

Manual Part # 19-00305MTS-DL9: Puradyn Installation Notes for Ingersoll Rand KVG-123 Compressor

Note Puradyn model nomenclature change: M85 system (prev. MTS 240), and
Application Kit # 01-A3M85S-R (prev. 01-70006MTS-DL9)

Ingersoll Rand KVG-123 Compressor Package		
Puradyn Part #	Description	Qty
SYSTEM		
15-70325TC-3	Kit, Assembly M85 3-US Skid Assembly w/Flow Meter w/Bite type supply manifold inlet fitting TransCanada (KVG-123)	1
19-00305MTS-DL9	Manual, Installation Notes for Ingersoll Rand KVG-123 Compressor (255 Gal. Sump)	1
19-00134	Manual, M Series Standard Installation	1
HOSES		
15-70085M	Kit, Hose Return 5/8" Off-Road W/ -12 ORFS fittings (Includes 72" Return Hose, Off-Road)	1
PARTS, ADDITIONAL KIT HARDWARE		
15-70131	Kit, Bolt Skid Assemblies 2 & 3 Unit Systems	3
14-00307	Fitting, Adapter 1" MNPT X -12 ORFS Male	1
KIT MATERIALS PART OF 15-70325TC-3 (Pre-Assembled)		
15-70025-2LP	M85 Main Assy. w/ Lift Points w/Supply Line Conn. SNG Oil & Gas Services. 1-3 US, Top Return, Non-FPS	3
	02-M85S1 Filter, Size 85 Polydry - SNG (pre-installed)	
15-00625	Kit, Assembly flow meter -12 ORFS Connections, 12 – 120 GPH	1
15-00422T	Assembly, Press. Manifold W/FPS Port & ORFS Connections For Tube Inlet Line Connection w/ Sample Valve, 3-Unit System	1
15-70043	Kit, Assembly Parflanged Tube W/ -12 ORFS Connections	2
15-70031	Assembly, Hose 3/16" ID M85 Press. Manifold To Filter Inlet 2 & 3-Unit Systems	1
15-70033	Assembly, Hose 3/16" ID M85 Pressure Manifold to filter inlet 2 & 3-Unit Systems (For side systems)	2
14-00348	Fitting, Tee -12 ORFS Male X Female X Male	1
14-00347	Fitting, Tee -12 ORFS Male X Male X Female	1
14-00330	Fitting, -12 ORFS Female X -12 ORFS Male 90 Degree 6000 Psi	1
24-00116	Mounting Plate, TF 240 Plumbing Manifold	1
24-00133	Mounting Plate, 1-PC, 3-Unit System	1
06-00004	Washer, Flat 3/8"	16
04-00011	Bolt, 3/8-16 X 1" Long Hex	2
03-00004	Nut, Nylon Insert, 3/8-16	14

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Customer Care Alert:

The owner/operator of this equipment is responsible for proper installation, care, maintenance, product registration and usage as outlined in the puraDYN Bypass Oil Filtration System Installation Manual.

The following document is used in conjunction with the **puraDYN** Bypass Oil Filtration System Installation Manual (part number 19-00134) that is included in the system box, and as such, should be considered a supplemental source of information. Furthermore, this document covers the installation of a 3-unit M85Bypass Oil Filtration System on an Ingersoll Rand KVG-123 Compressor.

Mounting the Systems: The (3) M85Bypass Filter Systems are pre-assembled to form a 1-piece Skid Assembly kit under Part number 15-70325TC-3, facilitating easy installation. As shown in **Picture 1**, the 1-piece kit should be mounted as it is in a suitable area along the equipment platform where the system can be secured in place. Make sure to identify the system with pre-installed 'Pressure Manifold Assembly' located in the center so that installation could be done allowing room for future supply line connections. Prepare the 1-piece skid assembly kit to be mounted and secured with the use of bolt holes in mounting plate pre-installed at the base (see **Picture 2**) and hardware materials provided within kit Part Number 15-70131.

Notes: Use rectangular slots found at the base of the canister and below the supply port as lifting points for this 1-piece skid assembly kit, slots are designed to support standard fork lifts or as grip points for manual carry by two persons under extreme caution (see **Picture 2**).



Picture 1
(Mounting along Equipment Platform)



Picture 2
(Bolt Holes and Slot-Lift points at the base of canister)

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Installing Supply Pressure Fittings:

***Note: Shut-off valve, 3/8" tubing and fittings not part of kit - to be supplied and installed by customer;**

Install the Shut-off Valve to engine, referring to example in **Picture 3**. Use supply tubing (3/8" stainless steel) to connect shut-off valve to the Pressure Manifold Assembly, by fastening tube end to 3/8" compression (A-lock/Swage-lock) fitting on manifold end (**see Picture 4**). The 1-piece skid assembly kit is pre-installed with (2) additional supply hose assemblies - P/N 15-70033 - each built with 3/16" hose, (1) straight and (1) 90° crimp hose fitting (**see Picture 3 & 4**).



Picture 3

(Install Shut-off Valve & supply line to engine- Actual hardware not shown)

For Pressure Manifold Assembly connections, note that (1) end of assembly features a Push-Button Sample Valve, while the other end features a compression fitting for connection to supply line



Picture 4

(Supply line connections to MTS-DL systems)

Installing the Return Line: After draining engine oil, locate and remove the 1" NPT (port) plug fitting on engine. Replace plug fitting with adapter fitting (P/N 14-00307) provided with this application kit (**See Pictures 5, 6**). ***Note: Applying Stay-bond hydraulic sealant or Teflon tape to NPT thread is recommended.** Return plumbing materials (Parflanged tube assemblies (2), tee-fitting (2) & 90° fitting), Flow Meter Assembly P/N 15-00625 are pre-assembled as shown in the **Picture 7**. Assemble (1) 5/8" ID return hose assembly using supplies provided in the part number 15-70085M Hose Kit. Connect 45° fitting end of return hose assembly to the bottom fitting of flow meter assembly and route the other end of hose to the -12 ORFS end of return adapter fitting (P/N 14-00307) to form 3-US M85 Bypass Filter System's return setup, and connect (**see Picture 7, 8**). The oil return hoses must be routed, ensuring they do not come in contact with any sharp edges or moving parts; **make sure hoses are routed in downward slope, with no kinks or traps, to oil pan. Oil is returned by gravity (SEE INSTALLATION MANUAL).** Secure in place with clamps if necessary. Drain the engine oil and clean all surfaces.

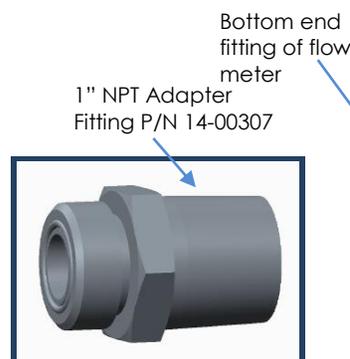
Note: Properly orient the fitting in order to avoid damage from debris.

Note: If necessary, cover the oil return hose with a secondary hose (or equivalent) to better protect it from potential damage.



Picture 5

(Remove plug & replace with Return fitting assembly)



Picture 6

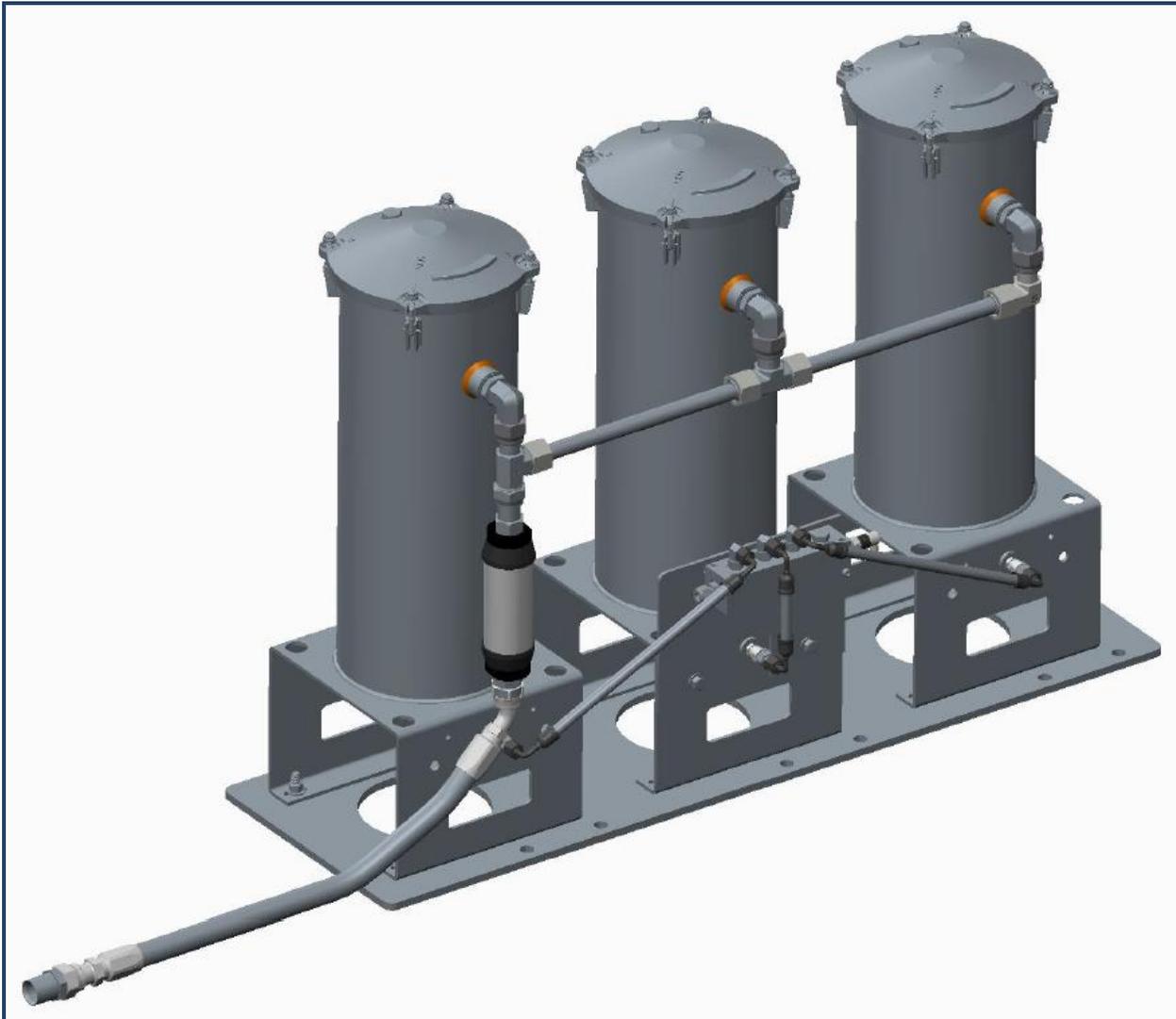
(Close-up view of Return adapter fitting)



Picture 7

(Return connection point at flow meter end)

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Picture 8

(Return Plumbing, Flow Meter and Return Hose set-up)

Testing the Bypass System:

Clean all surfaces and wipe off oil. Check all fittings tightness. Check operation of shut-off and sampling valve. Tie off all lines with tie wraps. Fill engine with oil. Start engine and check all connections for oil leaks. Open sample valve and verify that oil flow is present. Shut engine off and check oil level. Place **puradYN** Installation Manual in the documentation holder mounted to the equipment.

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Filter Change and Oil Analysis

Replace the **paraDYN** filter element and perform oil analysis at the oil change intervals recommended by your equipment's Original Engine Manufacturer (OEM). **As long as the oil analysis confirms that the oil is suitable for continued use, the oil does not need to be changed.**

	Before paraDYN Installation	Midpoint of First OEM Interval	Each OEM interval
Take Oil Analysis Sample	✓	✓	✓
Change paraDYN filter and change/clean full flow filter		✓	✓
Change Oil	✓	If analysis requires	If analysis requires

Oil analysis is a fast, non-invasive way to monitor the condition of your engine or hydraulic oil and is key to evaluating the benefits that result from optimized oil life and extended oil drain intervals. In addition, oil analysis is the only economical way to measure wear or contamination in the engine or equipment and often serves as an indicator of potentially costly problems.

Samples are easily taken from the oil sample valve provided with each system. Sampling the oil before it enters the **paraDYN** system enables an accurate assessment of the condition of the equipment. The oil analysis is conducted by an independent laboratory and is reported in a three-tier test that includes: spectrographic metals, wear metals, and contaminant metals (these metals must be monitored to fully evaluate the lubrication)

For extended oil drain practices relative to over the road trucks, Puradyn follows the Technology & Maintenance Council's (TMC) stringent requirements.

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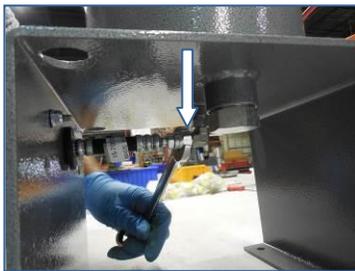
TROUBLESHOOTING SECTION

The **puradYN** system has been engineered in a quality system certified to ISO 9001. It is manufactured from the highest quality materials available with superior workmanship. If, however, your **puradYN** system is not functioning properly, check the following conditions as indicated:

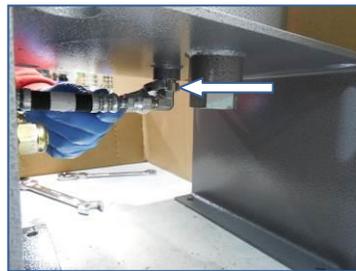
1) Restricted oil Flow:

- Pressure line may be clogged..... blow line out with high air pressure (**do this first**)
- Shutoff valve maybe closed..... open valve
- Filter may be dirty and clogged replace with new filter
- Metering jet screen maybe clogged clean screen thoroughly
- If metering jet is clogged clean metering jet thoroughly

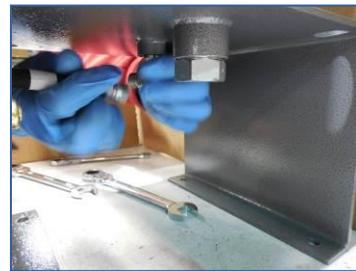
Cleaning the Metering Jet Assembly (2 & 3-Unit System)



1) Loosen hose fitting, for disconnection of 'Inlet Plumbing Hose Assembly'



2) Loosen (adjustment) locknut on 90 Degree fitting- allowing rotation of fitting



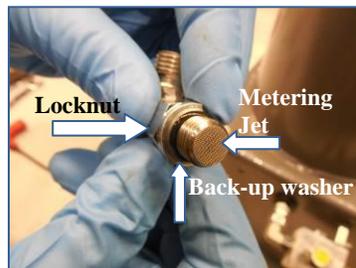
3) Slightly rotate fitting CCW, while gently pulling hose assembly rearward/downward- to fully disconnect; continue rotating fitting to remove- metering jet screen will drop down



4) Clean port internals & metering jet screen with solvent/fine wire brush; use high-pressure air to blow-out port & screen, clearing any debris



5) Back-off locknut/back-up washer on 90 degree fitting and lubricate external o-ring w/system fluid, also applying a dab on face of fitting- for screen adherence



6) Place screen on face of fitting, centered, against dabbed oil; screw this end of fitting into port- by hand, until back-up washer contacts face of port.



7) Slightly unscrew fitting- as required to align with hose assembly, then use (2) wrenches to hold fitting in place while tightening locknut; reconnect hose assembly



8) Check all fittings for tightness