# CHAPTER 2

# **Getting Started**

The information in this chapter will enable you to:

- Verify that each component of your system has been delivered safely
- **D** Become familiar with the system components and their interrelationships
- **u** Ensure that each component functions properly by bench testing

## What You Should Have

Inspect your Dynaserv shipment upon receipt for any shipping damage. Report any damage to the shipping company. Compumotor cannot be held responsible for any damage incurred in shipping. You should have received the following items in the Dynaserv ship kit:

Part Number	Quantity	Remarks
Motor	1	Standard motor has10-ft. motor and feedback cables (except
		DR5000"A" 18-in)
Drive	1	Drive is matched to specific motor
Connector for CN1	1	MR-50LM Honda Tsushin Kogyo
Connector for CN2	1	MR-8LM (DR) Honda Tsushin Kogyo
		MR-16LM (DM) Honda Tsushin Kogyo
Fuse	2	6 x 32 mm, 15A
User Guide	1	DM & DR Direct Drive Servos Part # 88-013940-01
<b>Optional Equipme</b>	nt	
71-011858-01	1	Dynaserv-Indexer Adapter—Step, Direction, and Shutdown only
71-012985-10	1	Dynaserv-Indexer—10ft cable, complete I/O Interface

## Drive/Motor Configuration

Dynaserv systems are pre-configured and sold as motor/drives. A motor part number is included on the drive serial tag. The motor part number must match the drive's part number. The part numbers are based on the motor torque output and motor size. System nomenclature is as follows:

	D			- 🗆	
Motor Series Name M—Encoder R—Resolver					
Motor Speed 1—Standard (up to 2.0 rps) 5—High-Speed (up to 4.0 rps)		]			
Peak Torque (Nm) ◀ 15 - 400 Depending on motor type					
Motor Diameter ◀ A—10" E—8" B—6"					
Input AC Voltage ◀ • 120 (120 if omitted) • 240					

# **Check-Out Procedure**

This section provides a basic bench test of the Dynaserv drive. Compumotor recommends that you complete these steps before you install the system permanently.

## **Bench Test**

This bench test is designed to test the motor's basic functionality. During the bench test, only Test Mode motion is possible. For further motor operation, the motor should be permanently mounted. Refer to *Chapter* ③ *Installation*. For the bench test, the following items are required:

- □ A 5VDC power supply with jumper leads
- □ An AC power cord
- Two (2) 2" jumper wires
- □ A Honda connector from ship kit

### Step ①

Bench mount the Dynaserv motor. Three bolts can be used to elevate the motor for the bench test. When the motor is bench mounted, it may be operated upright to allow for proper cable routing without restricting the rotation of the outside motor housing.



#### CAUTION

- Never operate the motor upside down with the rotor stationary. This will cause cable wind-up and possible sytem damage.
- 2 Never attach a load to the drive during the bench test procedure. This mounting configuration is for bench test only. For permanent installation, refer to Chapter ③ Installation.





Connect the feedback cable. On the DR Series, an 8-pin Honda connector is provided. A 16-pin Honda connector is used with the DM Series. **These cables are pre-wired**. Step ③



Connect the motor cable between the motor and drive. Match the correct phase as specified on the terminal leads (check color codes).

#### CAUTION

Never connect motor cables when power is connected to the drive—this may damage motor connector contacts.

Step ④



Measure and verify incoming power. The Dynaserv has separate power inputs for the control and main power supplies. These inputs can be jumpered together. This configuration is valid for both 115VAC and 230VAC models. The 200VAC version requires three-phase power. Connect, **but do not energize the power input**.



Check the cable connections and apply power to the drive. The drive is always energized in a *servo off* state. *Servo on* and *servo off* are indicated by the presence (on) or absence (off) of a lit decimal *after* the LED character.

Step 6 A-



To enable the servo, apply 5V to pin 24 and GND pin 23 (**CN1** 50-pin connector). This activates the **servo on** state. Confirm that the display now reads Ø. If the display does not show Ø., consult *Chapter* (and *Maintenance & Troubleshooting*.



When the motor is enabled, current flows to the motor. When shipped from the factory, the system gains are set to minimum values, so it is normal for the motor to have little torque. Adjust the gain settings to the recommended values listed in the table.

### Step 6 C

To complete the bench test, turn on the Test mode switch (see previous figure). The switch is recessed in the drive. When you turn the switch on, the motor will rotate back and forth at a rate of 2.5 Hz. If the motor rotates as described, the motor is operational and you may proceed. *To stop the motor, turn the Test mode switch off.*