



CALIBRATION & WIRING FOR DYN1-10744-000-0-12

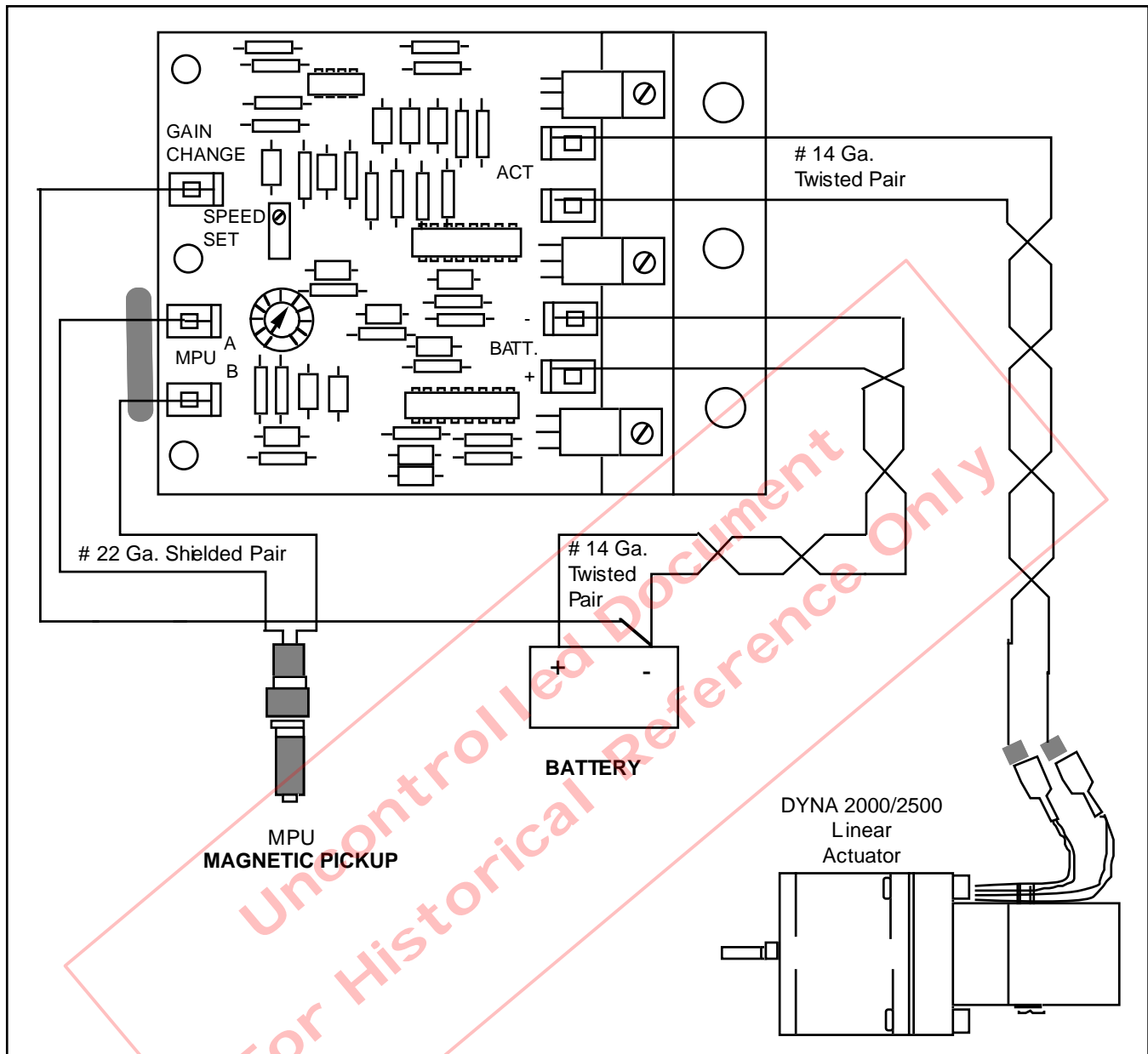
1.0 CALIBRATION PROCEDURE

- 1.1 Wire the system as shown.
- 1.2 Start the engine and adjust the speed by turning the speed potentiometer clockwise to increase speed.
- 1.3 At no load, turn the gain potentiometer clockwise until engine begins to hunt. If engine does not hunt, physically upset the governor linkage.
- 1.4 Turn the gain potentiometer counterclockwise until stable. If gain potentiometer is turned fully counterclockwise, and engine still hunts, remove wire from the controller gain change to battery negative.
- 1.5 Removing the controller gain change reduces the over-all gain by 25%. Repeat steps 1.3 through 1.6 until engine is stable.
- 1.6 Recheck engine speed and adjust the speed potentiometer accordingly.

NOTE

Controllers are factory set to minimum RPM, but for safety, it should be possible to disable the engine if overspeed should occur.

Wiring Diagram for a DYN1-10744-000-0-12



Linear Troubleshooting Chart for DYN1-10744-000-0-12

1. PROBLEM: SYSTEM IS COMPLETELY DEAD. ACTUATOR LEVER STAYS AT MINIMUM.

Means of Detection		Corrective Action
1.1	Check for battery voltage at controller on battery positive and battery negative.	Check battery connections and contacts for turning power "ON" to the controllers.
1.2	Check for proper linkage set up.	Correct and free linkage.
1.3	Magnetic pickup signal absent or too low. Measure AC volt across MPU A & B while cranking the engine. Voltage should be at least 2.5 VAC.	Check pole tip gap over gear tooth. It should be $0.37 \pm 0.127\text{mm}$ ($0.015" \pm 0.005"$) or adjusted to obtain 2.5 VAC or greater. Verify magnetic pickup wiring.
NOTE: The voltmeter should have an impedance of 5000 ohms/volts or higher.		
1.4	Measure the resistance of the magnetic pickup coil. This should be approximately 150 to 5000 ohms max.	If there is an open or shorted coil, replace the magnetic pickup.
1.5	Measure the resistance of each pin to the metal case of the magnetic pickup. No continuity should be evident.	If there is continuity to case, replace the magnetic pickup.
1.6	DC SUPPLY OFF. Remove actuator leads from terminals. Place actuator battery system power leads on. Actuator should go to full stroke.	If the actuator still does not move to full stroke, continue with steps below.
1.7	Measure actuator coil resistance: • 12 VDC unit. Coil resistance 1.4 ± 0.2 ohms. • 24 VDC unit. Coil resistance 7.3 ± 1.0 ohms.	If actuator coil is open or shorted to case, replace actuator. If governor still does not operate, continue with steps below.
1.8	Measuring the resistance of each coil lead to the actuator case should indicate an open circuit on a low scale of the ohm meter.	If continuity is detected, replace the actuator.
1.9	While cranking the engine, the following should be found when measuring current in series with one of the actuator leads from actuator: 12 V Act. - 2.5A to 5.9A 24 V Act. - 1.0A to 3.0A (Values may indicate negative if polarity of meter reversed.)	If no output current, replace the controller.

2. PROBLEM: ACTUATOR LEVER GOES TO FULL STROKE WHEN DC POWER IS TURNED "ON" (ENGINE IS NOT OPERATING.)

Means of Detection		Corrective Action
2.1	Check magnetic pickup leads for proper shielded wire or open shield.	Verify and correct wiring as necessary.
2.2	With DC power "OFF" remove leads at actuator. Check continuity of each terminal to heat sink. There should be no continuity between any terminal and heat sink.	If continuity is detected, replace the controller.
2.3	Check for shorted actuator lead.	Correct or replace actuator leads as necessary.

3. PROBLEM: ERRATIC GOVERNOR OPERATION

Means of Detection		Corrective Action
3.1	Measure DC voltage at battery positive and battery negative on controller. Nominal battery voltage should be indicated.	If nominal voltage is present, wiring is correct.
3.2	Battery voltage must be 80% or greater for governor to operate.	Check battery and charging system.
3.3	RFI noise due to incorrect shielding.	Correct wiring per applicable wiring diagram.
3.4	RFI noise fed through power supply leads.	Connect twisted pair power leads direct to the battery.

4. PROBLEM: SLOW, SMALL AMPLITUDE, HUNTING OF SPEED OR FREQUENCY

Means of Detection		Corrective Action
4.1	Sticking or very loose linkage.	Correct linkage.
4.2	Improper linkage arrangement. (Stroke too short or improper.)	See installation information.

5. PROBLEM: FAST OSCILLATION OF GOVERNOR LINKAGE

Means of Detection		Corrective Action
5.1	Verify calibration settings of the controller.	Readjust settings.

6. PROBLEM: ENGINE WILL NOT START — ACTUATOR AT FULL STROKE DURING CRANKING

Means of Detection		Corrective Action
6.1	Make sure fuel is available. Air may be trapped in fuel line. Try to operate engine manually.	Check fuel to engine and check for correct wiring to shut downs.

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NOTE

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CAUTION

As a safety measure, the engine should be equipped with an independent overspeed shutdown device in the event of failure which may render the governor inoperative.