

IOM FOR DYNATORQUE™ GROUND POSITION INDICATOR (GPI TYPE)
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Scope:

It is the purpose of this document to provide general installation, operation, storage, and maintenance instructions for DYNATORQUE™ ground position indicators.

Installation:

1. Install the extension stem making sure that the coupling is correctly positioned over the operating nut on the valve or operator input shaft.
2. Slip the white plastic pickup gear, #9, see diagram below, over the extension stem. The number of turns from open to close should be stamped on the face of the indicator. Using the chart below, establish the gear depth setting dimension.

	Turns	Depth Dim (In./mm)
Dimension from the valve box cover seat to the top of the Delrin pickup gear.	1-19	.75 [19.1]
	20-38	.75 [19.1]
	39-58	.75 [19.1]
	59-98	1.16 [29.5]
	99-148	1.33 [33.8]
	149-198	1.16 [29.5]
	199-298	1.33 [33.8]
	299-398	1.16 [29.5]
	399-498	1.63 [41.4]
	499-598	1.33 [33.8]
	599-938	1.63 [41.4]

3. Measure from the Position Indicator seat on the valve box down the extension stem to the appropriate setting dimension. Slide the pickup gear down the extension stem until the top of the gear is at the appropriate dimension.
4. Before installing the Position Indicator, make sure that the indicator and the valve are both in the same position, either full open or closed. ***This step is very crucial in order for the Position Indicator to function as desired. Incorrect set up, can yield false readings, and can ultimately damage or break internal gearing and components of the Position Indicator, and void product warranty consideration. If there are any questions regarding initial setup, please contact your local DYNATORQUE representative or contact the factory at info-dyt@c-a-m.com.***
5. Slip the indicator over the extension stem (window side up) and push down until the indicator is on the valve box seat. It may be necessary to rotate the indicator slightly to ensure that the gears mesh properly.
6. Using a .188 diameter drill bit, drill at least one 1 ¼" deep hole using one or more of the .188 holes in the face of the indicator as a guide.
7. Install a .188 diameter by .75" long roll pin in the hole. The pin prevents the indicator from rotating around the extension stem.
8. Install 2" AWWA nut if applicable.
9. Install valve box adapter provided with the indicator. (Note: For GPI's set in concrete – Once the valve box adapter has been set in concrete the position indicator cannot be removed.)

IOM FOR DYNATORQUE™ GROUND POSITION INDICATOR (GPI TYPE)**Safety:**

Cameron DYNATORQUE operators have been designed and manufactured to the highest quality standards. The use of larger handwheels, cheater bars, etc. will void the operator warranty and may cause damage to the operator, valve stem, drive shafts, or other torque transmitting or indicating devices as well as being dangerous to the user. Additionally, the use of chainwheels on operators that are not recommended for those applications will result in voiding operator warranty.

Operation:

Once the valve assembly has been installed, operation of the Position Indicator is straight forward. The Position Indicator is designed as a position indicating device only, and is not meant to produce any mechanical advantage. Assuming a clockwise to close valve, rotating the input clockwise will result in clockwise rotation of the indicating arrow toward the close position. Reversing rotation of the input counterclockwise will result in counterclockwise rotation of the indicating arrow toward the open position.

Maintenance:

- A. **Storage:** For best results, DYNATORQUE Position Indicators should be stored in a clean, dry area in their original factory shipping containers. If indicators are stored in high humidity areas, steps should be taken to reduce the amount of moisture the indicators will be exposed to. Position Indicator input shafts are plated or stainless steel to prevent corrosion. If indicators are being stored for a long period of time, indicator mounting surfaces should be lightly greased to prevent corrosion.
- B. **Maintenance:** DYNATORQUE Position Indicators do not require periodic maintenance. They are, for most applications, lubricated for life, with all components designed to have a life equal to or exceeding the wear life of the indicator gearing.
- C. **Lubrication:** If for any reason, lubrication replacement is necessary, Cameron recommends replacement of that lubrication with:

DYNATORQUE Standard Grease Specification:- Lithium NLGI 1

NLGI Grade: Grade 1
Grease Base: Lithium Complex
Texture: Tacky
Color: Red
Anti-Wear EP Additives: Yes
Dropping Point ASTM D2265: 536Deg F(280Deg C)
4 Ball Wear KG Load ASTM D2596: 400
Timken OK Load Lbs. ASTM D2509: 50
Base Oil Viscosity SUS @100 Deg F: 592
Base Oil Viscosity SUS @210 Deg F: 88
Pour Point ASTM D97: -20 Deg F (-30 Deg C)

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- D. Spare Parts: Cameron warrants work performed by the factory or by factory trained personnel only. Please consult the factory or your local DYNATORQUE representative to arrange assistance. Cameron modifies a great percentage of its DYNATORQUE indicators to meet specific customer requirements. Please refer to the indicator part list number as supplied on the shipping document, acknowledgement, or invoice, when ordering spare parts.
- E. Spare Parts: For your records, please enter the indicator part number from your shipping documents, acknowledgement, or invoice here:

Part Number: _____

Date Stamp: _____ (Located on the bottom of the indicator housing.)

Purchase / Sales Order Number: _____

Please Note:

When assembling Cameron DYNATORQUE products to a valve or to an automated valve package, standard engineering practices must be utilized to assure proper mounting orientation, configuration, and distribution of weights and forces. Failure to do so could cause product damage and/or malfunction, **and void warranty consideration**. If there are any questions please contact the factory at info-dyt@c-a-m.com.