

# TD-3100

## Heavy Duty Engine Dynamometer System

Portable power absorber specifically designed for diesel and spark-ignition engine rebuilders

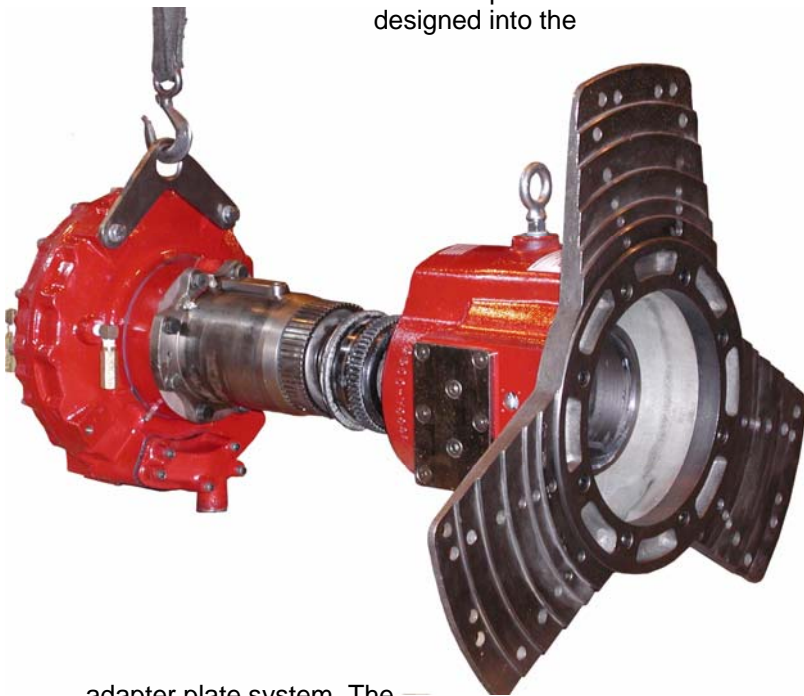


Use Taylor Dynamometer's TD-3100 portable dynamometer to quickly measure engine power. You can perform tests indoors or out. Simply mount the dynamometer directly on the engine. You don't need a special engine stand or test cell. You can even test the engine while it's sitting in the shipping crate. All you need is a water supply for the dynamometer. Entry-level mechanics can easily perform initial break-in runs, full power runs and governor checks. Coupled with Taylor Dynamometer's DynPro software, the TD-3100 produces color graphs, charts, and tabular test data reports. Add a Taylor fuel consumption system for accurate Measurement of fuel mass, volume, and BSFC.

- Test engines continuously up to 3,000 lb-ft (4050 Nm) of torque at 1,500 RPM and up to 1000 HP (750 kW) from 1,750 to 4,000 RPM
- Easily performs extended break-in and assurance tests demanded by quality rebuild facilities
- Quickly provides accurate information about your engine's performance
- Low-inertia impeller provides extra fast response for precise governor tests
- Portable design and SAE adapter plate let you quickly mount and dismount the absorber
- Mounts directly to the engine without a driveshaft
- Includes drive adapter for flywheel housings from SAE 0 through 4
- Compatible with existing DynPro instrumentation software

### TD-3100 Is Easy To Use

The 360-pound TD-3100 power absorber can be mounted on an engine in a matter of minutes. First, the flywheel adapter is installed directly to the engine flywheel. Next, the drive coupler is mounted on the flywheel adapter, and the trunnion module is installed directly to the flywheel housing (SAE 0-4). No alignment of the absorber is necessary because of the pilots designed into the



adapter plate system. The drive accommodates misalignments of up to 1/2 degree. The absorber module is then inserted into the trunnion module and locked in place for testing.

### Fast Torque Control

Operators will appreciate the ease with which the TD-3100 controls torque. Torque can be governed simply by employing a standard gate valve in the water line. You may also choose a fully-automatic Taylor control valve system.

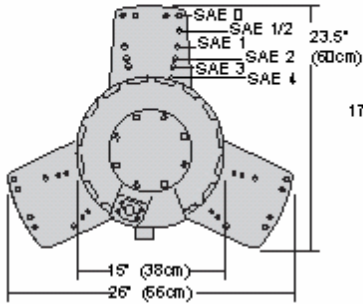
### Durable Design and Construction

The TD-3100 is comprised of two units, the absorber module and the trunnion module, which lock together for operation. With its rugged steel and aluminum-bronze components, the TD-3100 is designed for rigorous testing and utmost durability. The TD-3100 has a rugged crowned gear drive at both the rotor and engine ends for quick engine mounting and increased service life. Taylor's advanced torus vane design keeps the size of the absorber to a minimum. With its 12-inch diameter rotor, the TD-3100 has impressively low inertia properties that provide rapid response characteristics. This design is much better at revealing diesel governor problems and also reduces the minimum power threshold. Coupling the absorber directly to the engine helps you save money. There is no need for test stands or specialized test cells. Multiple engine tests can be accomplished by pre-staging the drive adapters on a line of test engines and simply advancing the absorber from one engine to the next as the tests are completed. You'll save shop time as well as construction dollars. Torque is measured through a pivot trunnion design, which eliminates large trunnion bearings. A precision strain gauge (load cell) measures the reaction torque, while speed is measured from a magnetic pick-up and a 60-tooth gear.

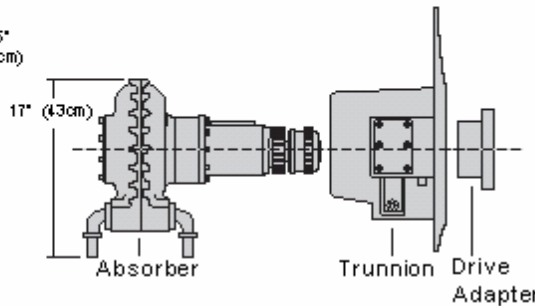


Drive Coupler on Flywheel

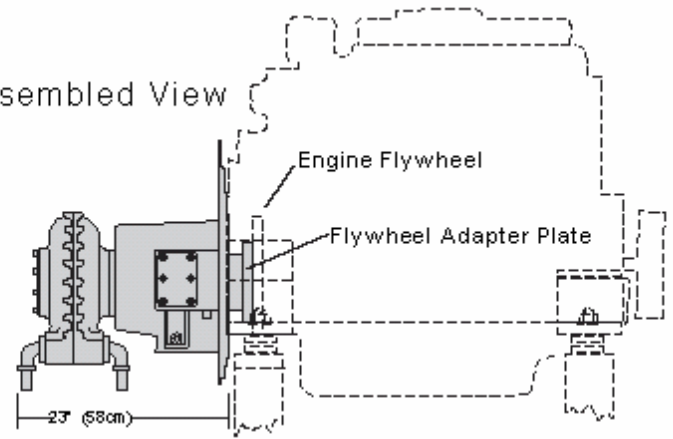
Frontal View



Exploded View



Assembled View



## Specifications

### Standard Equipment:

- Absorber module
- Trunnion module
- SAE 0-4 flywheel housing adapter plate
- Torque calibration arm

### Optional Equipment:

- Special flywheel housing adapters
- Adapter plates for engine flywheels
- Engine cooling column
- Control and instrumentation systems

**Dimensions** ..18.5" L x 27.5" W x 23.5" H (47 x 70 x 60 cm)

**Weight** .....360 lbs (163 kg)

**Shipping Weight** .....440 lbs (199 kg)

### Maximum Continuous Power

.....1,000 HP at 1,750 RPM (746 kW at 1,750 RPM)

**Minimum Controllable Power** ..8.2 HP (6kW) at 1,800 RPM)

### Torque Capacity

3,000 lb-ft at 1,500 RPM (4,068 Nm at 1,500 RPM)

### Minimum Controllable Torque

.....32 lb-ft (24 Nm) at 1,800 RPM

**Maximum Operating Speed** .....4,000 RPM

## System Layout

Ask your Taylor Service Representative for a System Layout Diagram so you can see how the TD-3100 will fit into your testing environment.

### Power/Torque Absorption Curves:

