User's Guide

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DFG-TS-C AND DFG-TS-T
Manual Lever Test Stands

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Introduction

All OMEGA force gauges are easily mounted any of the test stands. The combination of gauge and stand will create a high-precision, compact load tester for a wide range of applications. In addition, any model can be converted to any other model by following procedures in this manual.

Model DFG-TS-C, the factory standard configuration, is for a compression application. When you pull the lever arm down and toward you, the gauge will also come down and compress.

Model DFG-TS-T is configured for tension. When you pull the lever arm down and toward you, the gauge will move up and create tension.

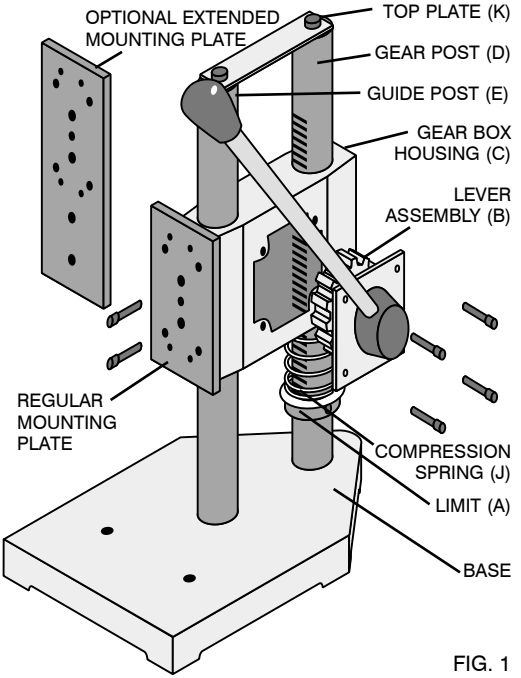
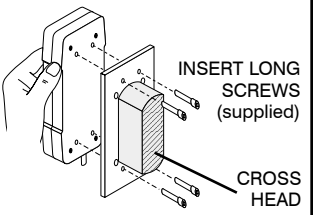


FIG. 1

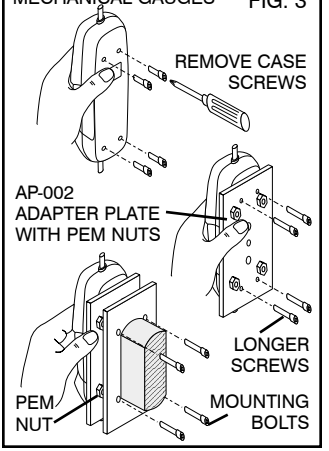
Mounting the Gauge

1. Mount ***digital gauges*** to the stand using the screws supplied with the stand. (FIG. 2) When mounting ***mechanical gauges*** to the stand, hold the gauge firmly and unscrew the 4 screws in back, making sure the case does not separate. Hold gauge up to the AP-002 adapter plate (supplied), align plate and gauge holes and insert the 4 long screws supplied to attach gauge. Next, hold gauge/adapter plate up to the test stand mounting plate. Insert bolts supplied through the mounting plate into PEM nuts on the adapter plate. (FIG. 3)
2. Loosen the allen screw in the limit (A), adjust your stop position, and re-tighten the screw. ***Support the gauge/mounting plate with your hand when moving the limit so the gauge will not fall to the base and be damaged!***
3. If desired, replace the regular mounting plate with the extender mounting plate to increase gauge/base clearance to 10 inches.

DIGITAL GAUGES FIG. 2



MECHANICAL GAUGES FIG. 3



Versatility

The **DFG-TS** Manual test stand can be configured to meet the needs of any compression/tension application. The standard configuration, **DFG-TS-C**, is with the mounting plate to the front, lever to the right. Compression measurements are made by pulling the lever down and toward you.

The following conversions can be made to convert the **DFG-TS-C**, to right or left handed operation, to measure tension, or with the optional work table to horizontal operation. (The **DFG-TS-T**, tension model, may similarly be converted).

Right or Left Handed Operation

Convert the stand to right or left handed use:

1. Remove the 4 screws holding the lever assembly (B) and pull out the assembly.
2. Mark the top side of the gearbox housing (C) and remove top plate (K).
3. Slide the gearbox housing (C) up and off the posts.
4. Turn the gearbox housing (C) over so that the top mark is down and the hole for the lever assembly is on the opposite side and slide back on the posts.
5. Replace the lever assembly and 4 screws.

Convert Compression to Tension

DFG-TS-C, standard model, may be converted to test for tension 3 different ways.

Method A

Simply unscrew the lever and re-locate to a different threaded hole (FIG. 4).

Method B

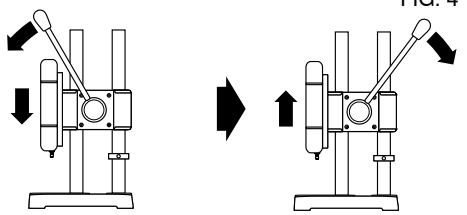
Remove the mounting plate and re-locate the mounting plate to the back of the gearbox housing. When you face the back of the stand and pull the lever arm down the gauge will move up (FIG 11 page 6).

Method C

Reverse the test stand posts. When you face the front of the test stand and pull the lever arm down the gauge will move up (FIG. 5).

1. Remove the 4 screws holding the lever assembly (B) and pull out the assembly.
2. Remove top plate (K) and slide the gearbox housing (C) up and off the posts.
3. Remove compression spring (J).

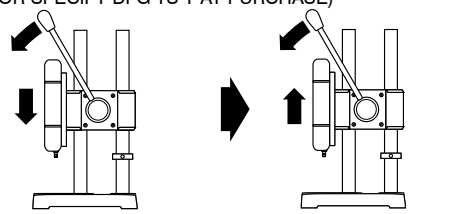
SIMPLE CONVERSION FIG. 4



DFG-TS-C (STANDARD CONFIGURATION) FOR COMPRESSION TEST

FOR TENSION TEST (AFTER SIMPLE CONVERSION)

MAJOR CONVERSION FIG. 5
(OR SPECIFY DFG-TS-T AT PURCHASE)



DFG-TS-C (STANDARD CONFIGURATION) FOR COMPRESSION TEST

DFG-TS-T FOR TENSION TEST

4. Turn the stand over and insert the 2 base plate mounting screws (F) about half way into the base. Remove the 2 post nuts (G) holding the posts, use second wrench for leverage as shown in (FIG. 6). You will need a M16 socket wrench and a second open ended wrench.

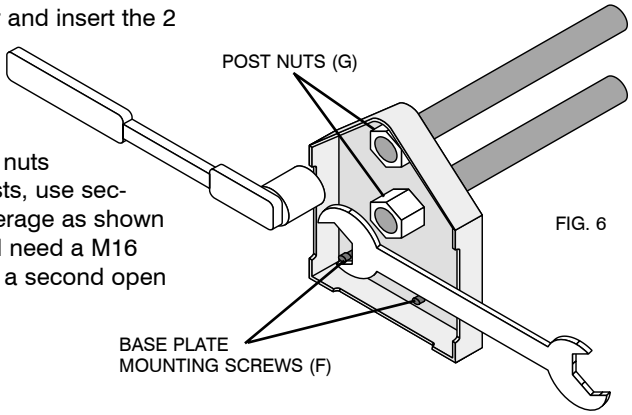


FIG. 6

5. Tap out the posts with a rubber mallet.
6. Reverse the positions of the gear and guide posts and reinsert the posts being careful to align the small hole in the bottom of each post with the spring clip (H) near the large hole in the base (FIG. 7).
7. Replace and loosely tighten the post nuts (G).
8. Slide the gearbox housing (C) over the posts and replace the lever assembly (B) before completely tightening nuts to assure smooth operation.
9. Mount the gauge to test for tension. The stand has been converted to Model DFG-TS-T.

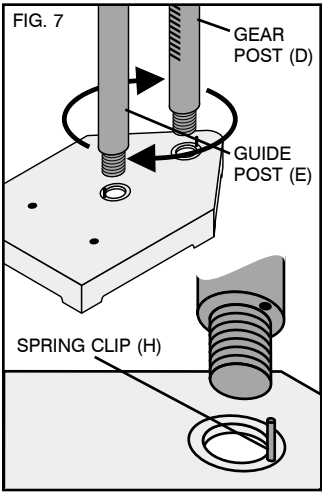
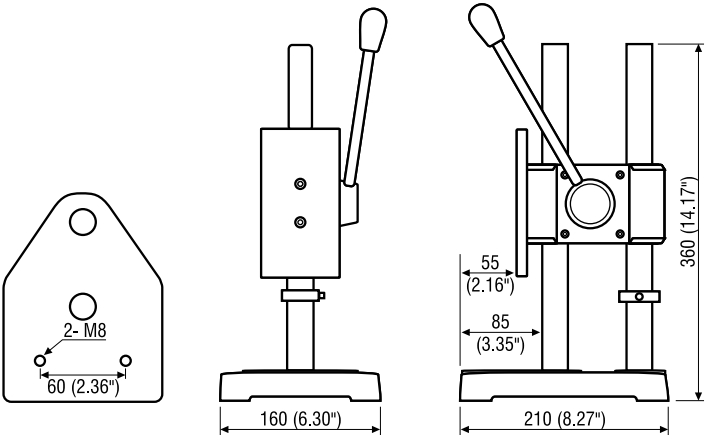


FIG. 7

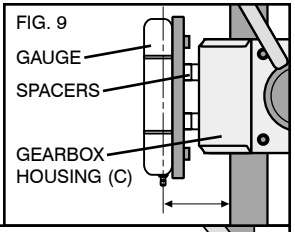
Dimensions DFG-TS



Oversize Objects

Adding Spacers

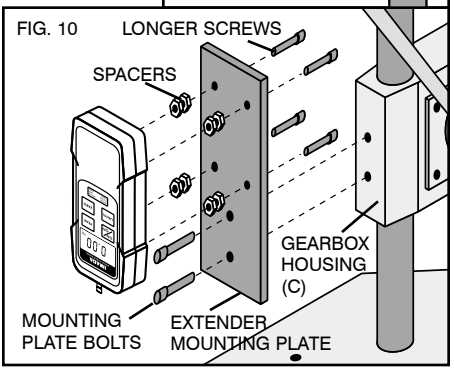
You can increase the distance between the gauge shaft and the test stand post. Spacers may be added between the mounting plate and the gearbox housing (C) using longer mounting screws.



Extender Plate

10" clearance may be obtained by installing the optional extender mounting plate (FIG. 10).

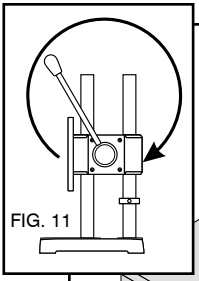
1. Remove the two screws holding the regular mounting plate and use them to install the extender mounting plate.
2. Install the gauge using the 4 longer screws and the 8 spacers included (2 spacers for each screw).

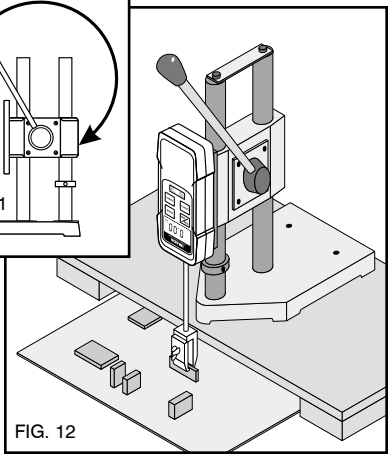


Moving Mounting Plate

Especially long or wide objects may be tested using the rear of the test stand. (FIG. 11 & 12)

1. Construct a bridge to accommodate wide objects or place the stand near the edge of a bench or table to test long items.
2. Remove the mounting plate and place on the rear of the gearbox housing (C).
3. Unscrew the lever and replace it in a hole facing you.





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