Installation Notes for Caterpillar 3512 Gen Set Package
(Up to 85 Gallon Sump Capacity)

Part # 19-00304MTS-DL **Kit # 01-70002MTS-DL/ 01-70002MTS-DL7**

Caterpillar 3512 Generator Set Package		
Puradyn Part #	**Description**	**Qty**
	UNIT	
15-70022-3	MTS-DL 240 Main Assy w/FPS Manifold Oil & Gas Services 1-us, Top Return	1
02-02407	Filter, Size 240 XD SAP(pre-installed)	1
19-00304MTS-DL	Manual, Installation Notes for CAT3512 Genset- MTS-DL (85 Gal. Sump)	1
19-00134	Manual, MTS Std. Installation	1
	HOSES	
15-70081M	Kit, 1-Unit System Hose (for 01-70002MTS-DL, includes 70" Supply Hose & 84" Return Hose, Off-road) ***Note:** Hose Kit not included in P/N 01-70002MTS-DL7 App. Kit*	1
	PARTS, ADDITIONAL KIT HARDWARE	
15-00427	Kit , Std. Parts Bag- 1 thru 3-unit, MTS-DL 240 App. Kits	1
24-00110	Mounting Plate, CAT 3512	1
15-70120	Kit , Bolt Bag CAT 3512	1
15-70088	Kit , Return Fitting Assembly, -12 ORFS x ¾ NPT- CAT 3512 MTS-DL 1-US 85 Gal. Sump	1

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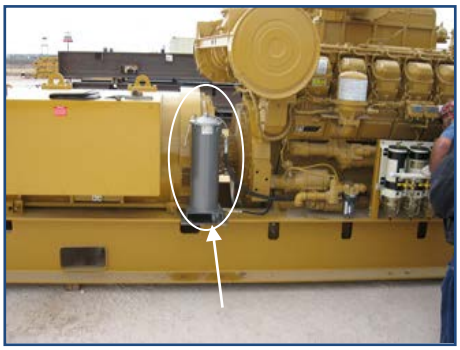
Customer Care Alert:

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.

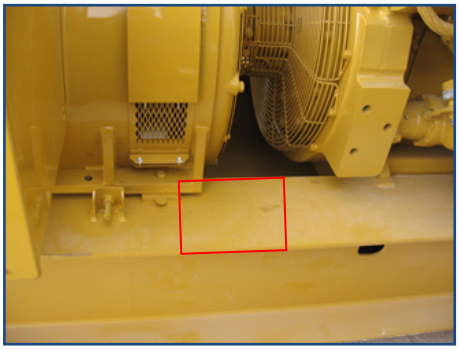
The following document is used in conjunction with the **pura**DYN Bypass Oil Filtration System Installation Manual (part number 19-00134) that is included in the unit box, and as such, should be considered a supplemental source of information. Furthermore, this document covers the installation of an MTS-DL 240 Bypass Oil Filtration System on a Caterpillar 3512 Generator Set Package.

Picture1: Before Installation

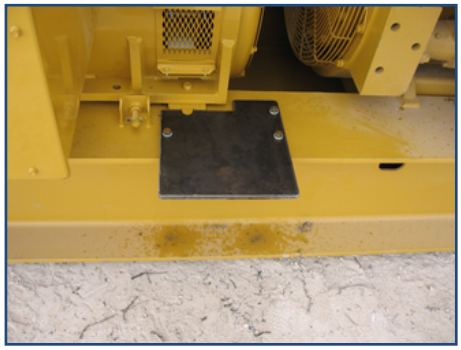


Picture 2: After Installation
Actual Kit Materials not Shown

Mounting the Unit: The Bypass Filter Unit should be mounted at the location as shown in **Picture 2,** for rail-mounted set-ups. Prepare the mounting holes on the frame as shown in **Pictures 3 & 4**, by using the mounting plate (part# 24-00110) as a template for bolt locations. The mounting plate will also have (4) studs protruding, allowing the filter unit bottom frame to be bolted to the plate. Secure the filter unit using bolt hardware provided in the part number 15-70120 bolt kit.

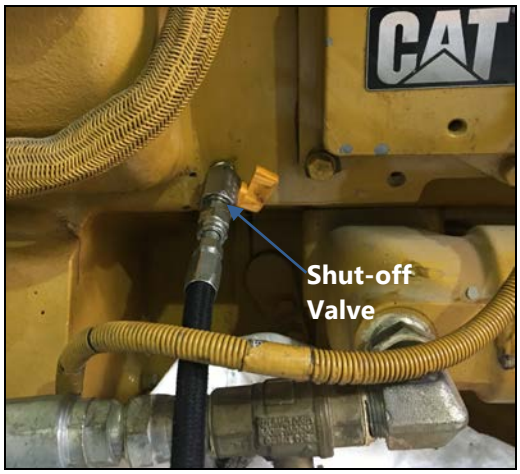


Picture 3: Rail-Mounted Location

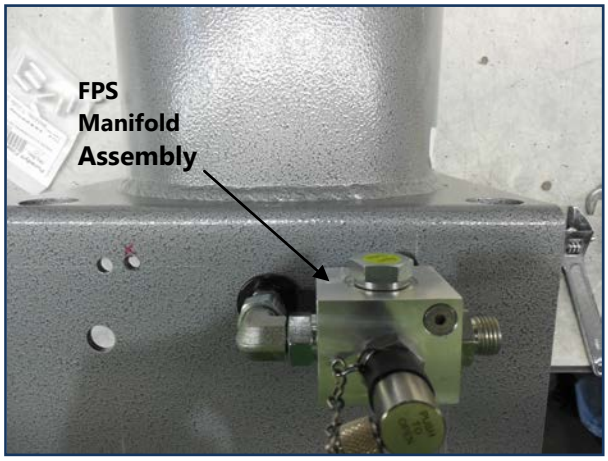


Picture 4: Mounting plate install.- Rail Mounted

Installing the pressure fittings: Install the shut-off valve to engine using supplied fittings as shown in **Picture 5**. ***Note:** Hose Kit not included in P/N 01-70002MTS-DL7 App. Kit*; Assemble (1) 3/16" ID supply hose assembly using supplied hose length and field-attachable hose fittings provided in the part number 15-70081M Hose Kit. Route the supply hose assembly to the shut-off valve on the engine**.** Connect line to the -4 Male ORFS fitting end of shut-off valve. Connect other end of supply hose assembly to the **pura**DYN Unit, by fastening hose end fitting to the -4 Male ORFS fitting on the end of FPS Manifold Assembly **(see Picture 6)**.



Picture 5: *Shut-off valve & Supply hose connection*



Picture 6: *Pre-production hardware shown*

Installing the Return Line: Locate and remove the front alternate dipstick cover on the right-hand side of the engine. Replace the cover with the Return Fitting Assembly (includes new gasket) provided in this application kit- P/N 15-70088, as shown in **Picture 7**. ***Note:** Hose Kit not included in P/N 01-70002MTS-DL7 App. Kit*; Assemble (1) 5/8" ID return hose assembly using supplied hose length and field-attachable hose fittings provided in the part number 15-70081M Hose Kit. Connect (1) end of the return hose assembly to the Return Fitting Assembly and route other end of return hose assembly to the filter unit'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. 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 7: *Return Fitting Assembly & Return hose connection*

Testing the By-pass 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 and verify that oil flow is present. After five minutes of engine operation, touch the bottom center of the Bypass Oil Filtration unit and verify that it is warm to the touch. Shut engine off and check oil level. Place **pura**DYN Installation Manual in the documentation holder mounted to the equipment.

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TROUBLESHOOTING SECTION

The **pura**DYN 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 **pura**DYN unit is not functioning properly, check the following conditions as indicated:

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 (MTS-DL Models)

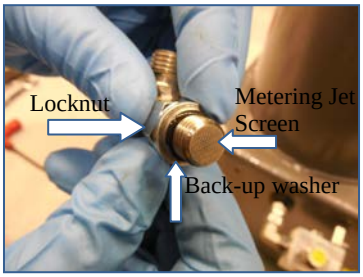
1) Loosen locknut, which secures FPS Manifold Assembly to unit base

2) Loosen hose fitting, to disconnect 'Inlet Plumbing Hose Assembly'

3) Loosen (adjustment) locknut on 90 Degree fitting, then rotate entire fitting CCW to remove- metering jet screen will drop down

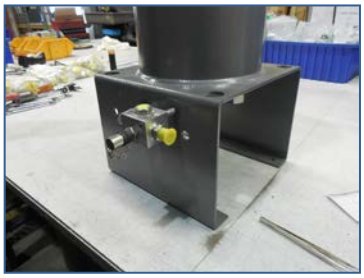
4) Clean port internals & metering jet screen with solvent/fine wire brush; use high-pressure air to blow-out port & screen, clearing any debris

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, then re-tighten locknut- securing FPS Manifold Assembly to unit base

Oil Analysis Procedures

The Puradyn Filter Technologies Oil Management Program includes an oil analysis schedule that assists our customers in achieving the benefits of extended oil drain intervals and longer service life for their engines and equipment.

Oil analysis is the key to achieving the benefits that result from optimized oil life (with reasonable safety precautions) and extended drain intervals. In addition, oil analysis is the only economical way to measure wear or contamination in the engine or equipment. Of primary importance is the interpretation of the test data, which is easy to read and self-explanatory.

The Puradyn oil analysis is conducted by an independent laboratory and is reported in an easy to understand format, which includes the following data of the oil:

- **Spectrophotometric Analysis**
- **Wear Metals**
- **TBN & TAN**
- **Oil condition**
- **Contaminant levels**

This analysis should be conducted in order to monitor and evaluate the lubrication system. The oil analysis can present warnings of any existing or potential problems, along with measuring the performance of the **pura**DYN system.