

# SCHULZ

TECHNICAL PARTS LIST FOR  
AIR COMPRESSORS  
**ABS-13H-30S**  
(AFTER SERIAL #20238432)

SPECIAL BUILD  
UNIT

ENGINE OIL GRADE:	SAE 10W-30
HONDA:	
ENGINE OIL CAPACITY:	37 oz.
HONDA:	175 PSI
MAXIMUM PRESSURE	SAE30W NON-DETERGENT
COMPRESSOR OIL GRADE:	50.7 oz.
COMPRESSOR OIL CAPACITY:	

This Parts Listing has been compiled for your benefit. You can be assured your new Gasoline Air Compressor was constructed and designed with quality and performance in mind. Each component has been rigorously tested to insure the highest level of acceptance.

The contents of this Parts Listing are based on the latest product information available at the time of publication. The manufacturer reserves the right to make changes in price, color, materials, equipment, specifications or models at any time without notice.

**WARNING**

**THIS IS A PROFESSIONAL GASOLINE AIR COMPRESSOR. CAUTION SHOULD BE OBSERVED WHEN USING OR REPAIRING THIS UNIT! READ AND FOLLOW THE SAFETY WARNINGS LISTED BELOW BEFORE ATTEMPTING ANY REPAIRS ON THIS GASOLINE AIR COMPRESSOR!**

### SAFETY WARNINGS

1. NEVER alter or modify the equipment. Be sure any accessory items and system components being used will withstand the pressure developed. Serious injury may occur from an air compressor malfunction or exploding accessories if incorrect system components, attachments or accessories are used. NEVER exceed manufactures maximum allowable pressure rating of attachments. Use only genuine parts for repair of your air compressor. Failure to do so can cause hazardous operating conditions and will VOID warranty.
2. NEVER make adjustments on machinery while the unit is connected to the engine without first removing the ignition cable from the spark plug. Turning over the machinery by hand during adjustment or cleaning might start the engine and machinery with it, causing serious injury to the operator.
3. Know how to stop and bleed pressures quickly. Be thoroughly familiar with controls. Do not operate without protective covers/ guards.
4. Before servicing the unit, turn unit off, relieve the pressure and allow the unit to cool down. Service in a clean, dry, flat area. Block the wheels to prevent the unit from moving. Be especially careful to properly dispose of any flammable materials.
5. After testing the machine, DO NOT leave the pressurized unit unattended. Shut off the unit and release pressure before leaving.

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# SPECIFICATIONS

MODEL NUMBER	AES-13H-30S
Engine:	Honda
Model	GX390
Engine Type	4 Stroke, Overhead Valve, Single Cylinder
Oil Type	SAE 10W-30
Oil Capacity	37 oz.
Low Oil Protection	Oil Alert™ Oil Guard™
Fuel type	Unleaded Gasoline 86 Octane Minimum
Fuel Capacity	1.6 Gallon
Starting	Electric
Engine RPM	3400
Idle RPM	2200-2400
Compressor Pump:	
Number of Cylinders	2
Compression Stages	2
First Stage Bore	4.75"
Second Stage Bore	2.50"
Stroke	3.58"
Max RPM	820
Flywheel	16.5"
Lubrication	Splash
Oil Quantity	50.7 oz.
Oil Type	30 W Non Detergent
Crankcase	Cast Iron
Bearings	Ball
Cylinder	Cast Iron
Valves	Reed
Head	Aluminum
Filter	Canister
Pilot Valve Setting:	
Cut-out	175 PSI
Cut-in	145 PSI
Air Tank:	
Capacity	30 Gallons
Performance:	
CFM Air Displacement	30.1
CFM @ 40 PSI	25.8
CFM @ 100 PSI	24.6
CFM @ 175 PSI	24.0
Maximum Pressure	175 PSI
Pump-up Time: 0-175 PSI	1 minutes and 44seconds
Recovery Time: 145-175 PSI	15 seconds
Weight:	
Net	398 lbs
Shipping	462 lbs
Dimensions:	
Basic L x W x H	37.85" x 23.0" x 43.01"
Shipping L x W x H	57.25" x 35.5" x 48.01"

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**NOTES**

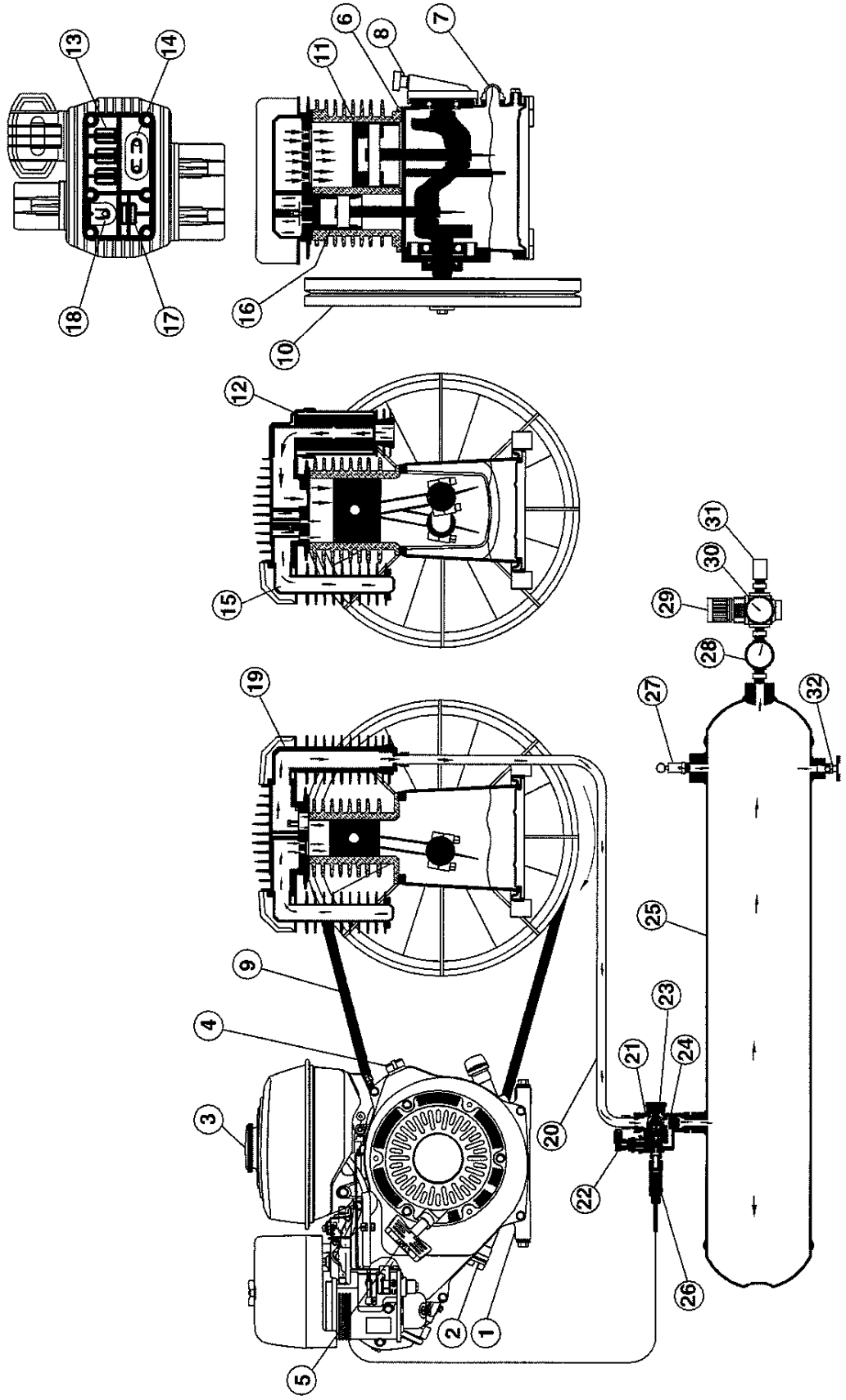
<b>DATE</b>	<b>SERIAL NUMBER</b>	<b>REASON FOR CHANGE</b>
08/17/18	#20238432	CHANGED AIR THROTTLE FROM 33-0413 TO 33-0625

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**NOTES**

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FLOW CHART

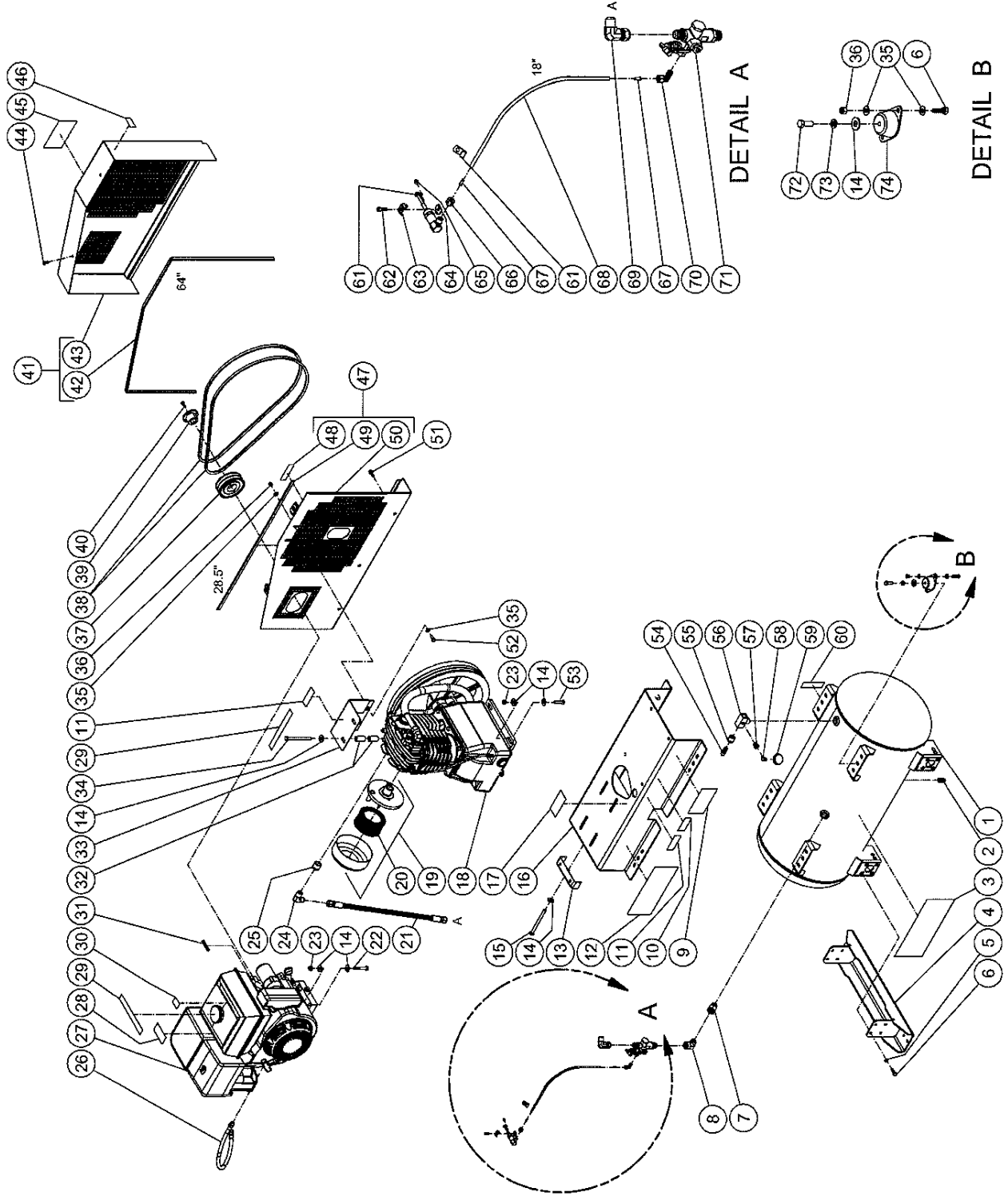


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## GENERAL THEORY OF OPERATION

1. The **ENGINE (1)** supplies power to the air compressor.
  - a. The **ENGINE (1)** is lubricated by oil. The oil level should be checked before each use by removing the **ENGINE OIL DIPSTICK (2)**.
  - b. The **ENGINE (1)** runs on gasoline. The **FUEL TANK (3)** level should be checked before each use.
  - c. The **ENGINE ON/OFF SWITCH (4)** and **STARTER ROPE (5)** are used to start the engine.
  - d. Refer to engine owner's manual for appropriate starting procedures and requirements of the **ENGINE (1)**.
2. The **COMPRESSOR PUMP (6)** is lubricated by oil. The oil level should be checked before each use by viewing the **COMPRESSOR PUMP OIL SIGHTGLASS (7)**. If the oil level is low, add SAE-30W non-detergent oil to the **COMPRESSOR PUMP OIL FILL PORT (8)**.
3. When the unit is operating, the **V-BELT (9)** turns the **COMPRESSOR PUMP FLYWHEEL (10)** which rotates the crankshaft and moves the pistons.
4. As the **FIRST STAGE PISTON (11)** moves down, air is drawn in through the **INLET AIR FILTER (12)**. Then through the **FIRST STAGE INLET REED VALVES (13)** and into the first stage piston chamber. At the same time, the **FIRST STAGE OUTLET REED VALVES (14)** is closed. This allows air to fill the first stage piston chamber.
5. As the **FIRST STAGE PISTON (11)** moves upward, the **FIRST STAGE INLET REED VALVE (13)** closes. The **FIRST STAGE OUTLET REED VALVE (14)** opens allowing the compressed air to flow into the **INTERCOOLER (15)** and into the second stage.
6. As the **SECOND STAGE PISTON (16)** moves down, the first stage compressed air is drawn in through the **SECOND STAGE INLET REED VALVES (17)** and into the second stage piston chamber. At the same time, the **SECOND STAGE OUTLET REED VALVES (18)** is closed.
7. As the **SECOND STAGE PISTON (16)** moves upward, the **SECOND STAGE INLET REED VALVES (17)** closes. The **SECOND STAGE OUTLET REED VALVES (18)** opens allowing the compressed air to flow into the **AFTERCooler (19)** and **DISCHARGE LINE (20)**.
8. The compressed air then enters the **PILOT CONTROL VALVE (21)** which has an **TOGGLE KNOB (22)** with two positions.
  - a. **Easy Start Position:**  
When the **TOGGLE KNOB (22)** is in the *open position (vertical)* air moves out the **PILOT VALVE MUFFLER (23)** allowing the **ENGINE (1)** to start under no-load conditions .
  - b. **Constant Run Position:**  
When the **TOGGLE KNOB (22)** is in the *closed position (horizontal)* the compressed air opens the **CHECK VALVE (24)** and moves into the **AIR TANK (25)**. When the pressure in the **AIR TANK (25)** reaches the maximum pressure setting of the **PILOT CONTROL VALVE (21)**, the excess air exits the **PILOT VALVE MUFFLER (23)** and the **CHECK VALVE (24)** will close. At the same time the **THROTTLE CONTROL (26)** allows the **ENGINE (1)** to idle down.
9. The **SAFETY RELIEF VALVE (27)** protects the system from any overpressure conditions.
10. The **TANK PRESSURE GAUGE (28)** indicates tank pressure. The **AIR PRESSURE REGULATOR (29)** can be adjusted to the desired operating pressure which is indicated on the **OUTLET PRESSURE GAUGE (30)**. The air exits through the **OUTLET FITTING (31)**.
11. The **ENGINE ON/OFF SWITCH (4)** stops the **ENGINE (1)** when moved to the "OFF" position.
12. When the **ENGINE (1)** is off, compressed air should be released from the **AIR TANK (25)** by opening the attached air tool or by pulling on the **SAFETY RELIEF VALVE (27)**. When the **TANK PRESSURE GAUGE (28)** registers less than 10 PSI, drain the condensation from the **AIR TANK (25)** by opening the **TANK DRAIN (32)**.

TANK ASSEMBLY FOR ABS-13H-30S (BEFORE SERIAL #20238432)

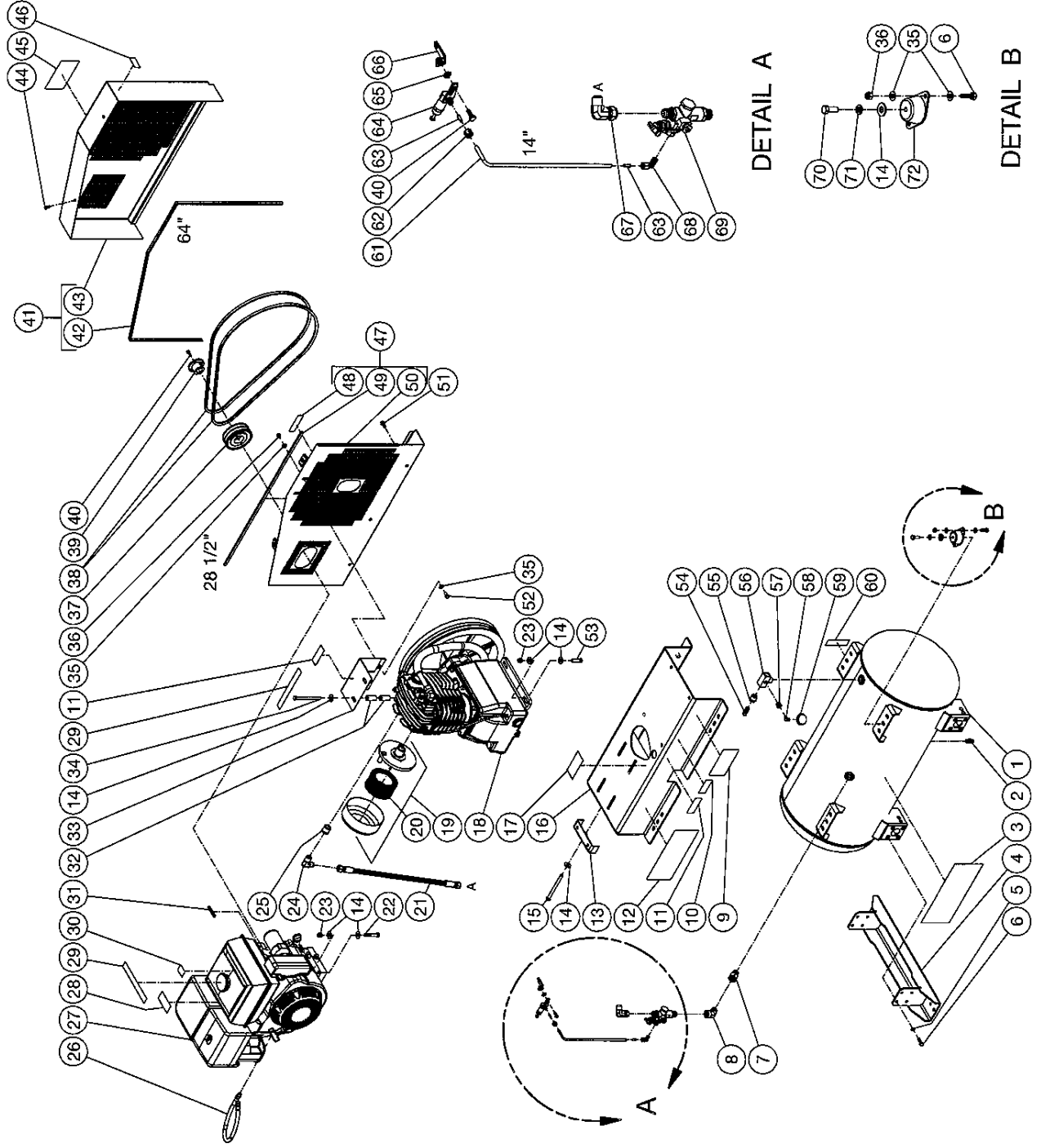


ABS-13H-30S 070518 RSW



ITEM		TANK ASSEMBLY		TANK ASSEMBLY		ITEM		TANK ASSEMBLY	
ITEM	TITLE	PART #	QTY	ITEM	TITLE	PART #	QTY	ITEM	TITLE
1	TANK ASSEMBLY	12-0209A01	1	39	BUSHING	9-0005	1		
2	PETCOCK	23-0812	1	40	BOLT	27-0015	2		
3	DECAL - SCHULZ	34-3344	1	41	BELTGUARD FRONT ASSEMBLY (INC. 42-43)	854-0088	1		
4	FOOT	20-0862A01	2	42	EDGING (SIX FEET REQUIRED)	33-0020	1		
5	LOCKWASHER	29-0007	16	43	BELTGUARD FRONT (SEE 854-0086)	N/A	1		
6	BOLT	27-0067	24	44	FASTENER	33-0187	2		
7	CONNECTOR	23-0072	1	45	DECAL - MAINTENANCE INSTRUCTIONS (SEE 71-0086)	N/A	1		
8	ELBOW	24-0041	1	46	DECAL - MADE IN USA	34-3553	1		
9	DECAL - OPERATING INSTRUCTIONS (SEE 71-0086)	N/A	1	47	BELTGUARD BACK ASSEMBLY (INC. 48-50)	854-0087	1		
10	DECAL - HEARING PROTECTION REC (SEE 71-0086)	N/A	1	48	DECAL - BELTGUARD IN PLACE (SEE 71-0086)	N/A	1		
11	DECAL - RISK OF BURNS (SEE 71-0086)	N/A	2	49	EDGING (THREE FEET REQUIRED)	33-0020	1		
12	DECAL - CAUTION/WARNING/DANGER (SEE 71-0086)	N/A	1	50	BELTGUARD BACK (SEE 854-0087)	N/A	1		
13	TIGHTENER BRACKET	20-0850A01	1	51	BOLT	27-9524	3		
14	WASHER	28-0023	23	52	BOLT	27-0086	2		
15	BOLT	27-0133	1	53	BOLT	27-0119	4		
16	BASEPLATE	5-0318A01	1	54	PRESSURE RELIEF VALVE	22-0267	1		
17	DECAL - SILVER STICKER	N/A	1	55	REDUCER	23-0056	1		
18	PUMP	3-0234	1	56	BRANCH TEE	23-0519	1		
19	FILTER CANNISTER	19-0237	1	57	REDUCER	23-0111	1		
20	AIR FILTER	19-0226	1	58	ELBOW	23-0133	1		
21	HOSE	15-0275	1	59	PRESSURE GAUGE	22-0446	1		
22	BOLT	27-0122	4	60	DECAL - TANK DRAIN (SEE 71-0086)	N/A	1		
23	LOCKNUT	30-0159	8	61	THROTTLE CONTROL	33-0413	1		
24	90° ELBOW FITTING	24-0074	1	62	BOLT	-	1		
25	REDUCER FITTING	24-0308	1	63	CLIP	45-0084	1		
26	OIL DRAIN HOSE	70-0358	1	64	THROTTLE CONTROL CLAMP	-	1		
27	ENGINE	1-0087	1	65	ADAPTOR	62-0126	1		
28	DECAL - MUFFLER HOT (SEE 71-0086)	N/A	1	66	NUT	23-0315	1		
29	DECAL - CHECK OIL	N/A	2	67	TUBE SUPPORT	23-0486	2		
30	DECAL - ENGINE FUEL (SEE 71-0086)	N/A	1	68	HOSE (TWO FEET REQUIRED)	15-0238	1		
31	KEY	43-0078	1	69	90° ELBOW FITTING	24-0272	1		
32	SPACER	20-1020A52	4	70	ELBOW	23-0316	1		
33	SUPPORT BRACKET	20-0860A01	1	71	PILOT VALVE	22-0270	1		
34	BOLT	27-0131	2	72	BOLT	27-0117	4		
35	WASHER	28-0003	20	73	LOCKWASHER	29-0008	4		
36	LOCKNUT	30-0157	10	74	ISOLATOR	14-0109	4		
37	SHEAVE	10-0025	1	-	DECAL SET	71-0086	1		
38	BELT	11-0069	2						*MUST ORDER IN ONE FOOT LENGTHS

**TANK ASSEMBLY FOR ABS-13H-30S (AFTER SERIAL #20238432)**

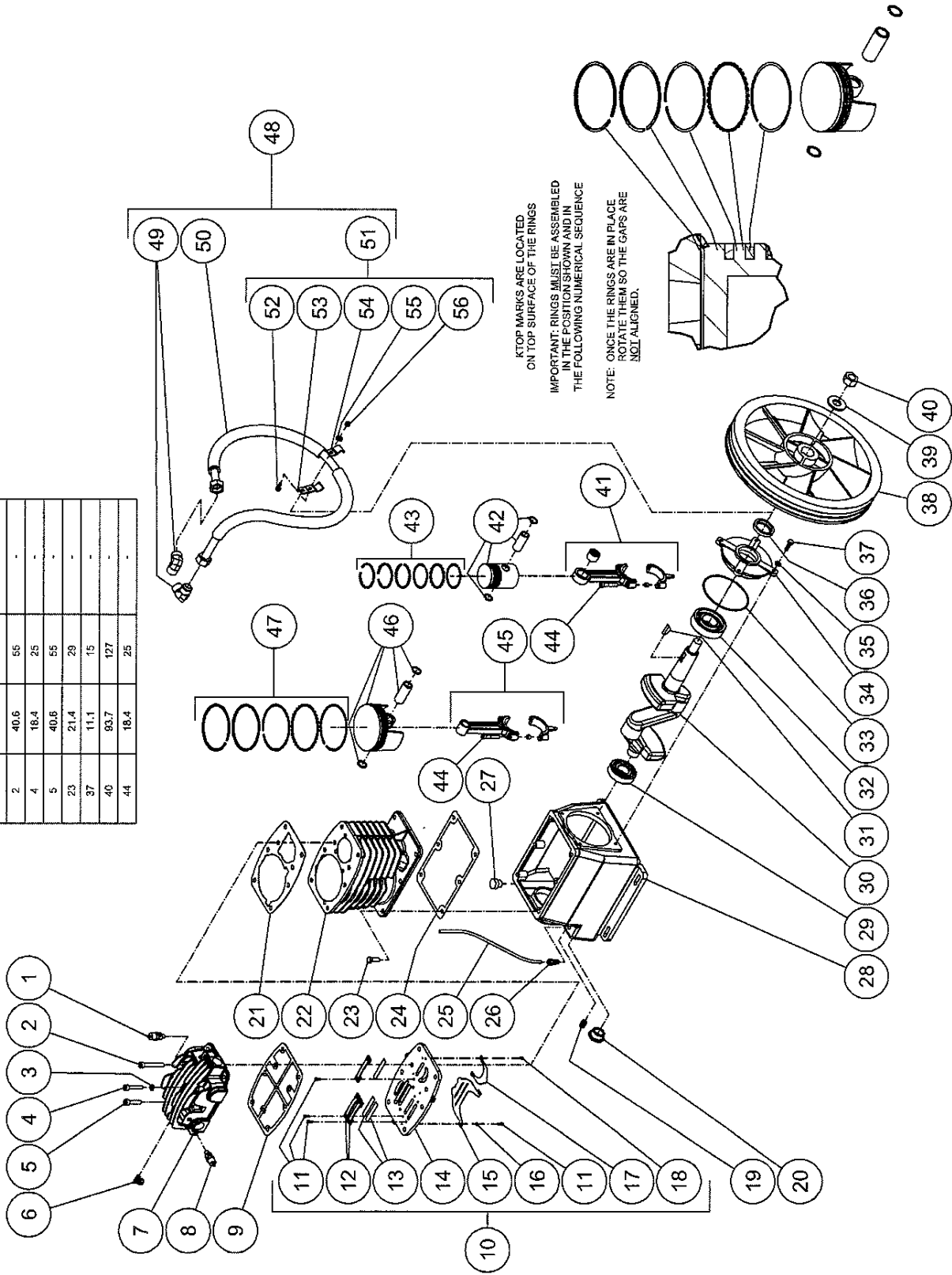


ABS-13H-30S 082418 JRC

TANK ASSEMBLY									
ITEM	TITLE	PART #	QTY	ITEM	TITLE	PART #	QTY	ITEM	TITLE
1	TANK ASSEMBLY	12-0209A01	1	38	BELT	11-0069	2		
2	PETCOCK	23-0312	1	39	BUSHING	9-0005	1		
3	DECAL - SCHULZ	34-3344	1	40	BOLT	27-0015	3		
4	FOOT	20-0862A01	2	41	BELTGUARD FRONT ASSEMBLY (INC. 42-43)	854-0088	1		
5	LOCKWASHER	29-0007	16	42	EDGING *SIX FEET REQUIRED)	33-0020	1		
6	BOLT	27-0067	24	43	BELTGUARD FRONT (SEE 854-0088)	N/A	1		
7	CONNECTOR	23-0072	1	44	FASTENER	33-0197	2		
8	ELBOW	24-0041	1	45	DECAL - MAINTENANCE INSTRUCTIONS (SEE 71-0086)	N/A	1		
9	DECAL - OPERATING INSTRUCTIONS (SEE 71-0086)	N/A	1	46	DECAL - MADE IN USA	34-3553	1		
10	DECAL - HEARING PROTECTION REQ (SEE 71-0086)	N/A	1	47	BELTGUARD BACK ASSEMBLY (INC. 48-50)	854-0087	1		
11	DECAL - RISK OF BURNS (SEE 71-0086)	N/A	2	48	DECAL - BELTGUARD IN PLACE (SEE 71-0086)	N/A	1		
12	DECAL - CAUTION/WARNING/DANGER (SEE 71-0086)	N/A	1	49	EDGING *THREE FEET REQUIRED)	33-0020	1		
13	TIGHTENER BRACKET	20-0650A01	1	50	BELTGUARD BACK (SEE 854-0087)	N/A	1		
14	WASHER	28-0023	23	51	BOLT	27-9524	3		
15	BOLT	27-0133	1	52	BOLT	27-0066	2		
16	BASEPLATE	5-0318A01	1	53	BOLT	27-0119	4		
17	DECAL - SILVER STICKER	N/A	1	54	PRESSURE RELIEF VALVE	22-0267	1		
18	PUMP	3-0234	1	55	REDUCER	23-0056	1		
19	FILTER CANISTER	19-0237	1	56	BRANCH TEE	23-0519	1		
20	AIR FILTER	19-0226	1	57	REDUCER	23-0111	1		
21	HOSE	15-0275	1	58	ELBOW	23-0133	1		
22	BOLT	27-0122	4	59	PRESSURE GAUGE	22-0446	1		
23	LOCKNUT	30-0159	8	60	DECAL - TANK DRAIN (SEE 71-0086)	N/A	1		
24	90° ELBOW FITTING	24-0074	1	61	TUBE PLASTIC *TWO FEET REQUIRED)	15-0238	1		
25	REDUCER FITTING	24-0308	1	62	NUT	23-0315	1		
26	OIL DRAIN HOSE	70-0358	1	63	TUBE SUPPORT	23-0486	2		
27	ENGINE	1-0087	1	64	THROTTLE CONTROL	33-0625	1		
28	DECAL - MUFLER HOT (SEE 71-0086)	N/A	1	65	LOCKWASHER	29-0110	1		
29	DECAL - CHECK OIL	N/A	2	66	IDLE CONTROL BRACKET	13-0248A01	1		
30	DECAL - ENGINE FUEL (SEE 71-0086)	N/A	1	67	90° ELBOW FITTING	24-0272	1		
31	KEY	43-0078	1	68	ELBOW	23-0316	1		
32	SPACER	20-1020A52	4	69	PILOT VALVE	22-0270	1		
33	SUPPORT BRACKET	20-0860A01	1	70	BOLT	27-0117	4		
34	BOLT	27-0131	2	71	LOCKWASHER	29-0008	4		
35	WASHER	28-0003	20	72	ISOLATOR	14-0109	4		
36	LOCKNUT	30-0157	10	-	DECAL SET	71-0086	1		
37	SHEAVE	10-0025	1	-					*MUST ORDER IN ONE FOOT LENGTHS

# TWO STAGE COMPRESSOR (3-0234)

TORQUE SPECIFICATIONS		
POSITION	FT-LBS	Nm
2	40.6	55
4	18.4	25
5	40.6	55
23	21.4	29
37	11.1	15
40	93.7	127
44	18.4	25

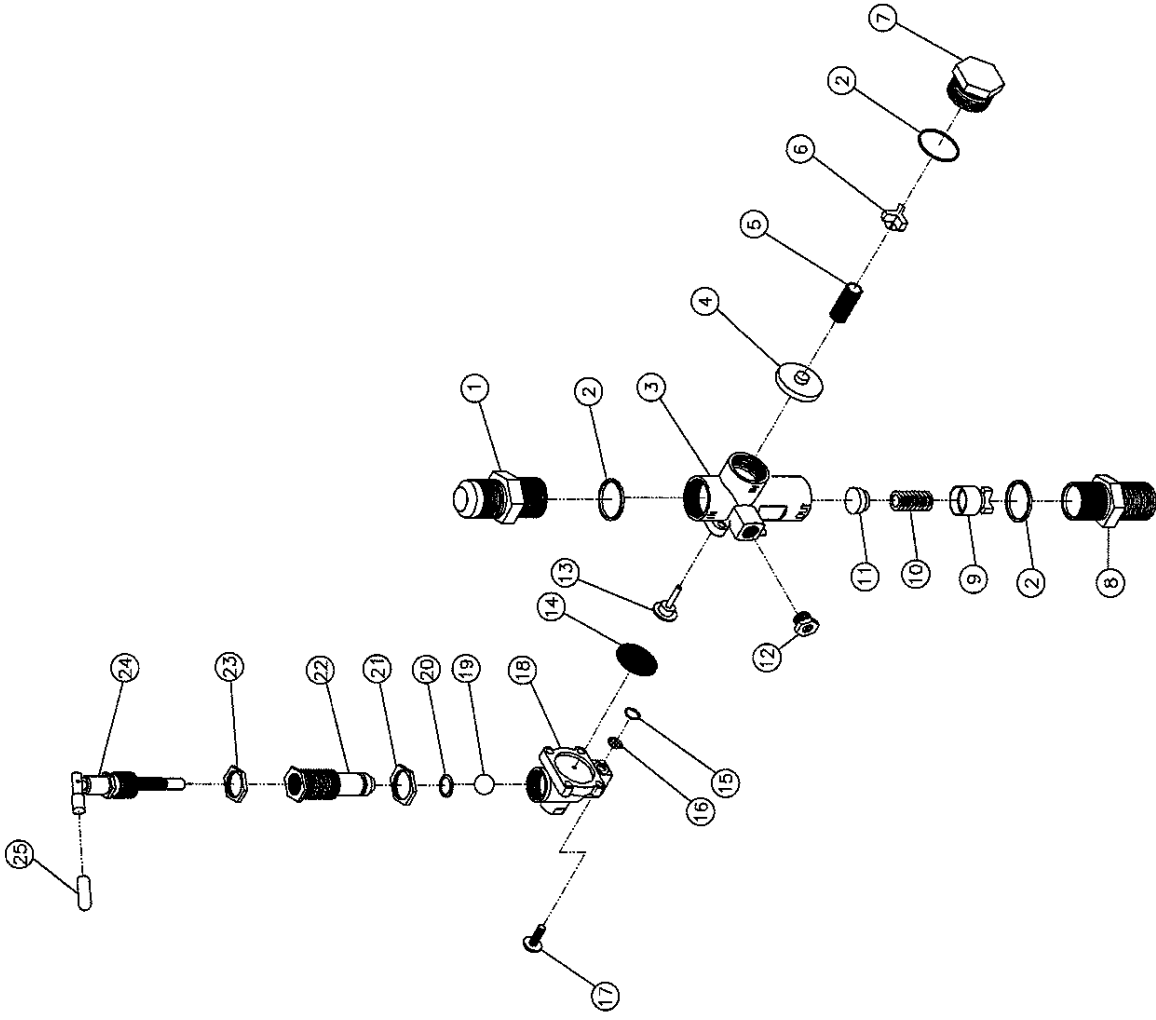


3-0234 073112 RSW

PUMP ASSEMBLY						
ITEM	DESCRIPTION	PART #	QTY	ITEM	DESCRIPTION	PART #
1	HP SAFETY VALVE	22-0477	1	29	BALL BEARING	48-0082
2	BOLT	-	4	30	CRANKSHAFT	N/A
3	COPPER WASHER - 5/16	N/A	2	31	KEY	43-0117
4	BOLT	-	2	32	BALL BEARING	48-0084
5	BOLT	27-0874	4	33	O-RING (SEE 70-0600)	N/A SEP
6	ELBOW	23-0316	1	34	BEARING FLANGE	46-1189
7	CYLINDER HEAD	46-1493	1	35	LOCKWASHER	29-0007
8	LP SAFETY VALVE	22-0362	1	36	OIL SEAL	26-0291
9	HEAD GASKET (SEE 70-0600 and 70-0603)	N/A SEP	1	37	BOLT	27-0067
10	VALVE PLATE	46-1494	1	38	FLYWHEEL	10-0132
11	BOLT (SEE 70-0603 and 70-0601)	-	8	39	CRANKSHAFT WASHER	N/A
12	VALVE SEAT (SEE 70-0603 and 70-0601)	-	3	40	CRANKSHAFT NUT	N/A
13	REED VALVE (SEE 70-0603 and 70-0601)	-	3	41	CONNECTING ROD (SEE 70-0423)	70-0423
14	VALVE PLATE	-	1	42	PISTON	46-1192
15	VALVE (SEE 70-0603 and 70-0601)	-	1	43	PISTON RING SET (SEE 70-0425)	70-0425
16	WASHER (SEE 70-0603 and 70-0601)	-	2	44	BOLT	N/A
17	VALVE (SEE 70-0603 and 70-0601)	-	1	45	CONNECTING ROD (SEE 70-0424)	70-0424
18	BOLT (SEE 70-0603 and 70-0601)	-	2	46	PISTON	46-1193
19	PLUG	24-0009	1	47	PISTON RING SET (SEE 70-0426)	70-0426
20	OIL SIGHT GLASS	46-1495	1	48	INTERCOOLER KIT	70-0602
21	GASKET (SEE 70-0603 and 70-0600)	N/A SEP	1	49	INTERCOOLER ELBOW (SEE 70-0602)	N/A
22	CYLINDER	46-1496	1	50	INTERCOOLER LINE (SEE 70-0602)	N/A
23	BOLT	27-0117	6	51	INTERCOOLER HOLDER KIT (SEE 70-0428 and 70-0602)	27-0015
24	CRANKCASE GASKET (SEE 70-0600)	N/A SEP	1	52	BOLT	N/A SEP
25	BREATHER TUBE	54-0034	1	53	INTERCOOLER BRACKET BACK (SEE 70-0428 and 70-0602)	N/A
26	ADAPTER	23-0328	1	54	INTERCOOLER CLAMP (SEE 70-0428 and 70-0602)	N/A
27	OIL FILL PLUG	46-1121	1	55	WASHER (SEE 70-0428 and 70-0602)	28-0002
28	CRANKCASE	46-1188	1	56	LOCKNUT (SEE 70-0428 and 70-0602)	30-0155

REPLACEMENT KITS			
KIT #	DESCRIPTION	ITEMS	# OF ASSEMBLIES
70-0428	INTERCOOLER HOLDER KIT	52-56	1,1,1,1,1
70-0603	KIT GASKET/VALVE PLATE	9,11-13,15-18,21	1,8,3,3,1,2,1,2,1
70-0602	KIT-INTERCOOLER	49,50,52-56	2,1,1,1,1,1,1
70-0424	LP CONNECTING ROD KIT	45	1
70-0423	HP CONNECTING ROD KIT	41	1
70-0600	KIT-GASKET	9,21,24,33	1,1,1,1
70-0426	KIT-RING 4.75"	47	1
70-0425	KIT-RING 2 1/2"	43	1
70-0601	KIT- VALVE PLATE	11-13, 15-18	8,3,3,1,2,1,2

# PILOT VALVE (22-0270)



22-0270 062905 062905 DLG

22-0270-062905-DLG				
PILOT VALVE (22-0270)				
REF #	DESCRIPTION	PART #	QTY	
1	Inlet Port Fitting	N/A	1	
2	O-ring (See 70-0241)	N/A Sep.	3	
3	Main Body	N/A	1	
4	Piston Assembly-Unloader Valve (See 70-0241)	N/A Sep.	1	
5	Spring-Unloader Valve (See 70-0241)	N/A Sep.	1	
6	Spring Seat-Unloader Valve	N/A	1	
7	Cap	N/A	1	
8	Discharge Port Fitting	N/A	1	
9	Spring Seat Assembly-Check Valve	N/A	1	
10	Spring-Check Valve (See 70-0241)	N/A Sep.	1	
11	Piston-Check Valve (See 70-0241)	N/A Sep.	1	
12	Muffler	23-0419	1	
13	Stem Unloader (See 70-0241)	N/A Sep.	1	
14	Diaphragm (See 70-0241)	N/A Sep.	1	
15	O-ring (See 70-0241)	N/A Sep.	1	
16	Screen (See 70-0241)	N/A Sep.	1	
17	Screw w/Washer	N/A	4	
18	Pilot Body	N/A	1	
19	Ball (See 70-0241)	N/A Sep.	1	
20	O-ring (See 70-0241)	N/A Sep.	1	
21	Differential Adjusting Locknut	N/A	1	
22	Differential Adjusting Nut	N/A	1	
23	Pressure Adjusting Locknut	N/A	1	
24	Pressure Adjusting Toggle Assembly (See 70-0241)	N/A Sep.	1	
25	Red Toggle Cover	N/A	1	
	Repair Kit (Includes 4-5, 10-11, 13-16, 19-20, 24 and 3 each 2)	70-0241		

