x 1/2 Hex Head Cap Screws	
	X	4)M-2047-G Lock Washer	
	X	2)A-3112-A Gasket	
	X	1)1327-K Instruction Plate (Special)	
	X	4)1333 Drive Pin	
	X	1)A-1663 Flexible Hose	
	X	1)29D-5/8 18 Jam Nut	
	X	1)M-2046-AF Lock Washer	
	X	2)M-102 Oil Cup	
1144-X	X	Shaft Opr	
X-7441-A	X	Lever Hand	
9617-A	X	Housing	
A-6518	X	Ring Drive	
M-268	X	Fitting	
M-287	X	Fitting	

DP-230
Twin Disk Clutch
Figure 6



DP-230

Twin Disc Clutch

Figure 6

Continued from page 117

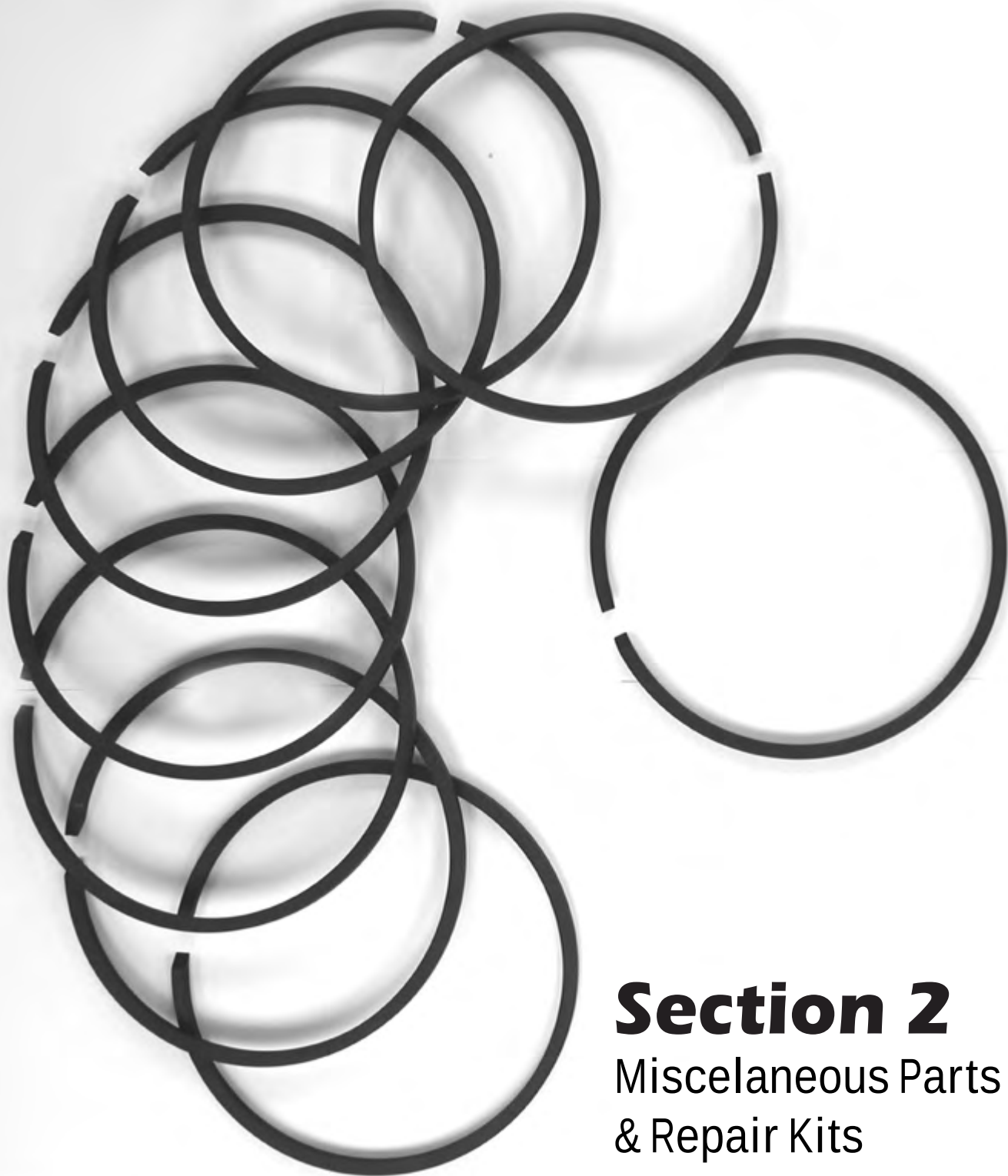
Arrow Part No.	DP-230	Description	No. Req.
BM-10901	X	Twin Disc Power Take-Off No. X-9691-A, Model SP-321-P00, Per Twin Disc Spec. #28395	1
SP-321	X	Clutch Assy. Per Specification 28396 Composed of:	1
	X	1)Z-9694-A Hub and Back Plate	
	X	1)F-9 Floating Plate Assembly Composed of	
	X	1)9695 Floating Plate	
	X	4)A-4419 Levers	
	X	4)B-1532-A Lever Pin	
	X	4)41A-3/16 x 1 1/8 Roll Pin	
	X	1)B-1285 Adjusting Lock Pin	
	X	1)A-2702-N Adjusting Lock Pin Spring	
	X	8)M-2115-E Spring Washer	
	X	1)S-636 Sliding Sleeve Assembly Composed of:	
	X	1)A-6700 Sliding Sleeve	
	X	8)1345 Lever Link	
	X	8)B-1530-A Lever Link Pin	
	X	8)2B-5/32 x 1/2 Roll Pin	
	X	1)X-5627 Collar Assembly Composed of:	
	X	1)5627 Collar	
	X	2)M-2004-AV Hex Head Cap Screw	
	X	2)M-193-OD Hex Nut	
	X	2)120-B-18 Shims	
	X	3)6971-B Driving Plate	
	X	1)A-6701 Adjusting Ring	
	X	2)A-6702 Center Plate	
9692-A	X	Housing #00 SAE	1
A-6697-A	X	Clutch Shaft	1
M-2034-BX	X	Key	1
M-2051-B	X	Flush Pipe Plug	1
M-2052-G	X	Reducer	1
M-268	X	Hydraulic Fitting	3
M-201105	X	Operating Shaft Seal	2
A-3633-A	X	Operating Shaft	1
M-2156	X	Pilot Bearing	1
A-2375	X	Stop Collar	2
M-2041-H	X	Cup Point Set Screw	2
6875	X	Driving Ring	1

Continued

DP-230
Twin Disk Clutch
 Figure 6

Continued from page 118

Arrow Part No.	DP-230	Description	No. Req.
Z-926	X	Misc. P.T.O. Parts Consisting of:	
	X	1)M-2217 Roller Bearing	
	x	1)M-2034-BA Hub Key	
	X	1)A-2470-A Hub Nut	
	X	1)A-2999 Lock Washer	
	X	1)9693 Bearing Carrier	
	X	6)M-2006-AF Hex Head Cap Screw	
	X	6)M-2047-AE Lock Washer	
	X	1)A-6698 Bearing Retainer	
	X	6)M-2002-AH Hex Head Cap Screw	
	X	1)A-5486 Throw-out Yoke	
	X	2)7A-½ 13 x 2 Hex Head Cap Screw	
	X	2)M-2046-AA Lock Washer	
	X	2)104A-#C Woodruff Key	
	X	1)8377-B Hand Lever	
	X	1)M-2004-AH Hex Head Cap Screw	
	X	1)M-2046-AA Lock Washer	
	X	1)29A-½ 13 Hex Nut	
	X	1)3204 Hand Hole Plate	
	X	1)3204-A Hand Hole Plate	
	X	4)12A-¼ 20 x ½ Hex Head Cap Screw	
	X	4)1A-¼ Lock Washer	
	X	2)A-3112-A Gasket	
	X	1)1327-K Instruction Plate (special)	
	X	4)1333 Drive Pins	
	X	1)A-1663 Flexible Hose	
	X	1)M-2046-AF Lock Washer	
	X	2)M-102 Oil Cup	
	X	1)M-2010-C Snap Ring	
	X	1)M-2051-D Pipe Plug	
	X	1)B-1256-T Pilot Bearing Spacer	



Section 2

Miscellaneous Parts
& Repair Kits

Arrow Piston Ring Sets for Ajax Engines

Set No.	Engine Size	Ring Part No.	Ring Size	Rings Per Set
†ARO-171	DV or DVA	XM-2317-A	4 x 1/4 - STD.	4
ARO-100	5 x 6½ WL	XM-2517	5 x 1/4 - STD.	5
ARO-101	5 x 6½ WL	XM-2517-3	5 x 1/4 - 1/8 OS	5
ARO-102	6½ x 8 CMA	XA-3543	6 1/2 x 1/4 STD.	5
ARO-176	6½ x 8 CMA	XA-3543-1	6 1/2 x 1/4 - 1/32 OS	5
ARO-177	6½ x 8 CMA	XA-3543-2	6 1/2 x 1/4 - 1/16 OS	5
ARO-103	6½ x 8 CMA	XA-3543-3	6 1/2 x 1/4 - 1/8 OS	5
ARO-172	6½ x 8 EA-22	XA-3523	6 1/2 x 5/32 STD.	4
ARO-173	6½ x 8 EA-22	XA-3523-1	6 1/2 x 5/32 - 1/32 OS	4
ARO-174	6½ x 8 EA-22	XA-3523-2	6 1/2 x 5/32 - 1/16 OS	4
ARO-175	6½ x 8 EA-22	XA-3523-3	6 1/2 x 5/32 - 1/8 OS	4
ARO-104	7¼ x 8 CMA	XA-3743	7 1/4 x 5/16 STD.	5
ARO-179	7¼ x 8 CMA	XA-3743-1	7 1/4 x 5/16 - 1/32 OS	5
ARO-180	7¼ x 8 CMA	XA-3743-2	7 1/4 x 5/16 - 1/16 OS	5
ARO-105	7¼ x 8 CMA	XA-3743-3	7 1/4 x 5/16 - 1/8 OS	4
ARO-106	7¼ x 8 EA-30	XA-3731	7 1/4 x 5/32 STD.	4
ARO-178	7¼ x 8 EA-30	XA-3731-2	7 1/4 x 5/32 - 1/16 OS	4
ARO-107	7¼ x 8 EA-30	XA-3731-3	7 1/4 x 5/32 - 1/8 OS	4
ARO-108	7½ x 10 CMA	XH-1017	7 1/2 x 5/16 STD.	5
ARO-181	7½ x 10 CMA	XH-1017-1	7 1/2 x 5/16 - 1/32 OS	5
ARO-182	7½ x 10 CMA	XH-1017-2	7 1/2 x 5/16 - 1/16 OS	5
ARO-109	7½ x 10 CMA	XH-1017-3	7 1/2 x 5/16 - 1/8 OS	5
ARO-110	7½ x 10 E-30	XA-3349	7 1/2 x 5/32 STD.	4
†ARO-111	7½ x 10 E-30	XA-3349-3	7 1/2 x 5/32 - 1/8 OS	4
ARO-112	8½ x 10 CMA	XH-4163-A	8 1/2 x 5/16 STD.	5
ARO-185	8½ x 10 CMA	XH-4163-A-1	8 1/2 x 5/16 - 1/32 OS	5
ARO-186	8½ x 10 CMA	XH-4163-A-2	8 1/2 x 5/16 - 1/16 OS	5
ARO-113	8½ x 10 CMA	XH-4163-A-3	8 1/2 x 5/16 - 1/8 OS	5
ARO-114	8½ x 10 E-42	XA-2943	8 1/2 x 5/32 STD.	4
ARO-166	8½ x 10 E-42	XA-2943-1	8 1/2 x 5/32 - 1/32 OS	4

Continued

Arrow Piston Ring Sets for Ajax Engines

Set No.	Engine Size	Ring Part No.	Ring Size	Rings Per Set
ARO-183	8½ x 10 E-42	XA-2943-2	8 1/2 x 5/32 - 1/16 OS	4
†ARO-184	8½ x 10 E-42	XA-2943-1	8 1/2 x 5/32 - 1/32 OS	4
ARO-115	8½ x 10 E-42	XA-2943-3	8 1/2 x 5/32 - 1/8 OS	4
†ARO-167	8½ x 10 E-42	XA-2943-4	8 1/2 x 5/32 - 3-16 OS	4
ARO-116	9½ x 12 DP-60	XA-3831	9 1/2 x 3/16 STD.	4
ARO-187	9½ x 12 DP-60	XA-3831-2	9 1/2 x 3/16 - 1/16 OS	4
†ARO-117	9½ x 12 DP-60	XA-3831-3	9 1/2 x 3/16 - 1/8 OS	4
†ARO-118	10½ x 13 CMA	XA-154-A	10 1/2 x 3/8 STD.	5
†ARO-119	10½ x 13 CMA	XA-154-A-3	10 1/2 x 3/8 - 1/8 OS	5
ARO-120	11x14 DP-80 & DP-160	XA-3762	11 x 3/16 STD.	4
†ARO-188	11x14 DP-80 & DP-160	XA-3762-2	11 x 3/16 - 1/16 OS	4
†ARO-121	11x14 DP-80 & DP-160	XA-3762-3	11 x 3/16 - 1/8 OS	4
ARO-122	11x14 CMA & DP-70	XA-156	11 x 3/8 STD.	5
†ARO-192	11x14 CMA & DP-70	XA-156-1	11 x 3/8 -1/32 OS	5
†ARO-123	11x14 CMA & DP-70	XA-156-3	11 x 3/8 -1/8 OS	5
†ARO-191	11x14 CMA & DP-70	XA-156-4	11 x 3/8 -1/4 OS	5
ARO-124	12 x 15 CMA	XA-155-A	12 x 7/16 STD.	5
†ARO-125	12 x 15 CMA	XA-155-A-3	12 x 7/16 - 1/8 OS	5
†ARO-126	12½ x 16 CM	XA-1207	12 1/2 x 7/16 STD.	5
†ARO-127	12½ x 16 CM	XA-1207-3	12 1/2 x 7/16 - 1/8 OS	5
†ARO-128	13¼ x 16 DP-100	XH-342-A	13 1/4 x 7/16 STD.	6
†ARO-128 OS	13 1/4 x 7/16	XH-342-A-3	1/16 OS	6
†ARO-129	13¼ x 16 DP-100	XH-342-A-5	13 1/4 x 7/16 -1/8 OS	6
†ARO-193	13¼ x 16 DP-100	XH-342-A-4	13 1/4 x 7/16 -1/4 OS	6
ARO-130	13¼ x 16 DP-115 & DP-230	XA-2791	13 1/4 x 1/4 STD.	4
†ARO-165	13¼ x 16 DP-115 & DP-230	XA-2791-1	13 1/4 x 1/4 - 1/32 OS	4
ARO-189	13¼ x 16 DP-115 & DP-230	XA-2791-2	13 1/4 x 1/4 - 1/16 OS	4
†ARO-131	13¼ x 16 DP-115 & DP-230	XA-2791-3	13 1/4 x 1/4 - 1/8 OS	4
ARO-194	13¼ x 16 DP-115 & DP-230	XA-2791-4	13 1/4 x 1/4 OS	4

Arrow Pistons and Piston Rods for Ajax Engines

Item	Description	Engine Size
XYAE-1316-1-P	Piston & Rod Assembly	71/4 X 8
XYAE-1316-5-P	Piston & Rod Assembly Semi-finished	71/4 X 8
XYAE-1316-A-2P	Piston & Rod Assembly	71/4 X 8
XYAE-1316-A-5P	Piston & Rod Assembly Semi-finished	71/4 X 8
XYAE-2016-1-P	Piston Rod S 5r, Standard	81/2 X 10
XYAE-2016-5-P	Piston Rod 5r Semi-finished	81/2 X 10
XYAE-2016-A-1P	Piston Rod A 4r, Standard	81/2 X 10
XYAE-2016-A-5P	Piston Rod A 4r Semi-finished	81/2 X 10
XYAE-5016-Q	Piston & Rod Assembly, Standard	DP-115 & DP-230
XYAE-6016-A	Pstn & Rod Assembly	91/2 X 12
XYAE-7516-B-2	Piston & Rod Assembly, Lean Burn	DPC-360 & DPC-180
XYAE-7516-C-2	Piston & Rod Assembly, Standard	DPC-360 & DPC-180
XYAE-8016-C-6-P	Piston & Rod Assembly, 11" Semi-finished	11X14
XYAE-8016-C-P	Pstn & Rod Assembly	11X14





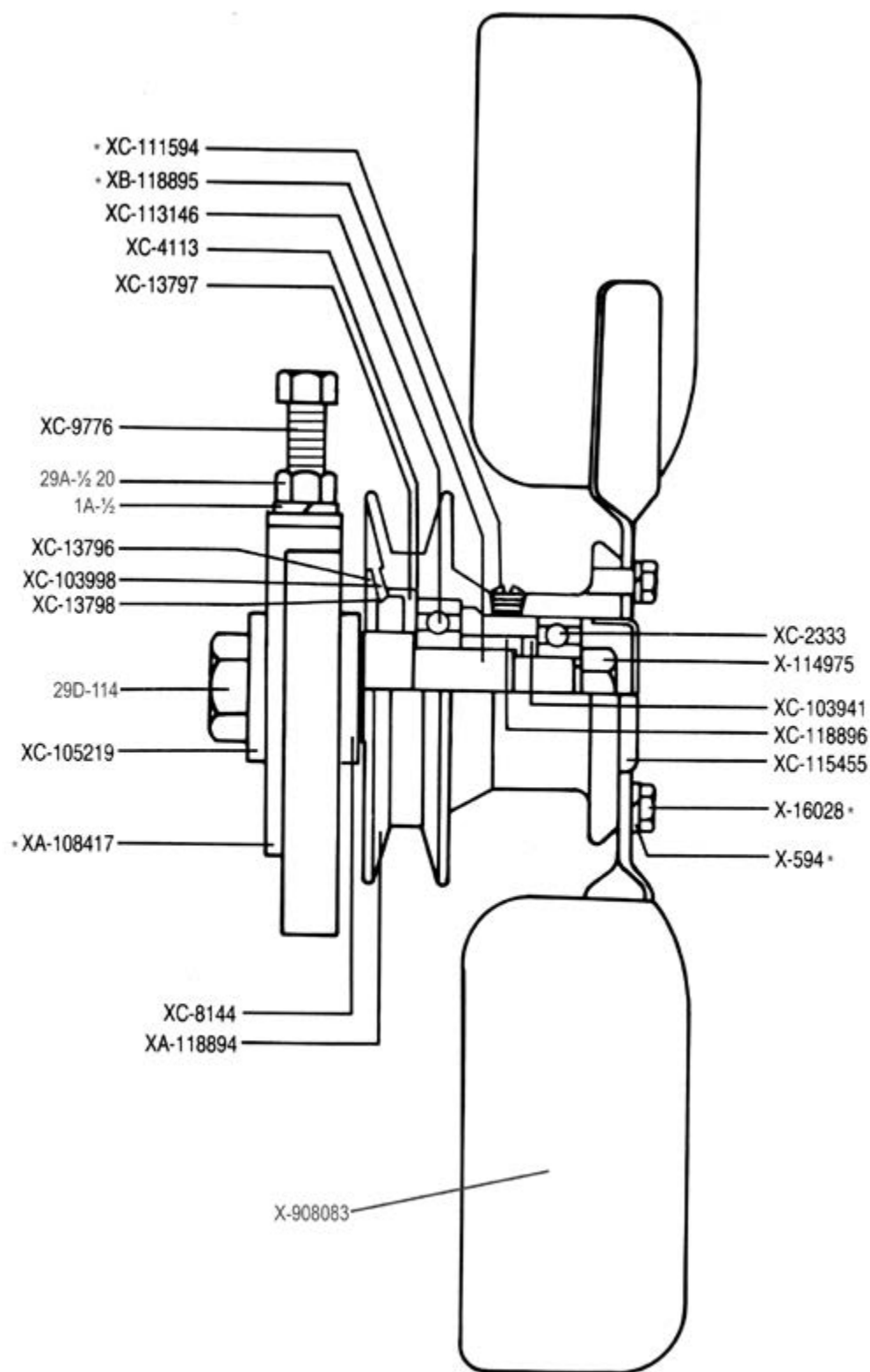
Repair Kits

Fan Hub

Fits Engines

6½x8 thru 8½x10 CMA

Figure 1



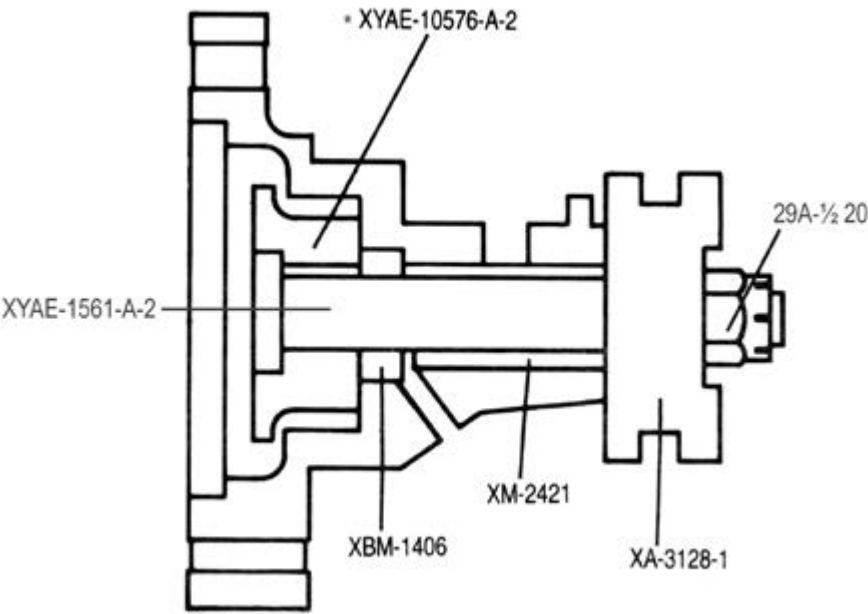
Fan Hub
Fits Engines
6½x8 thru 8½x10 CMA
 Figure 1

Arrow Part No.	Fan Hub Repair Kit Parts	Description	No. Req.
ARO-164	X	Fan Hub Repair Kit (includes those parts with an X)	1
X-594		Lock Washer	4
29A-½ 20		Lock Nut	1
1A-½		Lock Washer	1
29D-114		Flex Lox Nut	1
X-16028		Cap Screw (not included in assembly)	4
X-114975	X	Marsden Nut	1
X-131063		Fan Hub Assembly	1
X-108417		Bracket	1
X-118894		Hub	1
X-118895	X	Spindle	1
X-2333	X	Bearing	1
X-4113		Oil Gasket	1
X-8144	X	Clamp Washer	1
XC-9776	X	Adjusting Screw	1
X-13796	X	Seal Retainer	1
X-13797	X	Seal Retainer Washer	1
X-13798	X	Seal Washer, Cork	1
X-103941	X	Washer	1
X-103998	X	Lock Wire	1
X-105219	X	Clamp Washer	1
X-111594		Oil Plug	1
X-113146	X	Bearing	1
X-115455	X	Hub End Cap	1
X-118896	X	Bearing Spacer	1
X-908083		Fan Blade	1
XYAE-2088	X	Fan Assembly for E-42	1
ARO-164		Fan Hub Repair Kit	

Magneto Drive Kit

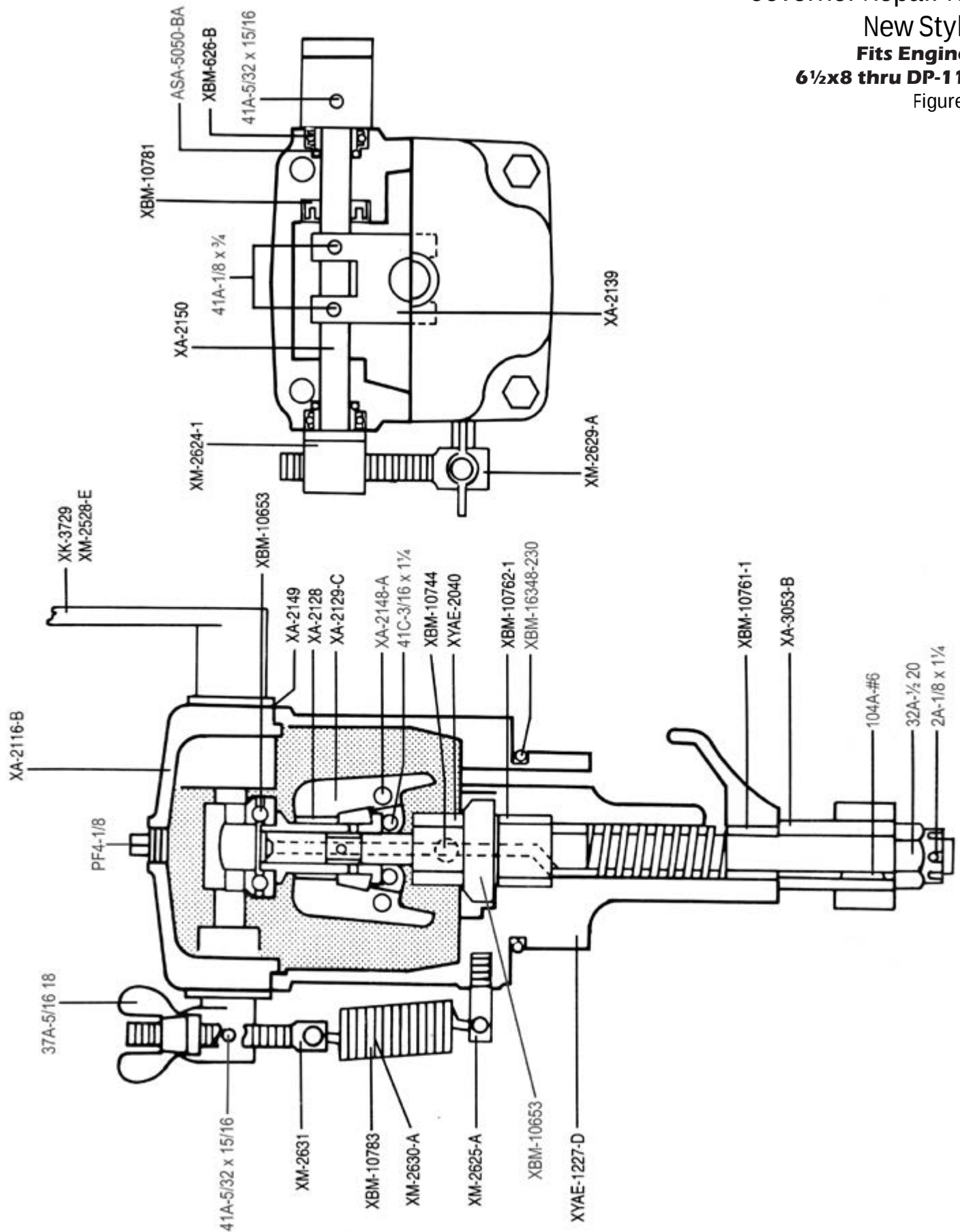
Fits Engines
6½x8 thru DP-115

Figure 2



Arrow Part No.	6½ x 8 thru DP-115	Description	No. Req.
ARO-163		Magneto Drive Kit Includes the Following:	1
XYAE-10576-A-2	X	Magneto Assembly	
XYAE-1561-A-2	X	Magdrive	
XBM-1406	X	Seal	1
XBM-10576-A	X	Roll Pin-Overspeed Trigger Stop (not shown)	2
XM-2421	X	Bushing, Magneto Bracket	1
#6	X	Woodruff Keys (not shown)	1
½" x 20 thd.	X	Lock Nut	1
XA-3128-1	X	Pinion	1
XYAE-1561-B	X	Mag Drive Assembly	1

Governor Repair Kit
New Style
Fits Engines
6½x8 thru DP-115
Figure 3



Governor Repair Kit

New Style

Fits Engines

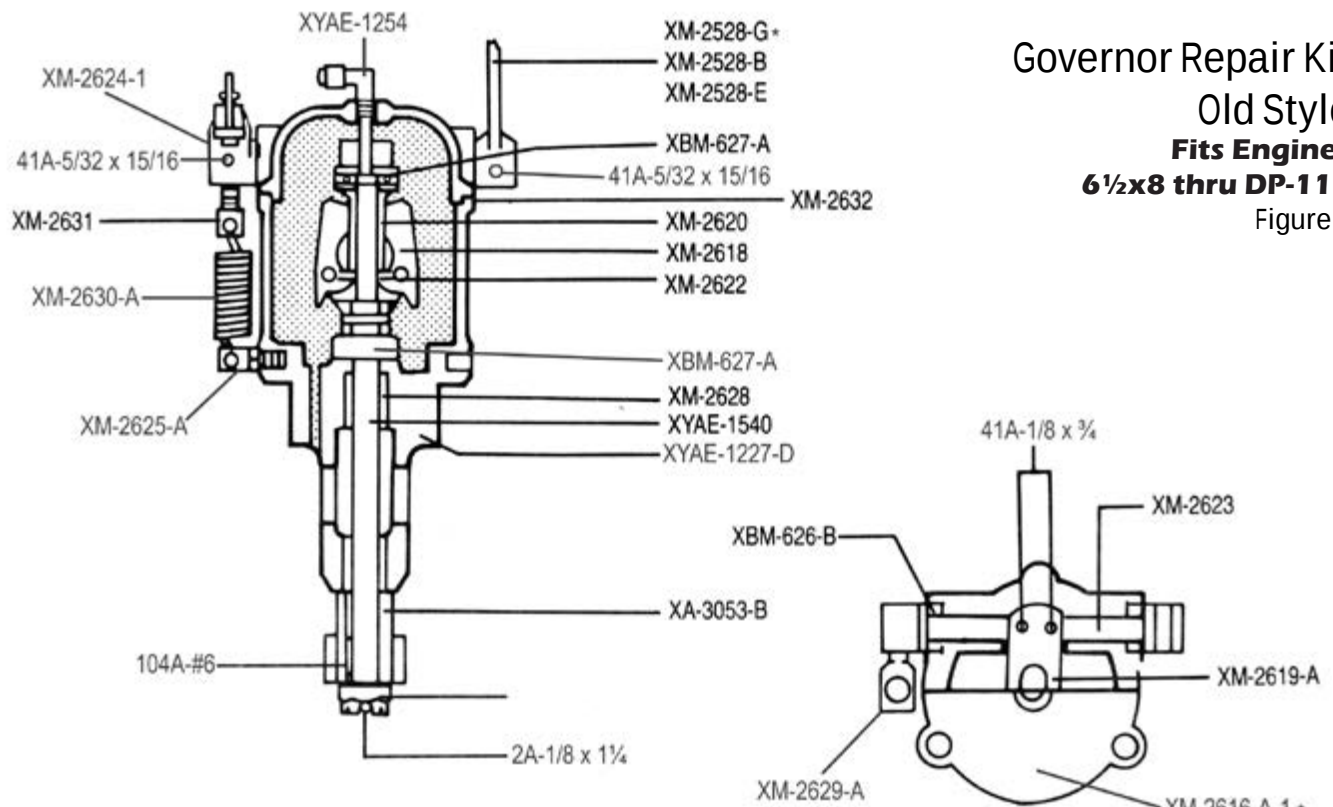
6½x8 thru DP-115

Figure 3

Continued from page 129

Arrow Part No.	6½ x 8 thru DP-115	Description	No. Req.
ARO-162		Governor Repair Kit (includes those parts with an X)	
XYAE-1227-D		Governor Body	1
XYAE-2038-J		Governor Assembly (fits engines DP-160, DP-80)	1
XYAE-2038-K		Governor Assembly (fits engines DP-115)	1
XYAE-2038-T		Governor Assembly (fits engines E-30, E-42, C-42)	1
XYAE-2038-V		Governor Assembly (fits engines EA-22, EA-30)	1
XYAE-2040	X	Governor Weight Stand	1
XYAE-2065		Governor Yoke Shaft Assembly	1
XA-2116-B	X	Governor Body Cap	1
XA-2128	X	Sliding Sleeve	1
XA-2129-C	X	Governor Weights	2
XA-2139	X	Governor Yoke	1
XA-2148-A	X	Governor Weight Pins	2
XA-2149	X	Gasket	1
XA-2150	X	Yoke Shaft	1
XA-3053-B		Pinion	1
XBM-626-B	X	Ball Bearing	2
41A-1/8 x ¾	X	Roll Pins	2
41A-5/32 x 15/16		Dowell Pin	2
ASA-5050-BA		"O" Ring	2
XBM-16348-230		"O" Ring Gasket	1
37A-5/16 18		Wing Nut	1
XBM-10653	X	Thrust Bearings	2
XBM-10744	X	Drive Lock Studs	2
41C-3/16 x 1¼	X	Rollers	2
XBM-10761-1	X	Bushing, Lower	1
XBM-10762-1	X	Bushing, Upper	1
XBM-10781	X	"U" Cup	1
XBM-10783		Governor Spring (fits engines E-30, E-42, C-42, DP-60, DP-80)	2
XK-3729		Governor Lever (fits engines EA-22, EA-30, E-30, E-42, C-42)	1
XM-2528-E		Governor Lever (fits engines DP-60, DP-80, DP-115)	1
XM-2624-1		Governor Spring Lever	1
XM-2625-A		Governor Spring Retainer	1
XM-2629-A		Governor Spring Lever Screw	1
XM-2630-A		Governor Spring (fits DP-115)	2
XM-2631		Spring Adjusting Screw	1
32A-½ 20	X	Lock Nut	1
2A-1/8 x 1¼		Set Screw, Socket, Cup Pt.	1
104A-#6	X	Woodruff Keys	2

Governor Repair Kit
Old Style
Fits Engines
6½x8 thru DP-115
Figure 4



Arrow Part No.	6½ x 8 thru DP-115	Description	No. Req.
ARO-161		Governor Repair Kit (includes those parts with an X)	
XYAE-1227-D		Governor Body Assembly	1
XYAE-1538		Governor Assembly (fits engines E-30, E-42, C-42)	1
XYAE-1538-B		Governor Assembly (fits engines DP-70, EA-22, EA-30)	1
XYAE-1538-C		Governor Assembly (fits engine DP-115)	1
XYAE-1540	X	Governor Weight Stand	1
XYVGD-238-2		Governor Yoke Shaft Assembly	1
XA-3053-B		Pinion	1
XBM-626-B	X	Bearing	2
XBM-627-A	X	Bearing	2
XM-2528-B		Governor Lever (fits engines DP-60, DP-80)	1
XM-2528-E		Governor Lever (fits engines E-30, E-42, C-42, EA-22, EA-30)	1
XM-2528-G		Governor Lever (fits engine DP-115)	1
XM-2616-A-1		Governor Body Cap	1
XM-2618	X	Governor Weights	2
XM-2619-A	X	Yoke	1
XM-2620	X	Sliding Sleeve	1
XM-2622	X	Governor Weight Pins	2
XM-2623	X	Shaft	1
XM-2628	X	Governor Body Bushing	2
XM-2631		Governor Spring Adjusting Screw	1
XM-2632	X	Gasket	1
104A-#6	X	Woodruff Key	2
32A-½ 20	X	Lock Nut	1
2A-1/8 x 1¼	X	Taper Pin	1
XM-2624-1	X	Gov Spring Lever	
41A-5/32 x 15/16	X	Pin Roll	
XM-2630-A	X	Spring Gov	
XM-2625-A	X	Gov Spring Retainer	
XYAE-1254	X	Gov Fitting	
XBM-627-A	X	Bearing	
XM-2629-A	X	Bolt	
41A-1/8 x ¾	X	Pin Roll	

Arrow Repair Kits and Assemblies for Ajax Engines

Arrow Part No.	5 x 6½ Ajax	Qty.
†ARO-132	Spark Plug Cable Assy.	1
†ARO-152	Head and Cylinder Gasket Set	1
†ARO-168	IMPCO Conversion Kit for 5 x 6½	1
ARO-6976	Complete Overhaul Gasket Set	1
ASIC-3	110 Carb 5 x 6.5	1

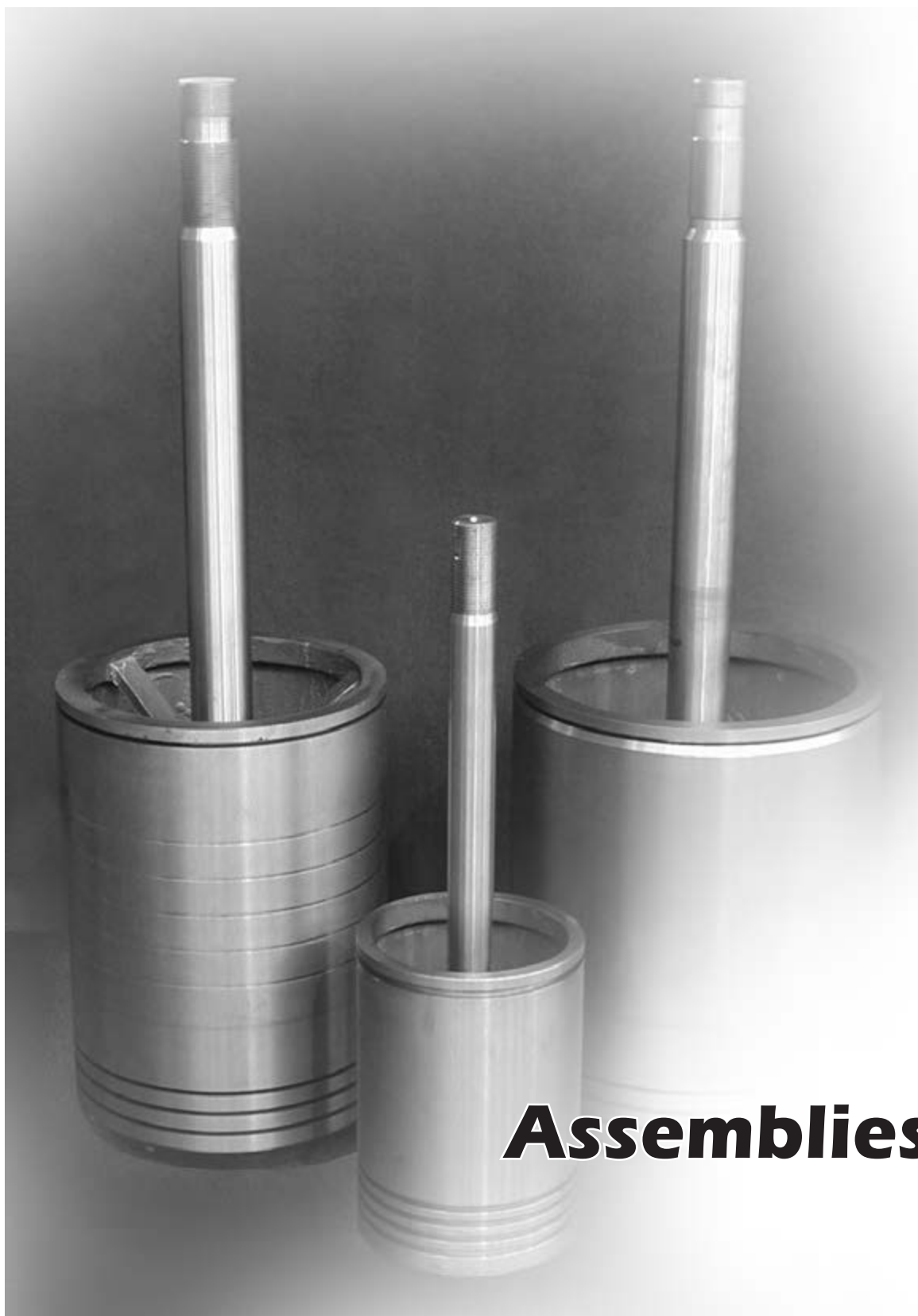
Arrow Part No.	6½x8, 7¼x8, EA-22, EA-30	Qty.
†ARO-133	Spark Plug Cable Assy.	1
ARO-153	Gasket Set	1
ARO-154	Gasket Set	1
†ARO-169	IMPCO Conversion Kit	1
ARO-6789	Complete Overhaul Gasket Set for CMA	1
ARO-6789-A	Complete Overhaul Gasket Set for CMA	1
ARO-6789-B	Complete Overhaul Gasket Set for EA-22	1
ARO-6789-C	Complete Overhaul Gasket Set for EA-30	1
ASIC -4	210 Carb 6.5 x 8, 7.25 x 8	1
XBM-2003-A-48	Spark Plug Cable	1

Arrow Part No.	7½x10, 8½x10, E-30, E-42	Qty.
†ARO-135	Spark Plug Cable Assy.	1
†ARO-136	Spark Plug Cable Assy.	1
ARO-155	Gasket Set, Cylinder and Head	1
ARO-156	Gasket Set, Cylinder and Head	1
ARO-161	Gov. Repair Kit (old style see Gov. pg.)	1
ARO-162	Gov. Repair Kit (old style see Gov. pg.)	1
ARO-163	Magneto Drive Kit (see Magneto pg.)	1
ARO-163	Magneto Drive Kit (see Magneto pg.)	1
ARO-164	Fan Repair Kit (see Fan pg.)	1
†ARO-170	Replacement Kit - Impco for Ensign	1
†ARO-5790-B	Complete Overhaul Gasket Set for CMA	1
ARO-6790	Complete Overhaul Gasket Set for E-42	1
ARO-6790-A	Complete Overhaul Gasket Set for CMA	1
ARO-6790-C	Complete Overhaul Gasket Set for E-30	1
ASIC-5	210 Carb. 7.5, 8.5 x 10	1
XBM-2003-A-48	Spark Plug Cable	1
ARO-6790-B	Comp. Gasket Set CMA 8.5 x 10	1

Arrow Part No.	9½ x 12, DP-60	Qty.
†ARO-137	Spark Plug Cable Assy.	1
ARO-157	Gasket Set, Cylinder and Head	1
ARO-161	Gov. Repair Kit (old style see Gov. pg.)	1
ARO-162	Gov. Repair Kit (new style see Gov. pg.)	1

Arrow Part No.	11x14, DP-70/80, DP-160	Qty.
ARO-158	Gasket Set, Cylinder and Head	1
ARO-161	Gov. Repair Kit (old style see Gov. pg.)	1
ARO-162	Gov. Repair Kit (new style see Gov. pg.)	1
†ARO-6979-D	Complete Overhaul Gasket Set for DP-80	1

Arrow Part No.	DP-115 & DP-230	Qty.
†ARO-139	Spark Plug Cable DP-115	1
†ARO-140	Spark Plug Cable Assy. DP-230	2
ARO-159	Gasket Set, Cylinder and Head DP-115	1
†ARO-160	Gasket Set, Cylinder and Head DP-230	1
ARO-161	Gov. Repair Kit (old style see Gov. pg.)	1
ARO-162	Gov. Repair Kit (new style see Gov. pg.)	1
†ARO-7039-D	Complete Overhaul Gasket Set for DP-115	1

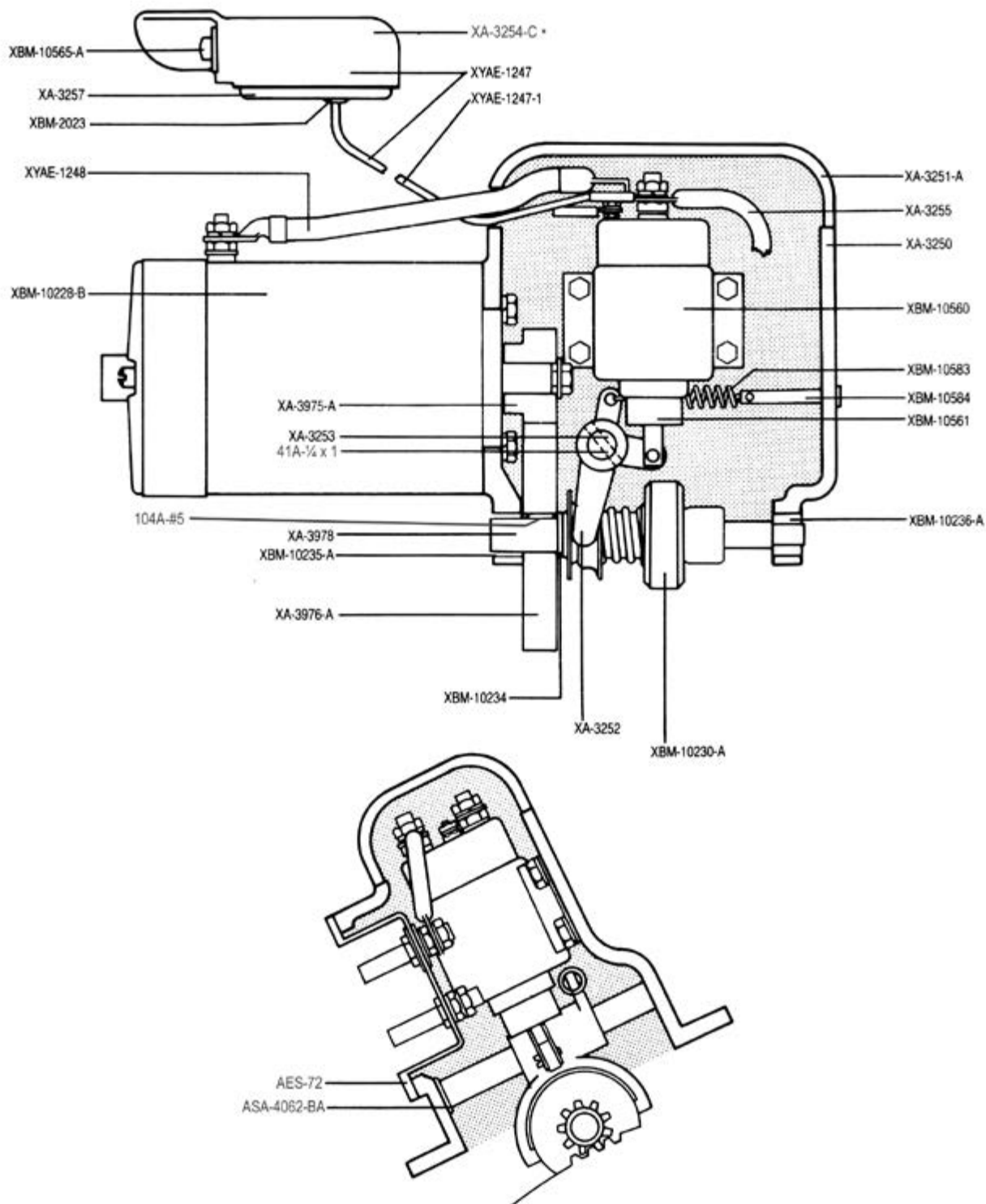


Assemblies

Arrow Electric Starter Assembly for Ajax Engines

5x6½ WL thru 8½x10 CMA

Figure 1



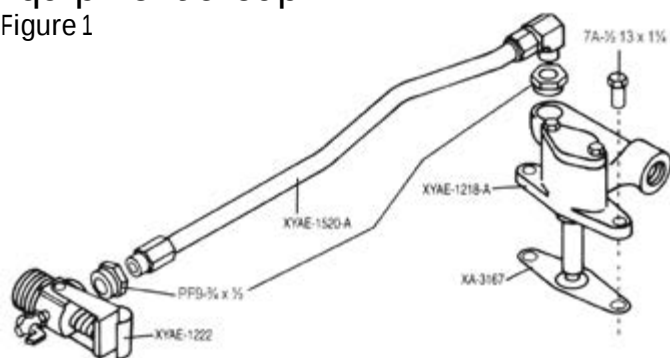
Arrow Electric Starter Assembly for Ajax Engines 5x6½ WL thru 8½x10 CMA

Figure 1

Arrow Part No.	5x6½ WL - 8½x10 CMA	Description	No. Req.
XYAE-1241-B	X	Electric Starter Assembly	1
XYAE-1247	X	Starter Push Button Switch and Cable Assembly	1
XYAE-1247-1	X	Cable Assy., Push Button Switch	1
XYAE-1248	X	Cable Assy., Motor to Solenoid Switch	1
XA-3250	X	Starter Gear Case	1
XA-3251-A	X	Cover, Starter Gear Case	1
XA-3252	X	Engagement Yoke	1
XA-3253	X	Shaft, Engagement Yoke	1
XA-3254-C	X	Starter Switch	1
XA-3255	X	Conductor, Receptacle to Switch	1
XA-3257	X	Starter Switch Cover	1
XA-3975-A	X	Starter Pinion, 19 teeth	1
XA-3976-A	X	Starter Gear, 48 teeth	1
XA-3978	X	Spline Shaft	1
XBM-2023	X	Rubber Grommet, Starter Switch	1
XBM-10228-B	X	Starter Motor	1
XBM-10230-A	X	Starter Drive Assembly	1
AES-72	X	Current Receptacle	1
ASA-4062-BA	X	Snap Ring	1
XBM-10234	X	Ring Retainer	1
XBM-10235-A	X	Bushing, Clutch Shaft	1
XBM-10236-A	X	Bushing, Clutch Shaft	1
41A-¼ x 1	X	Dowel, Engagement Yoke to Shaft	1
XBM-10560	X	Solenoid Switch	1
XBM-10561	X	Plunger	1
XBM-10565-A	X	Push Button Switch	1
XBM-10583	X	Plunger Return Spring	1
XBM-10584	X	Spring Retainer	1
XBM-10817	X	#5 Woodruff Key, Pinion to Shaft	1
		3/8 Flat Washer (11FM in 3/8)	1
		#10-32 x 1/2 Fillisterhead Machine Screw	1
		1/4 x 3/4 Rnd. Hd. Machine Screws (12A1/4 20x3/4)	4
		1/4 x 1/2 Hex Head Cap Screws (7A1/4 20x1/2)	4
		5/16 x 1 Hex Head Cap Screws (7A5/16 18x1)	5
		5/16 Lockwasher (1A5/16)	5
		#10-24½ Fillister Head Machine Screws	6
		1/4 Lockwashers (1A1/4)	8
		#6 Woodruff Key, Gear to Spline Shaft	1
AES-73	X	Cannon Plug Assembly	1
AES-72-RK		Repair Kit	1
AES-73-RK		Cannon Plug Repair Kit	1

Air Start Equipment Group

Figure 1



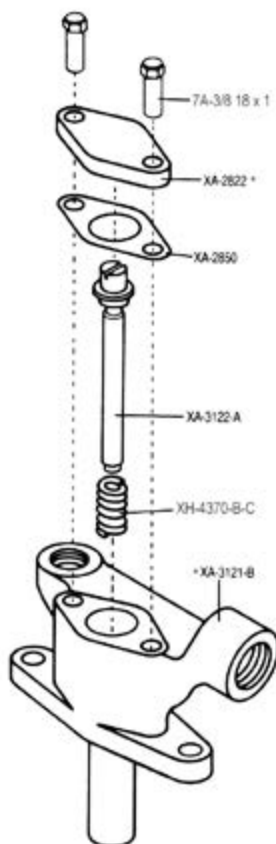
Arrow Part No.	Description	Qty.
XYAE-1222	Relief Valve	1
XYAE-1218-A	Air Starting Valve	1
XYAE-1520-A	Air Starting Line	1
PF9-3/4 x 1/2	Reducer Bushing	2
7A-1/2 13 x 1 1/4	Cap Screw, Hex Head	2
XA-3167	Gasket	1

Air Start Valve Assembly

XYAE-1218-A

Figure 2

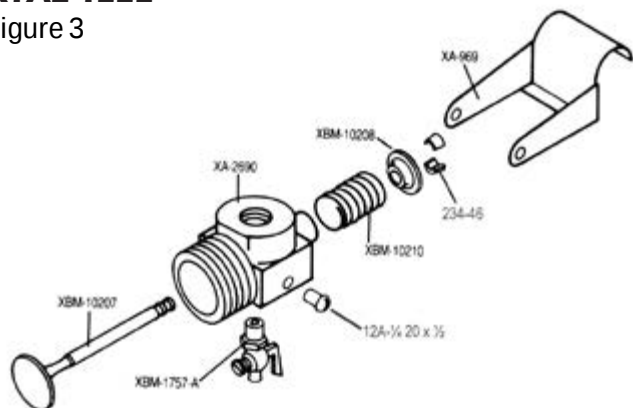
Arrow Part No.	Description	Qty.
XA-3121-B	Body	1
XH-4370-B-C	Spring	1
XA-3122-A	Valve	1
XA-2850	Gasket	1
XA-2822	Cover Plate	1
7A-3/8 18 x 1	Hex Head Cap Screw	2



Air Start Relief Valve Assembly

XYAE-1222

Figure 3



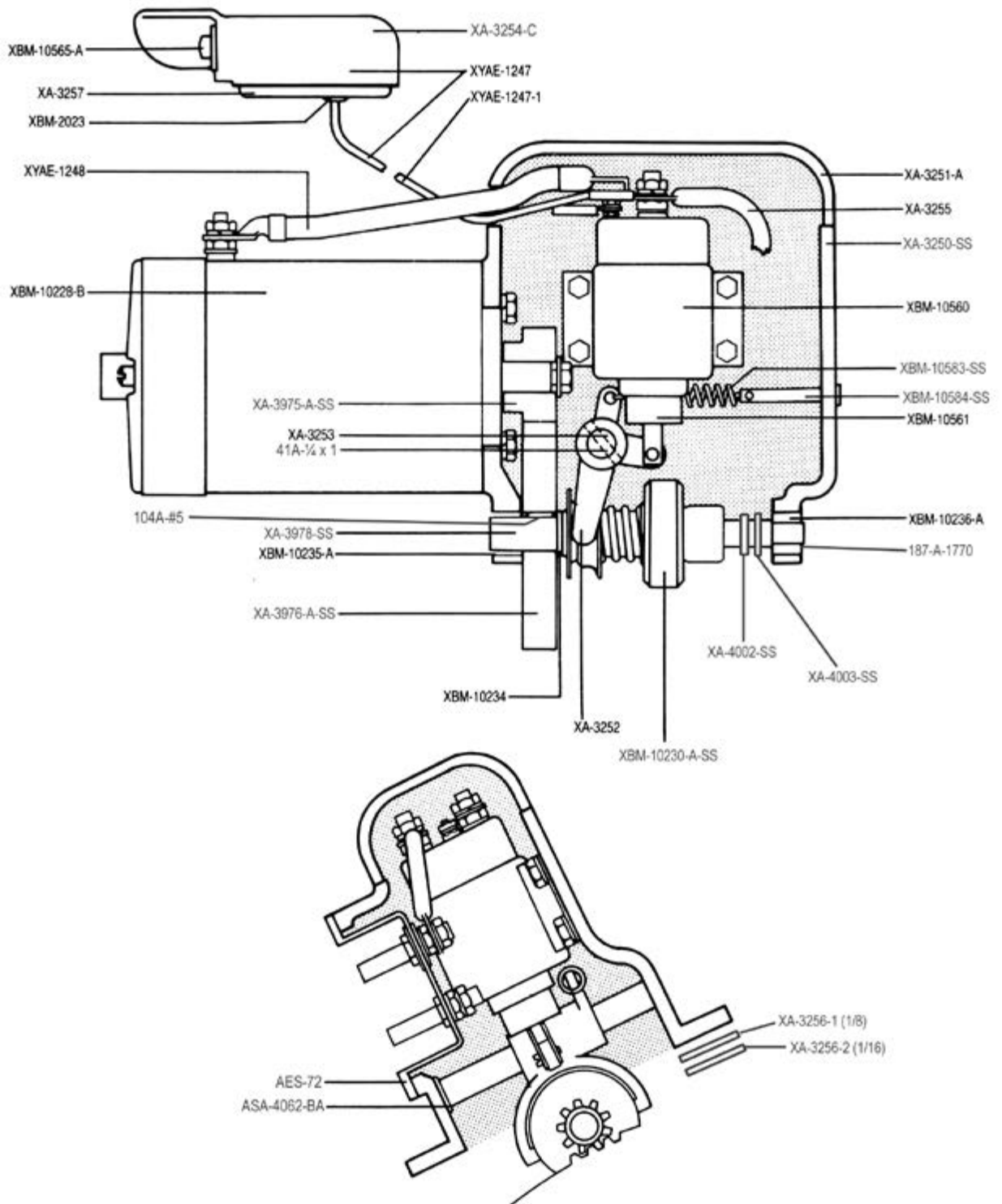
Arrow Part No.	Description	Qty.
XA-2690	Valve Body	1
XBM-10207	Relief Valve	1
XBM-10210	Spring	1
XBM-10208	Spring Cap	1
234-46	Cap Lock	2
XA-969	Opener	1
12A-1/4 20 x 1/2	Round Head Machine Screw	2
XBM-1757-A	Air Cock	1

Arrow Electric Super Starter Assembly for Ajax Engines

5x6½ WL thru 8½x10 CMA

Figure 4

Continued on page 138



Arrow Electric Super Starter Assembly for Ajax Engines

5x6½ WL thru 8½x10 CMA

Figure 4

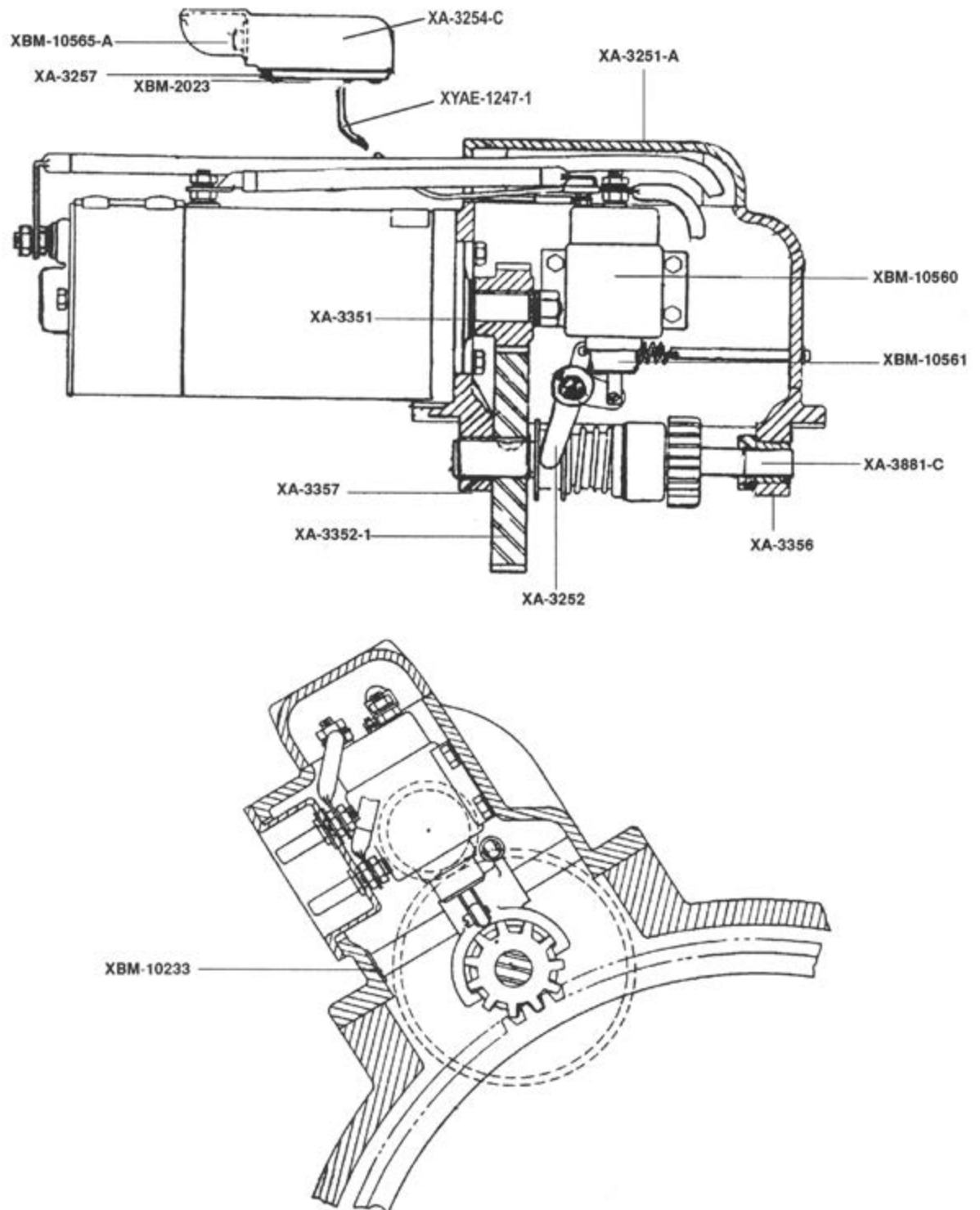
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Arrow Part No.	5x6½ WL - 8½x10 CMA	Description	No. Req.
XA-3250-SS	X	Starter Gear Case	1
XYAE-1248	X	Cable	1
XA-3252	X	Engagement Yoke	1
XA-3251-A	X	Starter Cover	1
XA-3253	X	Shaft	1
XA-3255	X	Copper Conductor	1
XA-3976-A-SS	X	Starter Gear	1
XA-3975-A-SS	X	Starter Gear Pinion	1
XA-3978-SS	X	Starter Shaft	1
XBM-10228-B	X	Starter Motor	1
XBM-10230-A-SS	X	Starter Drive	1
AES-72	X	Cannon Receptacle	1
XBM-10234-SS	X	Ring - Starter Shaft	1
ASA-4061-BA	X	Bearing	1
41A-¼ x 1	X	Roll Pin	1
XBM-10560	X	Starter Solenoid	1
XBM-10561	X	Plunger	1
XBM-10583-SS	X	Return Spring	1
XBM-10584-SS	X	Clevis Pin	1
XA-4000-SS	X	Key	1
187-A-1770	X	Race-Bearing	1
XA-4002-SS	X	Thrust Bearing	1
XA-4003-SS	X	Ring-Starter Shaft	1
XYAE-1247	X	Push BTN. Switch Assy.	1
104A-#6	X	Key	1
1B-3/8	X	Washer	1
12A-¼ 20 x ¾	X	Machine Screw	1
7A-¼ 20 x ¾	X	Capscrew	1
7A-5/16 18 x 1	X	Capscrew	1
1A-5/16	X	Lockwasher	5
12A-10 24 x ½	X	Machine Screw	6
1A-¼	X	Lockwasher	8
29A-¼ 20	X	Hex Nut	4
XA-4004-SS	X	Bolts	4
1A-3/8	X	Lockwasher	4
1315-795	X	Startwasher 5/16	1
XA-3256-1	X	Shim 1/8	2
XA-3256-2	X	Shim 1/16	2
104A-#5	X	Key	1
XA-4002-SS	X	Thrust Washer	1
XA-4003-SS	X	Snap Ring	1
ASA-4062-BA	X	Snap Ring Tru Arc	1

Arrow Electric Starter Assembly for Ajax Engines 9½ x 12 DP-60

Figure 5

Continued on page 140



Arrow Electric Starter Assembly

for Ajax Engines

9½ x 12 DP-60

Figure 5

Continued from page 139

Arrow Part No.	9½ x 12	Description	No. Req.
1A-¼	X	Plated Lockwasher	8
1A-5/8	X	Plated Lockwasher	5
1N-3/8	X	Flat Washer SAE	1
7A-¼ 20 x ½	X	Capscrew Hex Hd	4
7A-5/16 18 x 1	X	Capscrew Hex Hd	5
10A-5100-75	X	Ext. Retaining Ring	1
12A-¼ 20 x ¾	X	Mach. Screw Rd Head	4
12A-1024 x ½	X	Mach. Screw Rd Head	6
12A-1032 x ½	X	Mach. Screw Rd Head	1
41A-¼ x 1	X	Roll Pin	1
104A-#6	X	Woodruff Key	1
187-A-1770	X	Bearing Race	1
AES-72	X	Cannon Receptacle	1
ASA-4061-BA	X	Bearing	1
ASA-4062-BA	X	Tru Arc Rings	1
XA-3250	X	Starter Cs w/ Bushing	1
XA-3250-SS	X	Case, Starter	1
XA-3251-A	X	Starter Cover	1
XA-3252	X	Engagement Yoke	1
XA-3253	X	Shaft	1
XA-3254-C	X	Switch Housing	1
XA-3255	X	Copper Conductor	1
XA-3257	X	Switch Cover	1
XA-3351	X	Pinion Gear	1
XA-3352-1	X	Starter Gear	1
XA-3356	X	Bushing	1
XA-3357	X	Bushing	1
XA-3881-C	X	Shaft	1
XA-3975-A	X	Starter, Pinion	1
XA-3975-A-SS	X	Gear, Starter Pinion	1
XA-3976-A	X	Starter Gear	1
XA-3976-A-SS	X	Starter Gear	1
XA-3978	X	Spline Shaft	1
XA-3978-SS	X	Engine Starter Shaft	1
XBM-2023	X	Grommet	1
XBM-10228-B	X	Starter Motor	1
XBM-10230-A	X	Drive Assembly	1
XBM-10230-A-SS	X	Drive, Starter	1
XBM-10233	X	Tru Arc Ring	1
XBM-10235-A	X	Clutch Shaft Bearing	1
XBM-10236-A	X	Clutch Shaft Bearing	1
XBM-10560	X	Starter Solenoid	1
XBM-10561	X	Plunger-Solenoid Switch	1
XBM-10565-A	X	Push Button Switch	1
XBM-10583	X	Plunger Rtn. Spring	1
XBM-10583-SS	X	Spring, Return	1
XBM-10584	X	Spring Retainer	1
XBM-10584-SS	X	Clevis Pin	1
XYAE-1241-B	X	Electric Starter Assembly	1
XYAE-1247	X	Push Button Switch Assembly	1
XYAE-1247-1	X	Cable Only	1
XYAE-1248	X	Cable	1



Miscellaneous Parts

Arrow Replacement Parts for Obsolete Ajax Engines

Arrow Part No.	12½x16 Type D Ajax
†XA-2225	Gasket, Cyl. Head
XA-124	Gasket, Water Outlet Plate
XA-1349-A	Gasket, Cyl. Head Plate
†ARO-126	Piston Ring Set, Std., 5 Rings
†ARO-127	Piston Ring Set, 1/8 OS, 5 Rings
†XA-1207	Piston Ring, Std.
†XA-1207-3	Piston Ring, 1/8 OS
XA-1298	Gasket, Exhaust Flange
XA-474-A	Gasket, Cyl. to Bed
XA-1222-C-4	Crosshead Pin
†XYAE-5097-F-1	Barrel & Plunger Assembly - Gas Injection

Arrow Part No.	12x15 Type CMA or CMC
†XA-2224-A	Gasket, Cylinder Head
XA-124	Gasket, Water Outlet Plate
ARO-124	Piston Ring Set, Std., 5 Rings
†ARO-125	Piston Ring Set, 1/8 OS, 5 Rings
XA-155-A	Piston Ring, Std.
†XA-155-A-3	Piston Ring, 1/8 OS
XA-1181	Gasket, Exhaust Flange
XA-2235-A	Gasket, Stuffing Box to Bed
XA-2234	Gasket, Mixer Valve Cover
†XYAE-5097-F-1	Barrel & Plunger Assembly - Gas Injection

Arrow Part No.	10½x13 C, CMA or CMB
XA-1666-C	Gasket, Cylinder Head
XA-124	Gasket, Water Outlet Plate
XA-1665-A	Gasket, Cylinder Head Plate
†ARO-118	Piston Ring Set, Std., 5 Rings
†ARO-119	Piston Ring Set, 1/8 OS, 5 Rings
†XA-154-A	Piston Ring, Std.
†XA-154-A-3	Piston Ring, 1/8 OS
XA-1181	Gasket, Exhaust Flange
XA-1667	Gasket, Cyl. to Bed
XA-336	Stud, 7/8 x 3 1/2
†XA-540	Piston Rod Nut
XA-1608-C	Crosshead Pin
XA-1678-1-R	Crosshead Pin Bearing
XA-1717	Gasket, Breather to Bed
†XBM-1527-A	Fan Belt
†XYAE-5097-F-1	Barrel & Plunger Assembly

Arrow Part No.	DP-100 13¼x16 - DP-100-SX
XYAE-5016-Q	Piston & Rod Assembly
XA-433-K	Head Gasket
†XA-1223-1-R	Crosshead Pin Bearing
XA-2247-C	Gasket, Cylinder Head
†ARO-128	Piston Ring Set, Std., 5 Rings
†ARO-129	Piston Ring Set, 1/8 OS., 5 Rings
†ARO-193	Piston Ring Set, 1/4 OS., 5 Rings
†XH-342-A	Piston Ring, Std.
†XH-342-A-5	Piston Ring, 1/8" OS
†XH-342-A-4	Piston Ring, 1/4" OS
XT-125	Check Valve

Arrow Part No.	12x16 40 HP Superior
†XA-438-A	Head Gasket
†XA-443-A	Cylinder Head Plate Gasket

Miscellaneous Arrow Replacement Parts for Obsolete Ajax Engines

Arrow Part No.	Description
†XA-3008	Crosshead Pin 7½x10 & 8½x10 CMAG
†XBM-1412	Oil Seal
†XM-1750-A	Gasket
†XM-2432	Nut
†XM-2450	Gasket
†XM-2456	Gasket
†XM-2650	Gasket
†XM-2656-A	Gasket