'TASE' Gas Engine ('HDI') Air Compressor Installation, Maintenance, And Service Data

Please read this manual before installing or using your Air Compressor Unit. It contains valuable information that will help in the receiving, installation, use, and maintenance of the Unit.

Please keep this manual in a safe place for future reference.

All of the information, policies, and procedures in this reference manual apply exclusively to DV Systems.

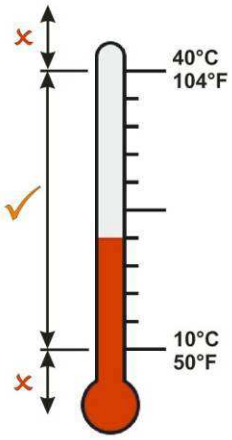
DV Systems Inc.
490 Welham Road,
Barrie, ON L4N 8Z4, Canada
Tele: (705) 728-5657

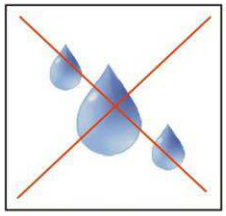
Web: www.dvsystems.com
Email: sales@dvsystems.com

Quick Start

Mechanical Installation.

(Refer to Page 7)



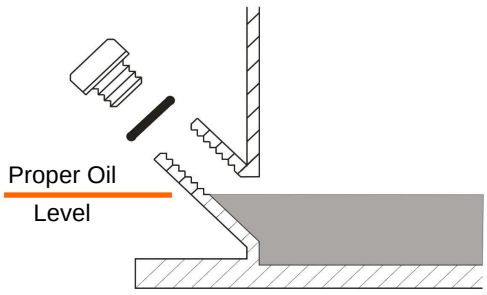


- These Units are used in applications where electrical power is not readily available. The most popular use of this type of Compressor is on service trucks, trailers, etc.
- As the airflow is from the Beltguard forward over and around the Pump, ensure that there is sufficient space behind the Beltguard to allow cooling of the Unit.
- The ambient temperature should be between 10°C and 40°C (50°F and 104°F).

  Use of the Unit in temperatures beyond this range may require changing to a different grade of oil (10 weight for lower temperatures, 30 weight for higher) and draining the Tank more frequently.
- Ensure that the floor under the Unit is capable of bearing the weight of the Compressor.

Lubrication.

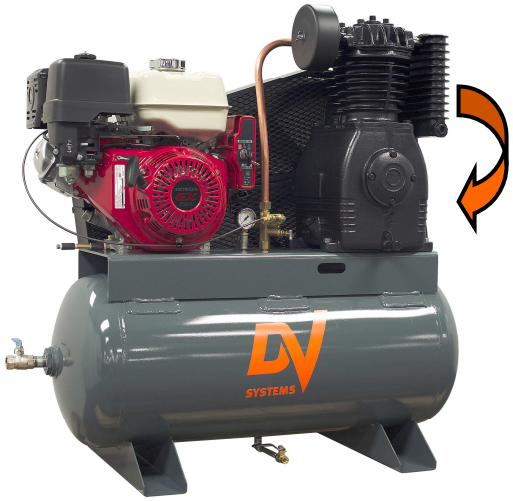
(Refer to Page 8)



Note: The Unit is shipped with 'PR-20' 20 Weight Compressor Oil in the Pump. Verify the proper level as indicated above before starting.

Pump Rotation.

The arrow to the right of the Pump indicates the correct rotation of the Flywheel.



Safety Precautions

In order to operate the Compressor Unit safely and correctly, we have opted to use the following symbols to make you aware of important points. These points relate to user safety and preventing equipment problems. Please pay close attention to these sections.

WARNING

Important safety Information. A hazard that may cause serious injury or loss of life.

CAUTION

Important information that indicates how to prevent damage to equipment, or how to avoid a situation that may cause minor injury.

NOTE

Information that you should pay special attention to.

WARNING

The following hazards may occur during the normal use of the equipment. Please read the following chart.

Area:	Hazard:	Safeguards:
What to look for:	What may occur if precautions are not observed.	How to avoid the hazard.
	Tampering with the Unit while under full or partial pressure may cause an explosion.	Relieve all pressure from the Unit before attempting any repair or maintenance work.
	Do not come into contact with moving parts.	Shut off all power to the Unit before attempting any repair or maintenance work.
	Air compressed by the Unit is not suitable for inhaling. It may contain vapours harmful to your health. Compressor capable of pressures >50 psi.	Never directly inhale compressed air produced by the Compressor. Do not direct air stream at body.
	The Compressor Pump, Engine, and Tubing become hot when running. Touching these areas may cause severe burns.	Never touch the Pump, Engine, or Tubing during or immediately after operation.
	As gasoline is used in the Honda Engine, and there may be electrical components close by, there is a potential for explosion.	Operate the Unit in a well ventilated area. As well, take caution when filling the Honda Engine with fuel.

Preventative Maintenance Schedule

Noted below are general maintenance guidelines which must be followed and documented, this in accordance with the DV Systems Warranty. It is based on an approximate Compressor usage of 30 hours per week. If your particular application varies from this, please adjust accordingly.

WARNING

When servicing the Air Compressor, shut off all power to the Unit, and drain the Tank of air pressure. Always re-install the Beltguard after adjusting the Belts or Pulleys.

Insist on Genuine DV Systems parts and kits when maintaining your Compressor Unit and Pump.	Notes	Normal Maintenance: Daily	Weekly	Monthly	Every 3 Months	Every 6 Months	1st Year Maint.	2nd Year Maint.	3rd Year Maint.	4th Year Maint.	5th Year Maint.	6th Year Maint.	7th Year Maint.
Drain moisture from Air Receiver		✓					'Normal Maintenance' items at left to be carried out regularly throughout the years.						
Check oil level and top up as required			✓										
Replace Air Filter	1			✓									
Replace Oil (mineral)	2				✓								
Check Belt Tension					✓								
Check Safety Valves					✓								
Check that Unit unloads when shutting down					✓								
Clean and/or blow dust/dirt off Unit					✓								
Replace Oil (synthetic)	3					✓							
Check Honda Manual for Service & Intervals													
Inspect Valve Assemblies in Cylinder Head(s)							✓		✓		✓		✓
Inspect Check Valve							✓		✓		✓		✓
Inspect Pressure Gauge							✓		✓		✓		✓
Replace Belts	4							✓		✓		✓	
Replace Valve Discs and Springs	5							✓		✓		✓	
Replace Safety Valves on Pump and Tank										✓			
Replace Pressure Gauge										✓			

Notes:
1. Air Filters are available separately or in a Maintenance Kit. Consult your Pump bulletin.
2. Mineral Oil is available separately or in a Maintenance Kit. Consult your Pump bulletin.
3. Synthetic Oil is available separately or in a Maintenance Kit. Consult your Pump bulletin.
4. Belts are available through your local DV Systems Distributor.
5. Valve Discs and Springs are available separately or in a Kit. Consult your Pump bulletin.

Unpacking and Inspection

NOTE

Each DV Systems Air Compressor is carefully tested and inspected before shipment. Though every attempt is made to ensure the safe and complete shipment of our product, freight damage or misplacement of goods may occur.

Shipments of DV Systems products are the property of the Consignee when the products leave our facility. DV Systems Inc. is not responsible for any damages or shortages caused to the product after it has left our shipping dock.

It is the responsibility of the receiver of the goods, either the Distributor or Customer, to ensure that the product has been shipped in full, and has arrived in suitable condition. Damage to the product may not be visible at time of off-loading, but may only become apparent upon unpacking or start-up.

Some areas to initially check are as follows:

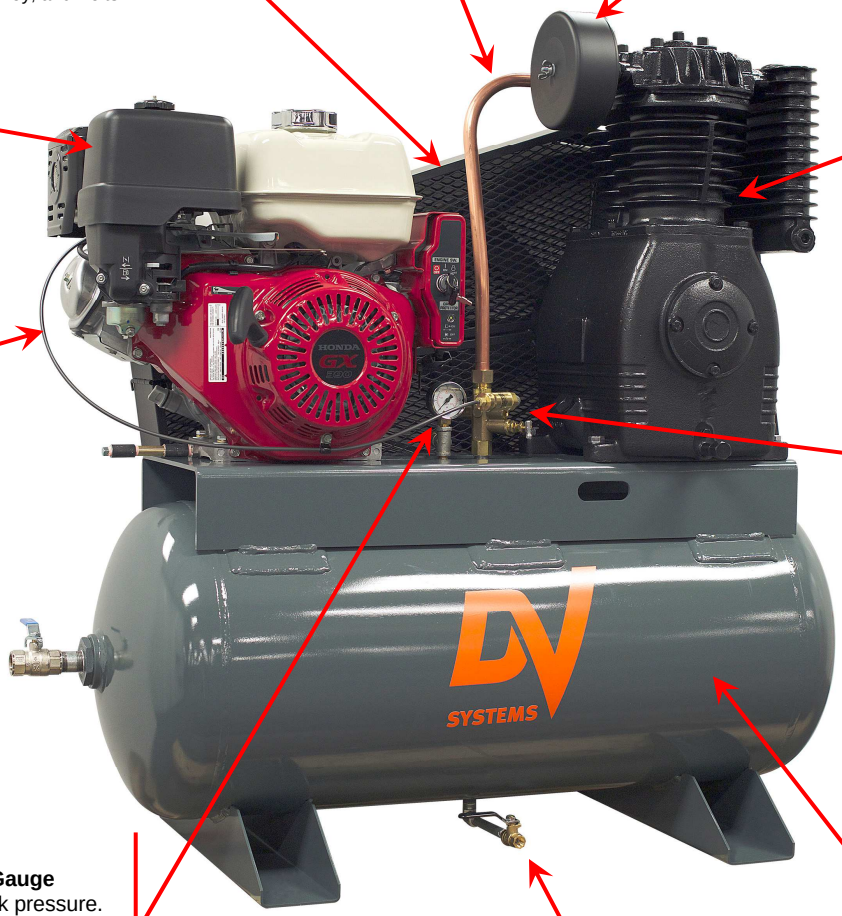
a) Check for damage to the crating and/or packaging.
b) Check for damage to the Beltguard.
c) If the BeltGuard appears damaged, remove the Guard and turn the Flywheel by hand to ensure the Crankshaft has not been bent, and the Belt drive is properly aligned and free of distortion.
d) Check the Air Tank thoroughly for possible damage

Should there be damage to the product or shortages in shipment:

1) Stop any further unpacking or operation of the product.
2) Make note of the problem on the Freight Bill, should it concern a shortage or visible damage to the product.
3) Should the damage be noticed only after the product has been received, contact the transport company immediately to file a claim.
   Depending on the problem, it may be wise to photograph the damage. Also, it may be wise to discuss with the carrier representative the time allotted to give notice of loss or damage to the product; there may be guidelines which limit timeframes of same.
4) Do not attempt further unpacking or operation of the product. Also, do not discard any packing material used.
5) A Loss or Damage Claim must be submitted to the carrier and supported by the following documents:
   - Copy of Freight Bill of Lading
   - Copy of the Invoice and Estimate to repair, in case of damage
   - Damage Report
   - Copy of photos, if applicable

Compressor Parts

Please refer to the picture below, as it identifies the major components of the 'TASE' style Air Compressor Unit and their function. (Base mounted Units do not have a Tank.)



EG-9479
Beltguard
Protects personnel from the moving parts of the Flywheel, Pulley, and Belts.

CT-9725
Aftercooler Tube
Allows the compressed air to cool as it transfers from the Pump to the Tank.

357-9401
Air Filter Assembly

357-9701
Air Filter Element

VAGE-9402
Honda Gas Engine
Provides power to turn Pump.

247-4502
Compressor Pump
Compresses the air.

UNL-9708
Throttle Control Assembly
Regulates running and idling of Honda Engine.

UNL-9707
Check Valve / Unloader
1) Allows the compressed air to enter the Tank, but prevents it from flowing back out.
2) Regulates the running of the Honda Engine.
3) Unloads pressurized air while Unit is idling.

VA-9705
Ball Valve
Discharge/outlet from Tank.

GA-250
Pressure Gauge
Shows Tank pressure.

TIA-5200
Safety Valve
Protects the Tank if pressure is too high.

Drain Valve
Allows the Customer to drain moisture from the Tank.

TA-9418-4
Air Receiver (Tank)
Stores the compressed air.

Note: Not indicated on the picture above are the following items:

BT-9031 Belt
PU-9212 Engine Pulley

Pump Components

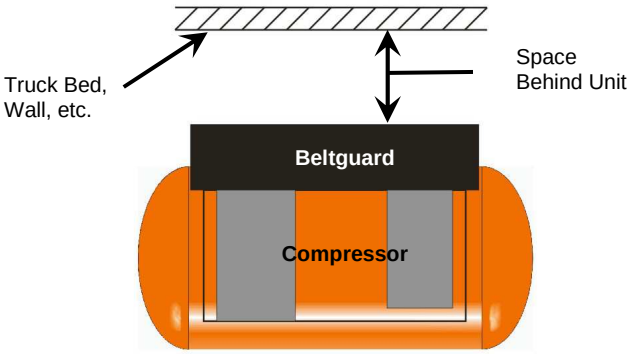
Please refer to the Compressor Pump Service Bulletin provided with your Unit to identify the part numbers, location, and quantities for your particular Pump model.

Installation – Mechanical

Location of the Unit.

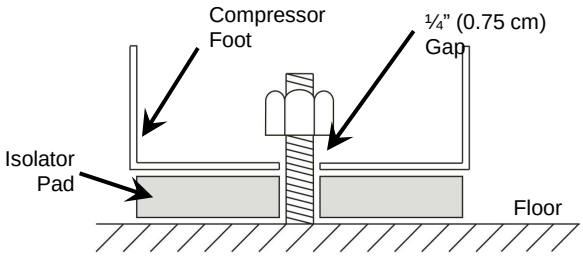
Items to consider when installing the Unit are as follows:

- Though these Units are used in more portable applications (eg trailers or trucks), they should be protected from the weather.
- Allow sufficient room behind the Beltguard to allow for proper ventilation of the Unit and ease of servicing.



- Ensure that the floor under the Unit is capable of bearing the weight of the Compressor. The Compressor must sit squarely on the floor.
- DV Systems has available a 'UDH-9700-K4' Kit consisting of (4) Vibration Isolator Pads to be placed under the Unit to absorb vibration.

- It is the responsibility of the Customer to ensure that the Compressor Unit is anchored securely in place. As well as fastening the Unit in place, please use the Vibration Isolators as indicated above.
- When anchoring the Unit, ensure that there is approx. ¼" (0.75 cm) between the Nut and the Compressor Foot (as shown below). Do not bolt down tightly.



WARNING

Never clamp or bolt Air Receiver Feet to the floor or support structure. Doing so can greatly increase stress on the Tank, causing it to weaken and/or fracture.

NOTE

The Compressor must not be operated in a confined area where the heat from the Unit cannot readily escape.

- The ambient temperature should be between 50°F and 104°F (10°C to 40°C).

Many common Compressor problems can be attributed to the location or installation of the Unit. Make sure the Unit is in a suitable location, and installed correctly.

Lubrication

Initial Start-up.

Each Compressor Unit built is extensively tested at the factory before shipment. The Unit is shipped with the original oil in it as was used for testing purposes.

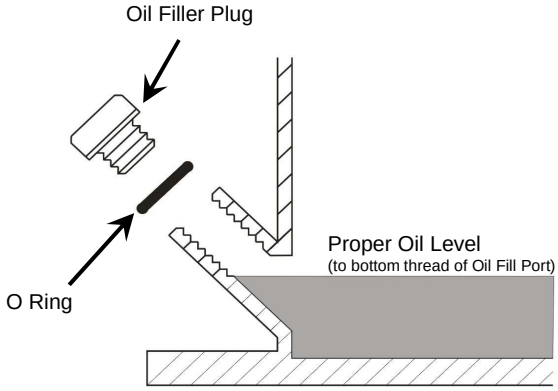
Check the oil level and for any oil leaks on a daily basis. This must be done when the Unit is off. Top up the Oil level on a monthly basis.

Use only DV Systems Premium Compressor Oil. Also, do not mix the DV Systems oil with any other lubricant.

Oil Changes.

Drain the existing oil from the Unit. Running the Unit prior to draining the oil will ensure that the oil will drain relatively quickly.

Fill the Oil Reservoir to the bottom thread at the Oil Filler Plug. Do not under or overfill. See drawing below.



Section Through Crankcase At Oil Fill Port

The following oils are available from your DV Systems Distributor.

DV Systems Premium Mineral Oils	Room (Ambient) Temperature
20 Weight: 'PR-20-4'	Up to 90°F (32°C)
30 Weight: 'PR-31-4'	Above 90°F (32°C)

DV Systems Premium Synthetic Oil is used in high heat or high duty applications.
20 Weight: 'OJ-2000'

CAUTION

Do not attempt to operate the Unit without first checking whether there is oil in the Pump Crankcase. Add oil as required. Serious damage may result from use, however limited, without oil.

CAUTION

Use of improper oil may negatively affect Compressor performance or shorten Unit life. Resulting problems are not covered by the DV Systems Warranty.

CAUTION

With limited Compressor use or installing in a very humid environment, condensation (water) may form in the Crankcase with the oil. If this occurs, change the oil more often than indicated on the Maintenance Schedule.

The following Maintenance Kits are available from your DV Systems Distributor. The Kits include both the Oil and Filter.

Kit c/w 20 Weight Mineral Oil

DV Systems Pump	Kit Part Number
247	MK-247

Note: Though 30 Weight Oil is available, it must be purchased separately as it is not included in a Kit.

Kit c/w 20 Weight Synthetic Oil

DV Systems Pump	Kit Part Number
247	MKS-247

Honda Engines

General Information.

The 13 HP 'TASE' Gas Engine Compressor Units are driven by means of a Honda Engine. The Engines have proven to be very reliable over the years and are therefore an industry standard.

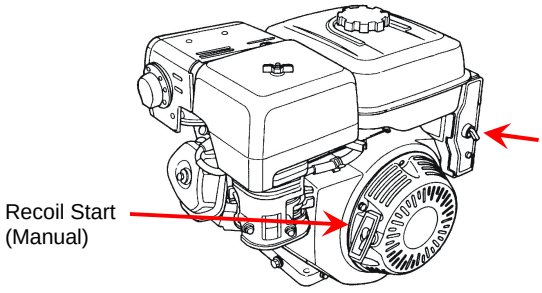
Any parts required for the Honda Engine, or any concerns that you may have with it, may be purchased from or addressed to your local Honda Engine Distributor and /or Service Center.

Each Unit is shipped with the 'Honda Engine Owners Manual' which outlines the various features, operation, and maintenance of the Engine.

As indicated below, the Honda Engine can be started by either:

a) a Recoil Starter (manual).
b) An Electric Start, requiring a 12 volt power supply from a dedicated power source or vehicle battery.

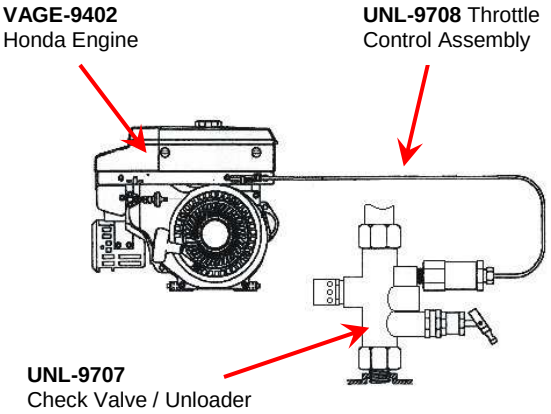
A battery and appropriate cables must be purchased locally to suit your particular layout. The Battery should be a 12 volt, high capacity.



Check Valve / Unloader Operation.

The Check Valve/Unloader is controlled by Tank pressure. These Compressors have Unloaders and run continuously, maintaining air pressure within set limits. At the preset cut-out pressure (approx. 150 psi), the Unloader Valve opens, and the compressed air is exhausted to atmosphere. This prevents the Compressor from continually building up pressure if the air is not required. At the same time, the Throttle Control puts the Engine in an idle mode (approx. 2000 rpm).

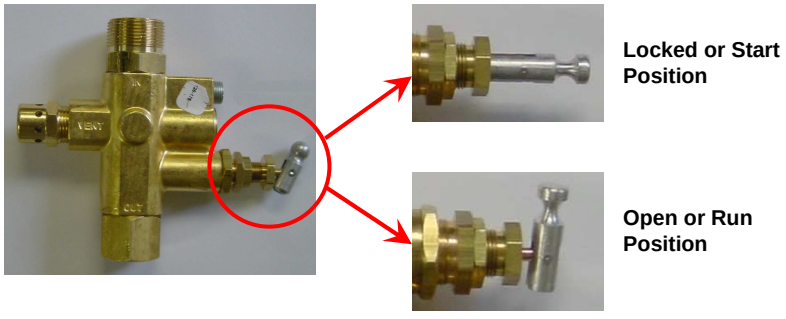
When the Tank pressure drops to a pre-set minimum pressure (approx. 115 psi), the Unloader Valve closes, and the Compressor again builds up the Tank pressure (the Engine running at approx. 3000 rpm).



Check Valve / Unloader Toggle Lever 'Start'/'Run' Position.

The Toggle Lever at the side of the Check Valve/Unloader Valve must be placed in the 'locked' (or 'start') position when starting the Compressor Unit. This will prevent the Compressor from starting under load.

Once the Engine has reached full throttle, the Lever must be returned to the 'open' (or 'run') position, allowing the Pump to build up air pressure in the Tank.



Start-up Procedures

CAUTION

Do not attempt to operate the Unit without first checking whether there is oil in the Pump. Add oil as required. Serious damage may result from use, however limited, without oil.

Initial Start-up

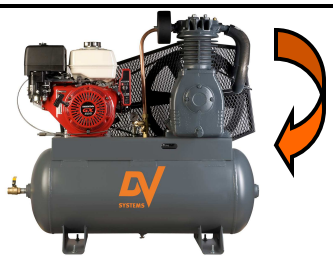
1) Remove the Oil Filler Plug on the Pump, and ensure that there is sufficient Oil in the Crankcase. Refer to the 'Lubrication' section (Page 8) in this manual for type and level of Oil.

2) Replace the Oil Filler Plug, and use a crescent wrench to tighten snug plus 1/4 turn.

3) Do a visual inspection of the Unit, and ensure that all Bolt heads are sufficiently tightened. This must be done, as some fasteners may become loose in transit.

NOTE

The Honda Engine will operate in only one direction. Correct rotation of the Pump is clockwise while facing the Pump, Flywheel behind the Pump, as shown below.



5) Open the Compressor's Ball Valve, and start the Unit as indicated on Page 9 at 'Check Valve / Unloader Toggle Lever 'Start'/'Run' Position'.

   Ensure that air is escaping to atmosphere. Allow the Unit to operate in this fashion for 5 minutes. This lubricates the Pistons, Bearings, and all internal surfaces.

CAUTION

Do not place any materials in close proximity to the Compressor. Placing materials against or close to the Unit will limit the cooling required, and could lead to premature failure.

6) After having run the Unit unloaded for 5 minutes, close the Ball Valve, and allow the Unit to reach maximum operating pressure (approx. 150 psi). Ensure that the Unit goes into the 'idle' mode.

7) Shut the Unit off. Once off, check the Compressor and piping systems for any air leaks. Correct as required.

WARNING

Shut off the Compressor Unit before attempting any repair or maintenance.

NOTE

During the first few days of operation, check the Unit periodically to ensure it is running smoothly. Should you have any concerns, contact your DV Systems Distributor.

Trouble Shooting Guide

WARNING

When servicing the Air Compressor, shut off all power to the Unit, and drain it of air pressure.

The 'Conditions', 'Causes', and 'Suggested Corrections' as indicated below and on the following page(s) are only a guideline for failures that we have found to be most common.

Though this information is provided in this booklet, it is assumed and expected that any personnel involved in the servicing of an Air Compressor Unit is knowledgeable with this type of equipment. Do not attempt to service a Compressor Unit unless you are familiar with it, as there are many issues that may come into play, the most important being personal safety and the welfare of the Unit.

Should you have any questions, or require servicing to your Unit, please contact your local DV Systems Distributor.

Condition:	Cause:	Suggested Correction:
A. Unit won't start.	No fuel in Honda Engine.	Check that Engine has fuel.
	Honda Engine will not start due to mechanical issue.	Contact local Honda Dealer.
	Check Valve / Unloader is not in 'Locked' / 'Start' position.	Place Check Valve / Unloader in 'Locked' / 'Start' position as indicated on Page 10.
B. No or Insufficient Air Flow.	Air Filter is dirty.	Replace the Air Filter.
	Loose Belts.	Tighten as required. Do not over-tighten.
	Pump Valves, Aftercooler, or Tank Check Valve leaking, sticking, or plugged.	Clean, repair, or replace.
	Air leaks at Compressor or in hose system.	Fix leaks. Soap/water mixture will assist in finding small leaks.
	Unit is too small for the compressed air requirements.	Contact your DV Systems Distributor for assistance.
C. Belts Roll Off Motor Pulley and/or Flywheel.	Flywheel and Motor Pulley are not aligned.	Align using a straight edge.
	If two or more Belts are used, Belts may not be matched set.	Purchase a new set of matched belts.
	A nick or tear on the edge of a belt.	Purchase a new set of matched belts.
	Belts do not match the Flywheel/Pulley groove (such as 'A' or 'B' section).	Purchase a new set of Belts, paying close attention to 'A' or 'B' section requirement.

Trouble Shooting Guide (cont'd)

Condition:	Cause:	Suggested Correction:
D. Excessive Noise.	Loose Beltguard, Flywheel or Motor Pulley.	Tighten as required.
	Loose Valve in the Cylinder Head.	Inspect the Valves. Ensure they are seated properly in the Cylinder Head. Reinstall, making sure that you re-torque as necessary.
	If noisy only during start-up, check for loose Belts.	Tighten Belts until no slippage is apparent.
	Normal sound amplified through floor.	Mount Unit on Vibration Pads.
	Improper level or grade of oil in Pump.	Use correct DV Systems oil, and check that level is correct.
	Carbon or other foreign material on Piston head.	Clean top of Piston. Check Cylinder walls for scoring.
	If the Pump is knocking, and cannot be attributed to any of the above, the Bearings in the Pump may be worn.	Worn Main Bearings can usually be detected by noticeable end play on the Flywheel. Replace the Main Bearings.
		Worn Connecting Rod Bearing Inserts can be detected by removing a Valve and watching the Piston while moving the Flywheel by hand. If the Flywheel can be moved at mid-stroke without the Piston moving, the Bearing Inserts or Connecting Rod may need to be replaced.
E. Oil Passing Downstream of Unit and Excessive Carbon Build-up.	Ambient temperature is too high.	Introduce cool air, better air flow, or move Unit to cooler location.
	Little or no air circulation around and over Unit.	Check the air circulation around the Unit.
	High percentage of running time.	Check for air leaks. If no air leaks are present, the Compressor may be too small for the application.
	Obstructed Air Filter.	Clean or replace as necessary.
	Too much oil in the Pump.	Reduce the amount of oil in the Pump.
	Using wrong type of compressor oil.	Change to the factory recommended oil.
	Worn Valves.	Check and repair as necessary.
	Worn Piston Rings.	Replace Piston Rings as necessary.

Trouble Shooting Guide (cont'd)

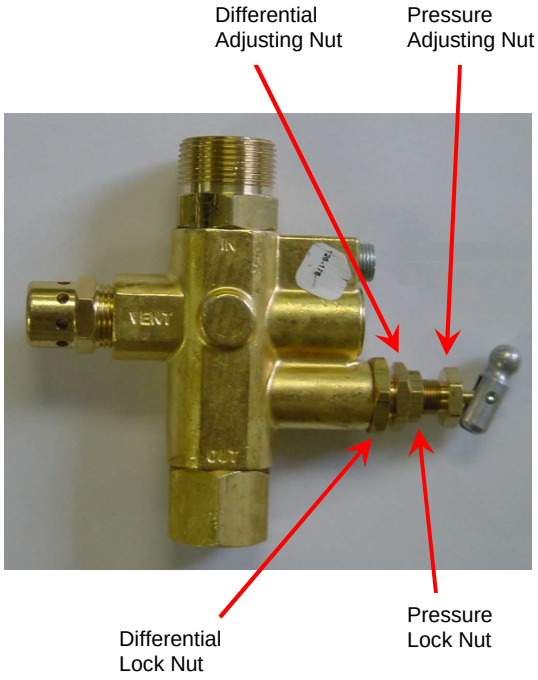
Condition:	Cause:	Suggested Correction:
F. Appearance of Water in the Air Lines and/or Oil 'milky' in Colour.	Tank is not being drained regularly. Unit is not being used enough to burn off any water in the Pump.	Drain the Tank on a daily basis. If using the Unit very infrequently, run for 30 minutes when used to burn off water. An oil/water mixture can cause premature issues with the Pump. Check the oil regularly and change more often then suggested in the Maintenance Schedule.
G. Compressor Over-heating.	Undersized Unit for air requirements. Dirt accumulation on outside of Pump. Not enough clearance at Beltguard for proper cooling. Pump rotating in wrong direction. Air leaks on Unit or in air lines. Non-ventilated room. Improper level or type of oil in Pump. Worn or carbonned Valves in Cylinder Head, Aftercooler Tube, or Check Valve.	Maximum operating time, based on an 8 hour day, is 75% to 80%, which related to 45 minutes per hour. Clean Pump. Move Compressor so Beltguard further away from any obstruction. Correct rotation of the Flywheel. Fix leaks. Soap/water mixture will assist in finding small leaks. Require fresh air ducting and ventilation. Refer to 'Lubrication' on Page 9. Clean or replace as required.
H. Unloader Does Not Function, or Leaks When Unit Operating.	Unloader may be dirty or faulty.	Clean, repair, or replace.
I. Intercooler Safety Valve Pops Continuously.	Dirty or defective Valves will cause back pressure. Intercooler clogged with carbon.	Clean, repair or replace the Valves. Clean or replace.

Check Valve / Unloader Calibration.

Adjusting the pressure settings on the Check Valve / Unloader is done as noted below. The cut-in / cut-out pressures are set at approximately 115 / 150 psi.

Maximum (Unload) Pressure.
Turn the Pressure Adjusting Nut clockwise to increase the pressure, counter-clockwise to decrease the pressure.

Differential (Unload) Pressure.
Hold the Differential Lock Nut so it remains stationary. Turn the Differential Adjusting Nut slightly clockwise to increase the differential, or counter-clockwise to decrease the differential pressure.



Genuine DV Systems Parts and Kits

DV Systems offers a variety of items to ensure that maintaining and servicing your 'TASE-5030' or 'TASE-5000' Air Compressor Unit is quick and easy. Adhering to a regular Maintenance Schedule as outlined in this manual, coupled with the purchasing of Genuine DV Systems Parts, will ensure many years of trouble-free Compressor operation.

A brief list of Genuine DV Systems Kits for the Maintenance and Servicing of your 'TASE-5030' Compressor is shown below.

Part:	Description:	Frequency of Use:
PR-20-4	4 litre (1 US Gallon) Jug of 20 Weight Compressor Oil (1) Oil change requires approx. 2.8 litres	Check Oil level weekly Top up as required Change every 500 hours
357-9701	Pump Air Filter Element (1) required per Unit	Change Filter as required or every 500 hours
MK-247	Maintenance Kit for use with 'TASE-5030' and 'TASE-5000' Units and includes: (1) PR-20-4 (4) litre Jug of 20 Weight Oil (1) 357-9701 Filter	Change Oil every 500 hours Change Air Filter as required
VRK-247	Pump Valve Repair Kit includes parts of the Valves that are deemed as 'regular wear items' (1) Kit required per Pump	Valves should be checked and/or serviced every year or 2000 hours (whichever occurs first)
OK-247	Pump Overhaul Kit includes parts of the Pump that should be changed during a fairly major servicing and includes: (1) 342-111 Oil Seal (2) 445-474 Bearing Inserts (1) GK-9404 Gasket Kit (1) KK-9805 Ring Kit – Standard Size (1) VRK-247 Valve Repair Kit	Pump may be overhauled as required

DV Systems Limited Warranties
Heavy Duty Industrial Air Compressors

DV Systems 7 Year Limited Pump Warranty.

DV Systems has implemented a new 7 Year Limited Pump Warranty, this being unprecedented in the Piston Compressor market. The new Warranty reflects the DV Systems commitment to providing quality Air Compressor Units to our Customers, this being the cornerstone of our long history in building Heavy Duty Industrial Air Compressors.

The '7 Year Limited Warranty' applies only to those Pump Assemblies that:

- are provided on and sold as a complete DV Systems 'HDI' Heavy Duty Cast Iron Compressor Unit. Pumps sold as 'separate sale items' or being installed on Units having the 'IS' or 'SDI' designation are governed by their own Warranty applicable to that product.
- have been manufactured by DV Systems after January 1, 2007.
- have been registered with the manufacturer within thirty (30) days from the date of purchase or 7 months from the date of manufacture (whichever occurs first), this done by returning the completed 'Warranty Registration Card' by email, fax, or post or by registering the warranty online.
- have been maintained in accordance with the DV Systems 'Preventative Maintenance Schedule' as provided here-in.
- have been maintained and serviced using only 'Genuine DV Systems' parts and kits, this including (but not limited to) Oil and Filters.

DV Systems Limited Warranty
Heavy Duty Industrial Air Compressors

Subject to the terms and conditions contained herein, DV Systems Inc. (the "Manufacturer") warrants that the Air Compressor (the "Product") shall be free of defects in material and workmanship (the "Warranty") for a period of one (1) year from the date of purchase, not to exceed eighteen (18) months from the date of manufacture (the "Warranty Period"). This Warranty is subject to the following terms and conditions:

- when in use, the Product must be properly installed, operated, applied and maintained in accordance with procedures and recommendations outlined in the Manufacturer's instruction manuals;
- all claims under this Warranty must be brought to the attention of the Manufacturer within the Warranty Period;
- the Warranty shall continue to apply to any Product or part of the Product replaced or repaired under the Warranty for the remaining term of the Warranty Period as would have been applicable to the original Product or part of the Product;
- this Warranty is applicable to the original purchaser of the Product and is not transferable;
- this Warranty does not apply to a Product that is purchased outside Canada or the continental United States (the "Territory"); and
- any service on the Product must be performed by the Manufacturer or, if by another party, only with the prior written authorization of the Manufacturer.

If there is a defect in the material or workmanship of the Product to which the Warranty applies, the Manufacturer will repair or replace the Product or part of the Product determined to be defective by the Manufacturer, in its sole and reasonable discretion. This Warranty applies only to parts and labour necessary to correct a defect in the Product.

This Warranty shall be deemed void if:

- any service on the Product is performed by any party other than the Manufacturer or his agent without the prior written authorization of the Manufacturer;
- the Product is not properly maintained as detailed in the Manufacturer's instruction manuals; or
- the Product is subject to misapplication, misuse, abuse, neglect, incorrect maintenance or accident.

This Product is subject to ordinary wear and tear ("Ordinary Wear and Tear"), which particularly applies to parts that are subjected to friction or that may generally have a known useful life (including but not limited to compressor pump rings, valves and bearings). The Manufacturer shall determine, in its sole and reasonable discretion, if a Product or part of a Product has been subject to Ordinary Wear and Tear. This Warranty does not apply to Ordinary Wear and Tear. In addition, without limiting the foregoing, this Warranty does not apply to:

- all shipping and handling charges
- compressor pumps using other than the recommended compressor pump lubricant;
- costs of removal, replacement, or repair of Product without previous authorization from Manufacturer;
- expenses incurred by a technician of the Manufacturer for travel or lodging beyond a 100 kilometre (60 mile) distance or 1 hour driving time from the nearest DV Systems Authorized Service Centre.
- damages resulting from transportation, installation, or servicing;
- products, parts, materials, components or accessories manufactured by parties other than the Manufacturer or supplied in connection with the sale of the Manufacturer's Product; and
- the cost of rental or loaner equipment provided to the customer while the Product is being assessed, repaired, or replaced.

To the maximum extent permitted by state, provincial or federal law, this warranty is in lieu of all other warranties, expressed or implied, including the implied warranties of merchantability and fitness for a particular purpose. In some jurisdictions, the duration of implied warranties is hereby expressly limited to the duration of the express warranty stated above.

To the maximum extent permitted by state, provincial, or federal law, in no event, whether as a result of breach of warranty or contract, tort (including negligence) strict liability or otherwise, shall the manufacturer be liable for indirect, special, incidental, or consequential damages, including but not limited to loss of use of the product or associated equipment, lost revenues or profits or cost of substitute equipment relating to or arising out of the use of the product or a claim under this warranty howsoever caused.

In order to make a claim under this Warranty, the customer must first call DV Systems Warranty Department at the number shown on this warranty.

All returns must be pre-authorized, returned 'Freight Prepaid', and accompanied by a 'Return Authorization (RA) Number'. All decisions made by the Manufacturer with regard to this Warranty shall be final. The Manufacturer will not be responsible for any claimed defective materials returned other than in accordance with this statement of policy or without its prior written authorization.

DV Systems Inc.
490 Welham Road,
Barrie, ON L4N 8Z4,
Canada
Tele: (705) 728-5657

DV Systems 'HDI' Unit Warranty Registration

Please complete this form and return to DV Systems Inc. via email, fax, or mail. Failure to return this Registration will result in a One Year Unit/Pump/Motor Warranty only.

Veuillez compléter ce formulaire et le retourne a DV Systems Inc. par courrier électronique, fax ou la poste. A l'absence de nous fournir ce formulaire, la garantie standard de 1 ans demeura seulement pour l'unité/pompe/moteur.

Unit is installed at:
Unité est installée à :

Name:
Nom: _____

Title:
Fonction: _____

Company:
Entreprise: _____

Address:
Addresse: _____

City:
Ville: _____

Prov/State:
Prov/Etat: _____

Postal/Zip: _____

Telephone: _____

Fax: _____

Email: _____

To Be Completed by Installer/Service Technician.
A remplir par l'installateur/technician.

Compressor Model:
Modele du Compresseur: _____

Serial Number:
Numero de serie: _____

Installation Date:
Date d'installation: _____

Installer's Name:
Nom de l'installateur: _____

Installer's Company:
Nom de l'entreprise: _____

Unit Purchased From:
Lieu d'achat: _____

Who Will Service Unit?
Responable du d'entretien? _____

Service Contract? Yes No
Contrat d'entretien? Oui Non

As indicated above, please forward this completed form to:

Tel que mentionné veuillez nous faire parvenir le formulaire complété a:

Email: sales@dvsystems.com

As well, this form can be completed on-line at www.dvsystems.com

Vous pouvez aussi trouver et remplir se formulaire sur notre site web www.dvsystems.com

DV Systems Inc.
490 Welham Road,
Barrie, ON L4N 8Z4,
Canada
Tele: (705) 728-5657