

**Manual Part # 19-00303MTS: Puradyn Installation Notes for Caterpillar 3306/3456/C15 Gen Set Package**

**Note Puradyn model nomenclature change: M10 system (prev. MTS 24), and Application Kits # 01-A1M10X-K (prev. 01-70001MTS) and 01-A1M10S (prev. 01-70001MTS8)**

<b>Caterpillar 3306/3456/C15 Generator Set Package</b>		
<b>Puradyn Part #</b>	<b>Description</b>	<b>Qty</b>
<b>SYSTEM</b>		
15-MTS24	M10 Core Assembly	1
02-M10X1 02-M10S1	Filter, Size 10 XD- <b>01-A1M10X-K Kit</b> Filter, Size 10 w/ SNG ADD- <b>01-A1M10S Kit</b>	1
19-00303MTS	Manual, Installation Notes for CAT 3306/3456/C15	1
19-00132	Manual, M Series Standard Installation	1
<b>HOSES</b>		
15-70089M	Kit, Hose (includes 56 in. Supply Hose & 17 in. Return Hose, Off-road- ORFS Connections)	1
<b>PARTS, HARDWARE NEEDED FOR INSTALLATION</b>		
24-00109	Mounting Plate "Z" Support	1
15-70124	Kit, Return Fitting assembly ¾ NPT X -12 ORFS CAT C15 MTS Application	1
15-70119	Kit , Bolt Mounting Plate C15 Application	1
15-00426	Kit , Parts Bag- M10 C15 Application	1
15-00209	Kit , Bolt Standard Hardware- Size M 6-10	1
15-00131	Kit, Clamp Set 6-10 Size Standard	2

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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. To prevent potential injury, a licensed electrical contractor should be engaged to install or modify any electrical connections in compliance with local, regional, or pertinent international electrical and safety codes, statutes or directives.

The following document is used in conjunction with the puraDYN Bypass Oil Filtration System Installation Manual 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 Model M10 System on a Caterpillar C15 or 3456 Generator Set Package.



Picture 1 (Before Installation)

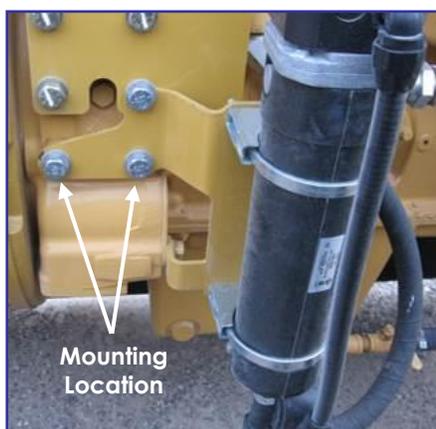


Picture 2 (After Installation- actual app. kit not shown)

**Mounting the System:** The M10 bypass oil filtration system should be mounted to the engine flywheel housing above the engine support mount located on right hand side of engine. Use the 5/8-inch hex bolts provided in the part number 15-70119 bolt kit to secure Mounting Plate 'Z' Support (part number 24-00109). In the case of an engine equipped with a heater, remove the bottom two bolts on the heater bracket and place the 'Z' mounting plate over the heater bracket and re-secure both heater and 'Z' mounting plate with the bolts initially removed. (See Pictures 3, 4, 5, below)



Picture 3 (Mounting Locations)



Picture 4 (Mounting with Heater)



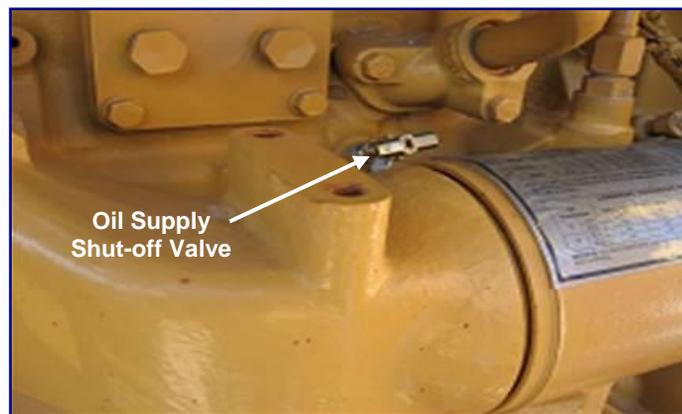
Picture 5 (Actual App. Kit not shown)

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**Installing the pressure fittings:** Install the shut-off valve to engine using supplied fittings from Part Number 15-00426 as shown in **Picture 7, 8**. Assemble (1) 3/16" ID supply hose assembly using supplied hose and field-attachable hose fittings provided in the hose kit part number 15-70089M. Route and supply hose assembly to the shut-off valve on the engine by connecting one end of line to the -4 Male ORFS fitting end of shut-off valve and the other end of supply hose assembly to the **puradYN** MTS24system, by fastening hose end fitting to the -4 Male ORFS 90° supply fitting at the bottom of M10 bypass filter system casting.



Picture 7 (Oil Supply Port)



Picture 8 (Actual Hardware not shown)

**Installing the Return Line:** Locate and remove the oil drain plug on the side of the oil pan. After draining the engine oil and cleaning all surfaces, install the tee fitting assembly supplied as part of Return Fitting Kit Bag part number 15-70124 into the oil pan drain port as shown in **Picture 9**. Assemble (1) 5/8" ID return hose assembly using supplied hose and field-attachable hose fittings provided in the Hose Kit part number 15-70089M. Connect one end of the return hose assembly to the tee fitting assembly and route other end of return hose assembly to the bypass filter system's return fitting, and connect. The oil return hose assembly must be routed to assure it does not come in contact with any sharp edges or moving parts; **make sure hose is 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.

**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 9 (Oil return adaptor)



Picture 10 (Actual Kit, Hardware not shown)

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**Testing the puradYN 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. Press FPS Manifold's sample valve (if applicable) and verify that oil flow is present. After five minutes of engine operation, touch the bottom center of the system and verify that it is warm to the touch. Shut engine off and check oil level. Place **puradYN** Installation Manual in the documentation holder mounted to the equipment.

**Filter Change and Oil Analysis**

Replace the **puradYN** 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 puradYN Installation	Midpoint of First OEM Interval	Each OEM interval
Take Oil Analysis Sample	✓	✓	✓
Change <b>puradYN</b> 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 unit. Sampling the oil before it enters the **puradYN** 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 (For 01-A1M10X- App Kit only)



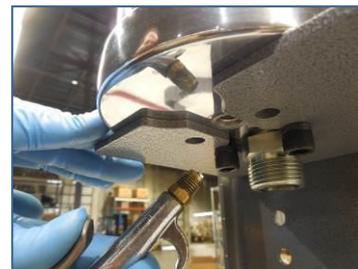
1) Loosen hose fitting, for disconnection of Supply Hose Assembly



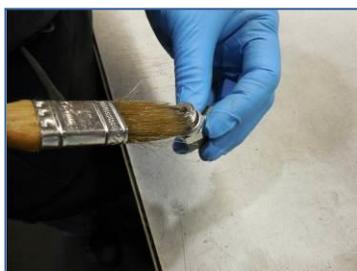
2) Loosen (adjustment) locknut on 90 Degree fitting- allowing rotation of fitting



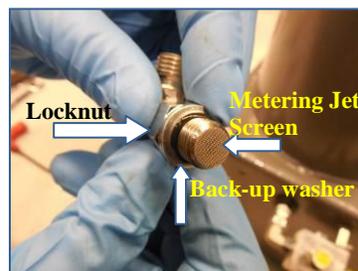
3) Rotate fitting CCW, to remove- metering jet screen will drop down- if screen does not drop, use probe tool to gently dislodge



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 orient fitting facing forward (or in direction required for install), then use (2) wrenches to hold fitting in



8) Reconnect hose assembly, and check all fittings for tightness