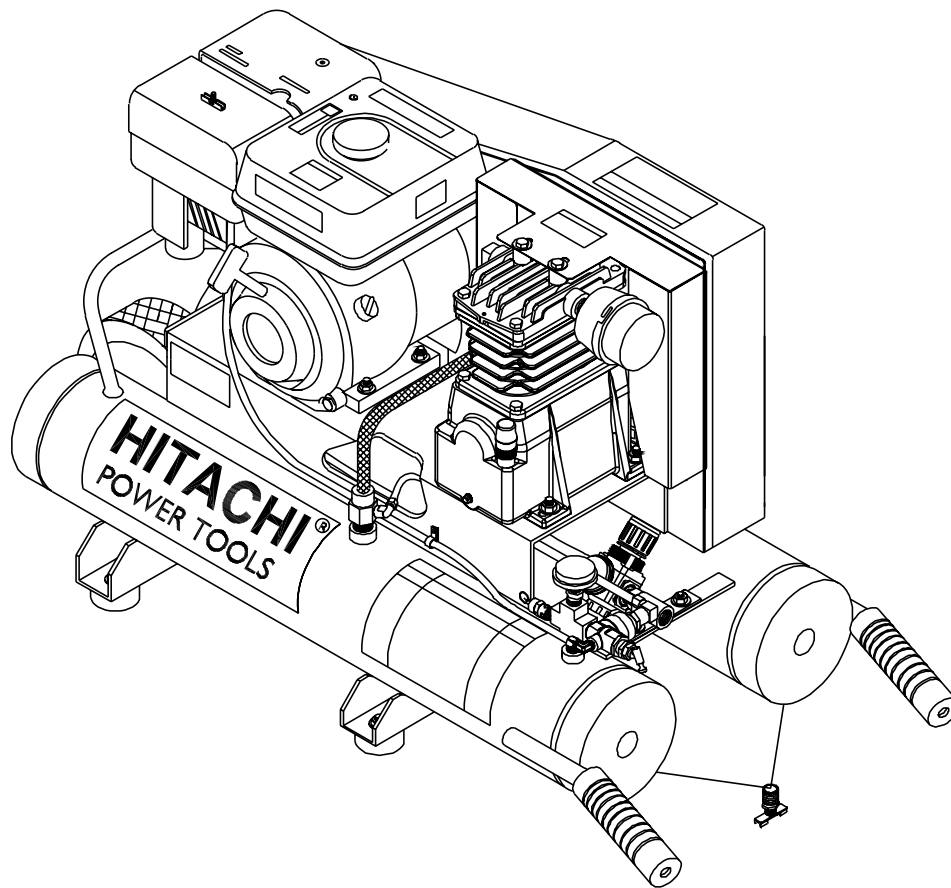


MODEL

EC 25E / AC1-PH55-08H TECHNICAL



WARNING

Improper and unsafe use of this compressor can result in death or serious bodily injury! Compressor manual (this manual) and engine manual contains important information about product safety.

Please read carefully and fully understand the compressor manual (this manual) and engine manual before operating the compressor.

Please keep the compressor manual (this manual) and engine manual available for others before they use the compressor.

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English			
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IMPORTANT INFORMATION

Read and understand all of the operating instructions, safety precautions and warnings in the Instruction Manual before operating or maintaining this compressor.

Most accidents that result from compressor operation and maintenance are caused by the failure to observe basic safety precautions. An accident can be avoided by recognizing a potentially hazardous situation beforehand, and by observing appropriate safety procedures.

Basic safety precautions are outlined in the "SAFETY" section of this Instruction Manual and in the sections which contain the operation and maintenance instructions.

Hazards that must be avoided to prevent bodily injury or machine damage are identified by WARNINGS on the compressor and in this Instruction Manual.

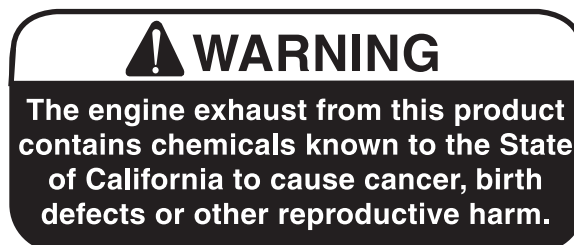
Never use this compressor in a manner that has not been specifically recommended by HITACHI

MEANINGS OF SIGNAL WORDS

WARNING indicates a potentially hazardous situation which, if ignored, could result in serious personal injury.

CAUTION indicates a hazardous situation which, if ignored, could result moderate personal injury, or could cause machine damage.

NOTE emphasizes essential information.



SAFETY

IMPORTANT SAFETY INSTRUCTIONS FOR USE OF THE COMPRESSOR



WARNING: Death or serious bodily injury could result from improper or unsafe use of this compressor. To avoid these risks, follow these basic safety instructions:

READ ALL INSTRUCTIONS

1. **NEVER TOUCH MOVING PARTS.**
Never place your hands, fingers or other body parts near this compressor's moving parts.
2. **NEVER OPERATE WITHOUT ALL GUARDS IN PLACE.**
Never operate this compressor without any guards or safety features in place and in proper working condition. If maintenance or servicing requires the removal of guard or safety features, be sure to replace the guard or safety features before resuming operation of this compressor.
3. **ALWAYS WEAR EYE PROTECTION.**
Always wear safety goggles approved by Ansi or equivalent eye protection. Compressed air must never be aimed at anyone or any part of the body.
4. **PROTECT YOURSELF AGAINST ELECTRIC SHOCK.**
Don't expose this compressor to rain. Never operate this compressor in damp or wet locations.
5. **STOP THE ENGINE.**
Always stop the engine and pull out the spark plug cap to prevent any sudden start of the engine and remove the compressed air from the air tank before servicing, inspecting, maintaining, cleaning, replacing or checking any parts.
6. **STORE COMPRESSOR PROPERLY.**
When not in use, this compressor should be stored in a dry place. Keep out of reach of children. Lock-out the storage area.
Do not store this compressor near an open flame or any equipment such as a stove, furnace, water heater, etc. which utilizes a pilot light or sparking device.
7. **KEEP WORK AREA CLEAN.**
Cluttered areas invite injuries. Always clear all work areas of unnecessary tools, debris, furniture, etc.
8. **CONSIDER WORK AREA ENVIRONMENT.**
Don't expose this compressor to rain. Don't use this compressor in damp or wet locations. Keep work area well lit and well ventilated. Operate this compressor at a stable place all the time.
Do not operate in flammable environment. This compressor produces sparks during operation. Never use this compressor in site containing lacquer, paint, benzene, thinner, gasoline, gases, adhesive agents, and other materials which are combustible or explosive.
This compressor contains some component parts that tend to produce arcs or sparks, and therefore, when located in a garage, it should be in a room or enclosure provided for this purpose, and should be 18 inches (457 mm) or more above the floor.
A spark arrester must be added to the muffler of this engine if it is to be used on any forest covered, brush covered or grass covered unimproved land. The arrester must be maintained in effective working condition by the operator.
Gasoline engines produce carbon monoxide; a poisonous odorless gas which may cause death. Do not start or operate this compressor in an enclosed area.
Operate this compressor at least 12 inches away from any wall or obstruction.
9. **KEEP VISITORS AWAY.**
All visitors should be kept safely away from work area.
10. **DRESS PROPERLY.**
Do not wear loose clothing or jewelry. They can be caught in moving parts.
Wear protective hair covering to contain long hair.
11. **STAY ALERT.**
Watch what you are doing. Use common sense. Do not operate this compressor when you are tired. This compressor should never be used by you if you are under the influence of alcohol, drugs or medication that makes you drowsy.

12. CHECK DAMAGED PARTS AND AIR LEAK.

Before further use of this compressor, guard or other parts should be carefully checked to see that it will operate properly and perform its intended function. Check alignment of moving parts, binding of moving parts, breakage of parts, mounting, air leak, and any other conditions that may affect its operation.

A guard or other part that is damaged should be properly repaired or replaced by an authorized service center.

Have defective pilot valve replaced by authorized service center.

Do not use this compressor if engine switch does not turn it on and off.

13. NEVER USE THIS COMPRESSOR FOR APPLICATIONS OTHER THAN THOSE SPECIFIED.

Never use this compressor for applications other than those specified in the Instruction Manual.

Never use compressed air for breathing or respiration.

14. HANDLE THIS COMPRESSOR CORRECTLY.

Operate this compressor according to the instructions provided herein. Never allow this compressor to be operated by children, individuals unfamiliar with its operation or unauthorized personnel.

15. KEEP ALL SCREWS, BOLTS AND COVERS TIGHTLY IN PLACE.

Keep all screws, bolts, and covers tightly mounted. Check their conditions periodically.

16. NEVER USE A COMPRESSOR WHICH IS DEFECTIVE OR OPERATING ABNORMALLY.

If this compressor appears to be operating unusually, making strange noises, or otherwise appears defective, stop using it immediately and arrange for repairs by a Hitachi authorized service center.

17. DO NOT WIPE PLASTIC PARTS WITH SOLVENT.

Solvents such as gasoline, thinner, benzene, carbon tetrachloride, and alcohol may damage and crack plastic parts. Do not wipe plastic parts on this compressor with such solvents. Wipe plastic parts with a soft cloth lightly dampened with soapy water and dry thoroughly.

18. USE ONLY GENUINE HITACHI REPLACEMENT PARTS.

Replacement parts not manufactured by Hitachi may void your warranty and can lead to malfunction, causing injuries. Genuine Hitachi parts are available from your dealer.

19. DO NOT MODIFY THIS COMPRESSOR.

Do not modify this compressor.

Do not operate at pressure or speed in excess of manufacturer's recommendations.

Always contact the Hitachi authorized service center for any repairs. Unauthorized modification may impair this compressor's performance and result in accident or bodily injury.

20. TURN OFF THE ENGINE SWITCH WHEN THIS COMPRESSOR IS NOT USED.

When this compressor is not used, push the knob of the engine switch OFF and open the drain cock to discharge the compressed air from the air tank.

21. NEVER TOUCH HOT SURFACE.

To reduce the risk of burns, never allow any part of your body or other materials to contact with any exposed metal parts on this compressor.

Never allow any part of your body to contact the engine muffler or adjacent areas.

These areas can remain hot for at least 45 minutes after this compressor is shutdown. Cool down before servicing.

22. DO NOT DIRECT AIR STREAM AT BODY.

Do not direct air stream at persons or animals, to avoid any bodily injury.

23. DRAIN TANK.

Discharge the drain after each use and every day.

When the tank gets corroded, there can be a risk of breakdown. Accordingly, be sure to discharge the drain inside the tank after each use. The drain contains moisture in the air, abrasion particles, rust, etc. To discharge the drain, therefore, gradually open the drain cock, and be careful not to point it at your face or eyes.

24. USE ONLY RECOMMENDED AIR HANDLING PARTS ACCEPTABLE FOR PRESSURE NOT LESS THAN 125 PSI (8.6 BAR)

Risk of bursting. Use only recommended air handling parts acceptable for pressures not less than 125 psi (8.6 bar).

25. SEE TO IT THAT FUEL IS SUPPLIED APPROPRIATELY.

Follow all fueling instructions in operator's manual.

Do not smoke while fueling.

Do not fill fuel tank while this compressor is running or hot. Allow this compressor and engine to cool down for two minutes before refueling.

Do not refuel indoors or in a poorly ventilated area.

Do not fill fuel tank to point of overflowing.

Always refuel slowly to avoid the possibility of spilled fuel which may cause a fire.

Do not operate this compressor if gasoline is spilled. Wipe this compressor clean and move it away from the spill. Avoid creating any ignition until the gasoline has evaporated. Allow approximately 1/4" of tank space for fuel expansion.

26. BE CAREFUL NOT TO TRIP OVER OR DROP THE COMPRESSOR DURING TRANSPORT.

Exercise utmost caution when you carry this compressor. If you trip over something and drop it, there is a fear that unexpected injury may result. If you drop this compressor or bump it against any objects, air tank or any component parts can cause serious deformation, damage, severe scratches and breakdown on this compressor. If operated under such conditions, it can result in any accidents of bodily injuries by explosion of tank or explosion of those damaged component parts. Furthermore, gasoline which spilled out by those damages, may have a great risk of a fire.

When there is any deformation and damage on the handle, it may drop during transport, resulting in a accident of injury.

Before carrying this compressor, switch off the engine and discharge the drain inside the air tank.

Be cautious enough to make sure that there are no obstacles, inflammable articles, and unauthorized people around this compressor.

REPLACEMENT PARTS

When servicing use only genuine replacement parts.

Repairs should be conducted only by a Hitachi authorized service center.

**SAVE THESE INSTRUCTIONS
AND
MAKE THEM AVAILABLE TO
OTHER USERS OF THIS TOOL!**

OPERATION AND MAINTENANCE

NOTE:

The information contained in the Compressor Instruction Manual (this Instruction Manual) and Engine Instruction Manual are designed to assist you in the safe operation and maintenance of this compressor.

Some illustrations in the Compressor Instruction Manual (this Instruction Manual) and Engine Instruction Manual may show details or attachments that differ from those on your own compressor.

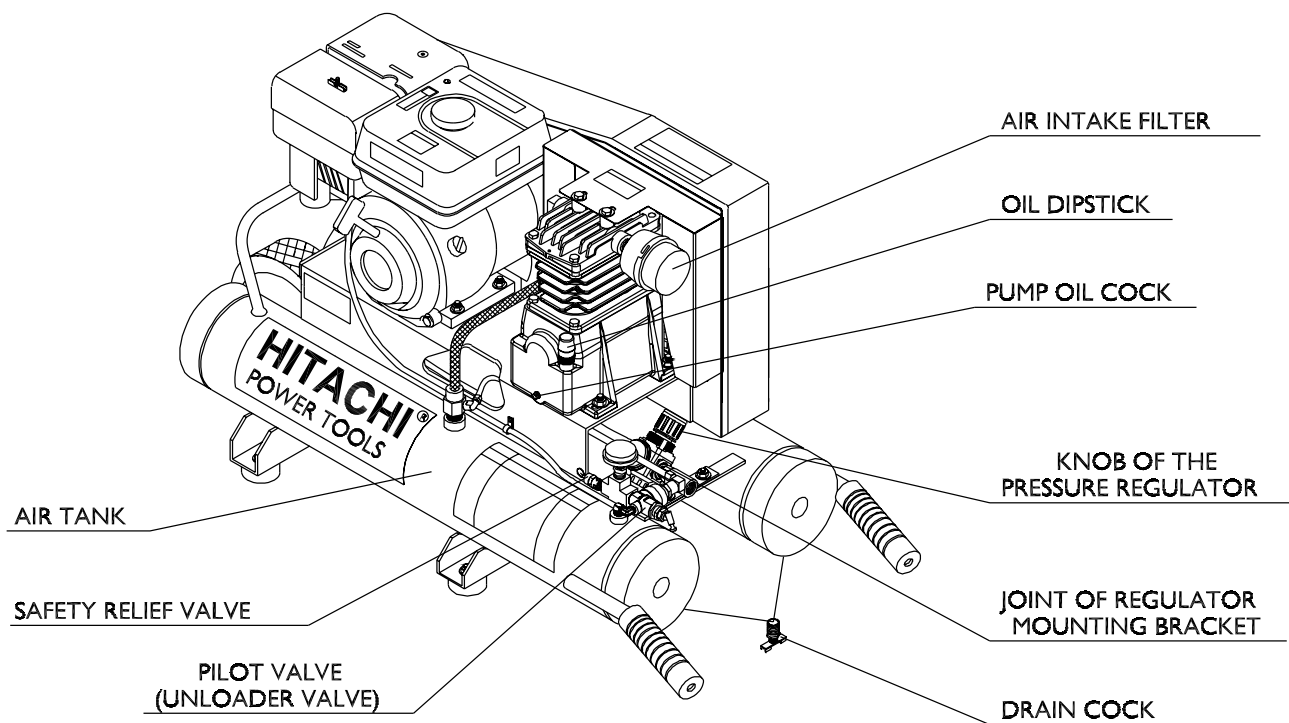


Fig. 1

SPECIFICATIONS

Compressor Model		EC25E
Engine	Manufacturer And Model	Honda GX160
	Displacement	9.9 cu in (163 mL)
	Max. Output	5.4bhp (4.0kW, 5.5PS)/3600min ⁻¹
	Fuel Tank Capacity	0.95 US gal. (3.6 L)
Tank Capacity		8.0 gal. (30.3L)
Maximum Pressure		125 PSI (8.6 bar)
Free Air Delivery	at 40 PSI (2.8 bar)	10.6 CFM (300 L/min)
	at 90 PSI (6.2 bar)	9.6 CFM (272 L/min)
	at 100 PSI (6.9 bar)	9.0 CFM (255 L/min)

APPLICATIONS

- Air source of the pneumatic nailer and stapler.

PRIOR TO OPERATION

- Initial set-up
 - Read safety warnings before setting-up this compressor.
 - Ensure the oil level in this compressor pump is adequate. If the oil level is low, replenish oil through the filling hole so that the amount of oil will come to a point between the maximum notch and the minimum notch on the dipstick according to the following OIL TYPE CHART. (Fig. 2)

OIL TYPE CHART

Ambient temperature (°F)	14~32 (°F)	32~68 (°F)	68~104 (°F)
Non-detergent oil	SAE 10W	SAE 20W	SAE 30

- Location
 - In order to avoid damaging this compressor, do not incline this compressor transversely or longitudinally more than 10°.
 - Place this compressor at least 12 inches away from obstacles that may prevent proper ventilation. Do not place this compressor in an area:
 - where there is evidence of oil or gas leaks.
 - where flammable gas vapors or materials may be present.
 - where air temperatures fall below 14°F or exceed 104°F.
 - where extremely dirty air or water could be drawn into this compressor.

- Gasoline engine
 - Review page 5.25 before fueling.



WARNING Do not allow the engine or muffler to come in contact with flammable vapors, combustible dust, gases or other combustible materials. A spark may cause a fire.
Do not place this compressor in an area where flammable gas vapors may be present. A spark can cause an explosion or fire.

- Read the engine manual accompanying this compressor for correct engine start-up maintenance procedures.
- Read and understand the safety labels located on this compressor.
- A minimum of 85 octane fuel is recommended for use with this compressor. Do not mix oil with gasoline.
- Use of clean, fresh, lead free gasoline should be used. Do not use gasoline containing methanol or alcohol.
- Check the engine oil level before starting. (See engine manual.)
- Fill the fuel tank according to the engine manual instruction.

- WARNING** Do not smoke while fueling. Do not fill fuel tank while this compressor is running or hot. Allow this compressor and engine to cool down for two minutes before refueling. Do not refuel indoors or in a poorly ventilated area. Do not fill fuel tank to point of overflowing. Always refuel slowly to avoid the possibility of spilled fuel which may cause a fire. Do not operate this compressor if gasoline is spilled. Wipe this compressor clean and move it away from the spill. Avoid creating any ignition until the gasoline has evaporated. Allow approximately 1/4" of tank space for fuel expansion.

- WARNING** Always store fuel away from this compressor while it is running or hot.

- H) Refer to the engine manual for all necessary maintenance and adjustments.

- WARNING** Do not operate this compressor in an enclosed area. Use this compressor only in well ventilated areas. The exhaust from the engine contains carbon monoxide, a poisonous, odorless and invisible gas. Breathing the gas can cause serious injury, illness and possible death.

4. Air coupler installation
Screw in the air coupler to the joint of regulator mounting bracket (Refer to Fig. 1 and Fig. 5). The screw size of the joint is 3/8". Use an air coupler which has the same screw size.
5. Pre-start checklist
A) The dipstick will register the amount of oil in the pump. (Fig. 2) Oil level should be checked on a daily basis to ensure it does not exceed the maximum notch or does not fall below the minimum notch on the dipstick. If the oil level is low, replenish oil through the filling hole so that the amount of oil will come to a point between the maximum notch and the minimum notch on the dipstick according to the OIL TYPE CHART on page 8.

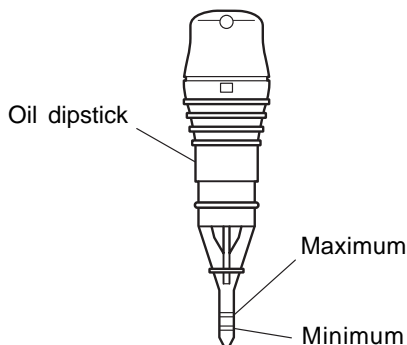
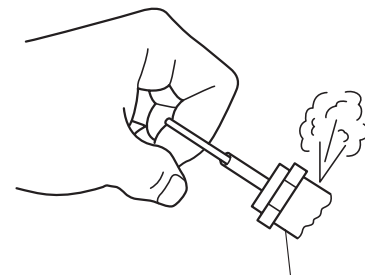


Fig. 2

- B) Remove any moisture in this compressor air tank. Gradually open the drain cock and discharge the drain. Close tightly when drained.
- C) Make sure the engine switch is in the "OFF" position.
- D) Make sure the safety relief valve is working correctly. (Fig. 3)
The safety relief valve is designed to prevent system failures by relieving pressure from the system when this compressed air reaches a predetermined level. The safety relief valve is preset by the manufacturer and must not be modified in any way. To verify the safety relief valve is working properly, pull on the ring. Air pressure should escape. When the ring is released, it will reset.



Safety relief valve

Fig. 3

- E) Make sure all guards and covers are in place and securely mounted.

OPERATION

1. Start up
A) Read safety warnings before performing operation.
B) When the toggle is in the upright position, all air from this compressor is vented through the discharge muffler (Fig. 4). This gives an easy start feature. For normal operation, the toggle is in the 90° position.

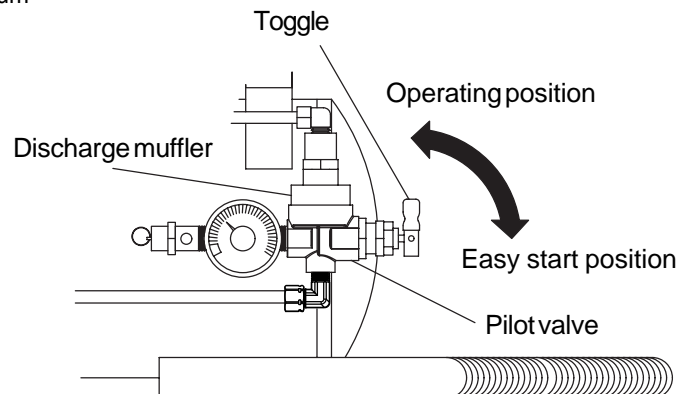


Fig. 4

- C) Start the engine. (Refer to the Engine Manual accompanying this unit.)
- D) When the engine has run for 1-2 minutes, flip toggle back to the original position.

The operation of this compressor is automatic and is controlled by the pilot valve which idles it when the pressure in the air-tank reaches the maximum level and restart it when the air pressure drops during use to the restart level. The pilot valve is preset by the manufacturer and must not be modified in any way.

WARNING: If you notice any unusual noise or vibration, stop this compressor.

2. Adjustment of working pressure

The air pressure coming from the air tank is controlled by the regulator knob (Fig. 5). Turn the pressure regulation knob clockwise to increase discharge pressure, and counterclockwise to decrease discharge pressure.

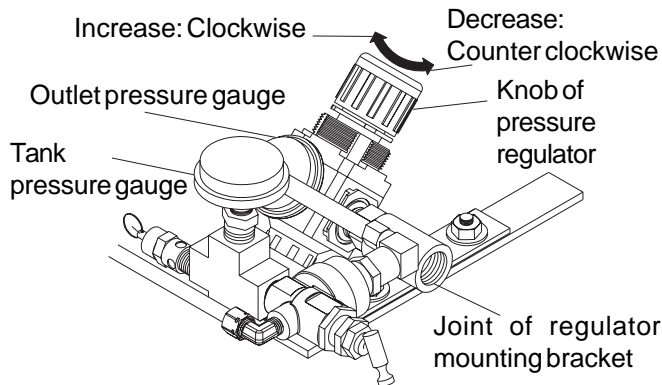


Fig. 5

The outlet pressure gauge indicates the air pressure available at the outlet side of the regulator. This pressure is controlled by the regulator and is always less or equal to the air tank pressure.

The air tank pressure gauge indicates the reserve air pressure in the air tank(s).

When adjusting the pressure, check and make sure that a pressure gauge for the tank has the pressure level that is higher than that of the pressure to be adjusted.

It is also imperative that you make adjustment by slowly starting up the pressure from the level that is lower than the pressure to be adjusted.

WARNING: Check the manufacturer's maximum pressure rating for nailers, staplers and accessories. Compressor outlet pressure must be regulated so as to never exceed the maximum pressure rating of the nailers, staplers and accessories.

3. Shutdown

- A) To stop this compressor, move the engine switch to the "Off" position. (Refer to the Engine Manual accompanying this unit.)
- B) Gradually open the drain cock, take out the drainage and all the compressed air inside the tank to prevent any internal corrosion of the tank. (Fig. 6)

WARNING: When the tank gets corroded, there is a risk of breakdown. Accordingly, be sure to discharge the drain inside the tank after each use.

The drain contains moisture in the air, abrasion particles, rust, etc. To discharge the drain, therefore, gradually open the drain cock, and be careful not to point it at your face or eye.

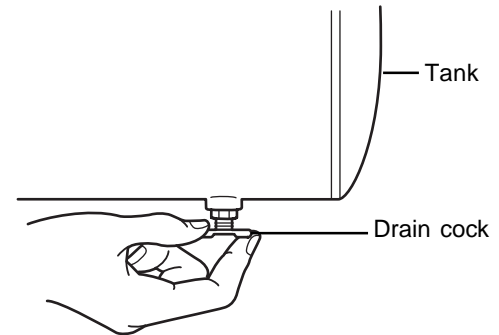


Fig. 6

- C) Allow this compressor to cool down.
- D) Wipe this compressor clean and store in a safe, non-freezing area.

MAINTENANCE

WARNING: Always stop the engine and pull out the spark plug cap to prevent any sudden start of the engine and remove this compressed air from the air tank before performing the maintenance operations.

Read the instruction manual before performing maintenance. The following procedures must be performed when stopping this compressor for maintenance or service.

- A) Turn off this compressor.
- B) Disconnect spark plug wire from engine.
- C) Open all drains.
- D) Wait for this compressor to cool down before starting service.

1. Cleaning the air intake filter

This filter is designed to clean air coming into the pump (Fig 7). To ensure the pump continually receives a clean, cool, dry air supply this filter must always be clean and ventilation opening must always be free from obstructions.

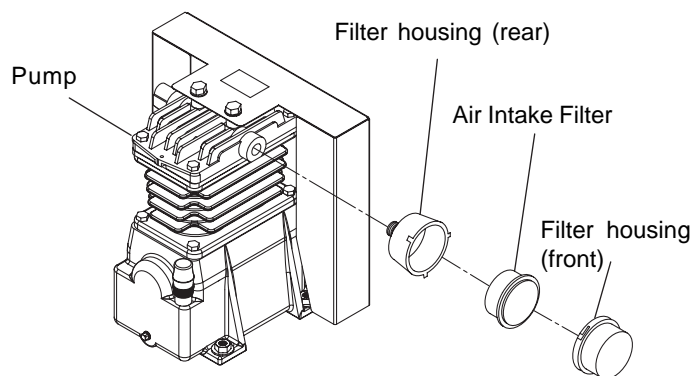


Fig. 7

SERVICE AND REPAIRS

All quality compressors will eventually require servicing or replacement of parts because of wear and tear from normal use. To assure that only genuine replacement parts will be used, all service and repairs must be performed by a HITACHI AUTHORIZED SERVICE CENTER, only.

NOTE:

Specifications are subject to change without any obligation on the part of the HITACHI.

NOTE:

Replace the filter element when it becomes dirty.

2. Draining tank:

Gradually open the drain valve, and drain out the air in the tank. (Fig. 6)

Close tightly when drained.

3. Maintenance chart:

MAINTENANCE CHART

PROCEDURE	AFTER USE	DAILY	WEEKLY	MONTHLY	200 HOURS
Check pump oil level		X			
Oil leak inspection		X			
Drain condensation in air tank (s)	X	X			
Inspect guards/covers		X			
Check for unusual noise/vibration		X			
Check for air leaks		X			
Clean exterior of compressor			X		
Inspect air filter			X		
Check safety relief valve			X		
Inspect belt tension				X	
Change pump oil					X
Replace air filter					X

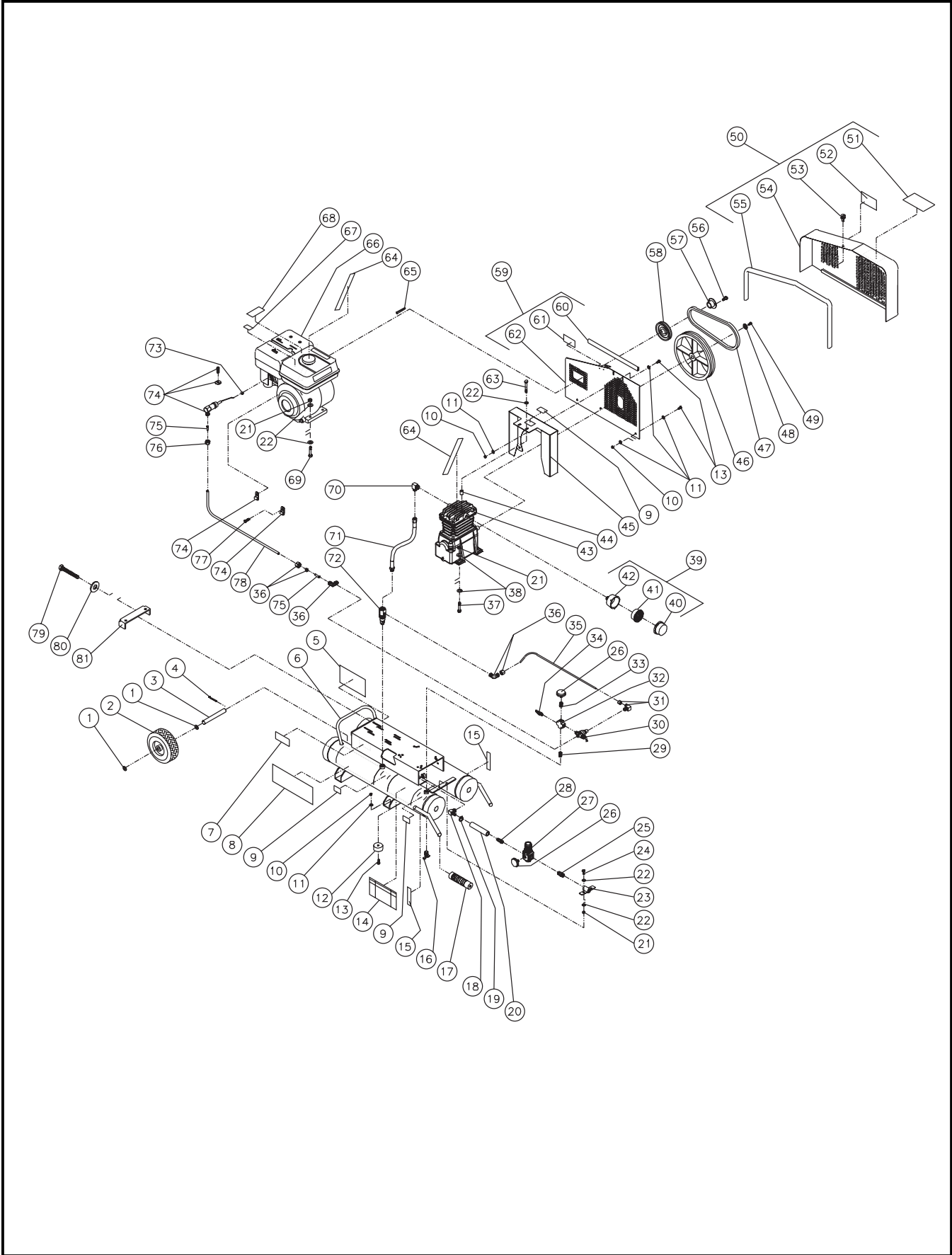
The pump oil must be changed after the first 50 hours of operation and every 200 hours or 3 months, whichever comes first.

Open the pump oil cock and replace pump oil. (Fig. 1)

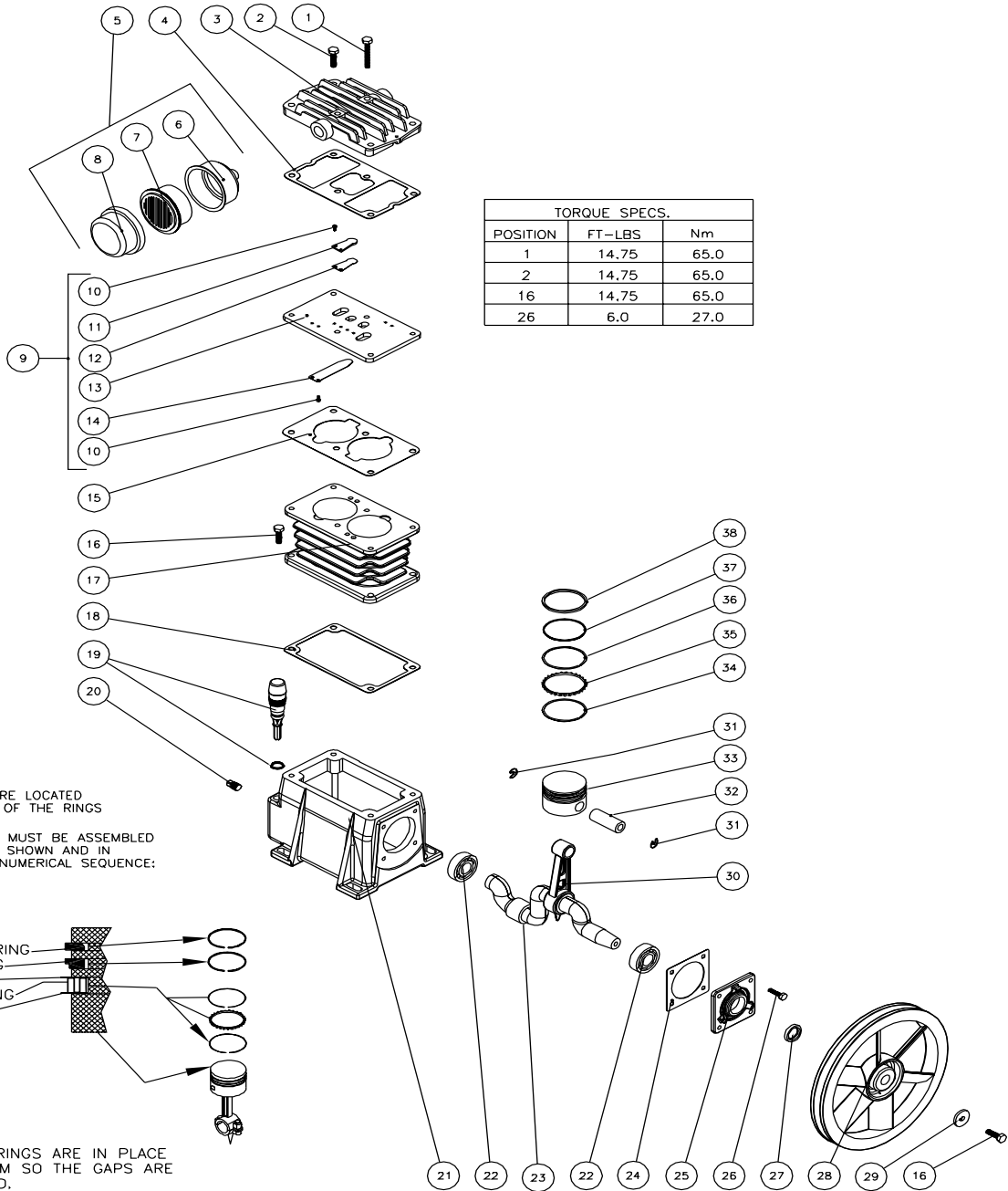
As regards the engine, follow instructions in the engine manual.

Every 2 years, an Authorized Service Technician should check the check valve, intake valves and delivery valves.

EC 25E



EC 25E



EC 25E

3-0215 M & Hitachi-081301-BAR

SINGLE STAGE COMPRESSOR (724046 / 3-0215)									
REF #	DESCRIPTION	PART #	PART #	QTY	REF #	DESCRIPTION	PART #	PART #	QTY
1	Screw	724101	27-0071	2	22	Bear Ball	724122	48-0016	2
2	Screw	724040	27-0068	4	23	Crankshaft	724123	46-0955	1
3	Cylinder Head	724103	46-0951	1	24	Flange Gasket (See 724139 / 70-0326)	N/A Sep.	N/A Sep.	1
4	Head Gasket (See 724139 / 70-0326)	N/A Sep.	N/A Sep.	1	25	Flange	724125	46-0957	1
5	Filter Assembly (Inc. 6-8)	724042	19-0083	1	26	Screw	724126	27-0014	4
6	Air Filter (See 724042 / 19-0083)	N/A Sep.	N/A Sep.	1	27	Shaft Oil Seal	724127	26-0246	1
7	Filter Element	724044	19-0082	1	28	Flywheel	724049	10-0115	1
8	Filter Cap	724108	19-0084	1	29	Washer w/Crankshaft (See 724123 / 46-0955)	N/A Sep.	N/A Sep.	1
9	Valve Plate Assembly (Inc. 10-12, 14) (See 724140 / 70-0327)	N/A Sep.	46-0952	1	30	Connecting Rod	724130	46-0958	2
10	Valve Screw (See 724140 / 70-0327)	N/A Sep.	N/A Sep.	8	31	Snap Ring (See 724142 / 70-0329)	N/A Sep.	N/A Sep.	4
11	Valve Stop (See 724140 / 70-0327)	N/A Sep.	N/A Sep.	2	32	Wrist Pin(See 724142 / 70-0329)	N/A Sep.	N/A Sep.	2
12	Outlet Reed Valve (See 724140 / 70-0327)	N/A Sep.	N/A Sep.	2	33	Piston (See 724142 / 70-0329)	N/A Sep.	N/A Sep.	2
13	Valve Plate	N/A	N/A	1	34	Bottom Rail (See 724141 / 70-0328)	N/A Sep.	N/A Sep.	2
14	Inlet Reed Valve (See 724140 / 70-0327)	N/A Sep.	N/A Sep.	2	35	Expander Ring (See 724141 / 70-0328)	N/A Sep.	N/A Sep.	2
15	Cylinder Valve Plate Gasket (See 724139 / 70-0326)	N/A Sep.	N/A Sep.	1	36	Top Rail (See 724141 / 70-0328)	N/A Sep.	N/A Sep.	2
16	Screw	724021	27-0067	5	37	Scraper Piston Ring (See 724141 / 70-0328)	N/A Sep.	N/A Sep.	2
17	Cylinder	724117	46-0953	1	38	Taper Face Piston Ring (See 724141 / 70-0328)	N/A Sep.	N/A Sep.	2
18	Cylinder to Crankcase Gasket (See 724139 / 70-0326)	N/A Sep.	N/A Sep.	1		Gasket Kit (Inc. 4, 15, 18, 24)	724139	70-0326	
19	Oil Dipstick w/ O-ring	724119	46-0956	1		Valve Plate Kit (Inc. 10-12, 14)	724140	70-0327	
20	Plug	724120	24-0082	1		Piston Seals Kit (Inc. 34-38)	724141	70-0328	
21	Crankcase	724121	46-0954	1		Piston Kit (Inc. 31-33)	724142	70-0329	

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