



USER INSTRUCTIONS FOR

## Dyna DSPT-1

### Programmable Digital Ignition System

For

Harley-Davidson Sportster 883, 1200

#### DESCRIPTION

The DYNA DSPT-1 Digital Ignition system for Harley-Davidson motorcycles is a self contained upgrade to the electronic advance ignition found on Harley Sportsters. This ignition is microcomputer controlled, generating extremely accurate control over the entire ignition process.

In addition to providing precise control over the ignition process, the DYNA DSPT-1 allows you to tailor the advance curve and rev limiter to the specific needs of your particular engine. The DYNA DSPT-1 has sixteen built in advance curves in three groups, which have been optimized to cover the needs of stock motors to highly modified motors over a variety of operating conditions. There are also eight rev limiter choices from 6250 to 8500 RPM, allowing you to set the exact protection level you need.

#### INSTALLATION

Locate the stock ignition module and remove it from the bike. Depress the lock tabs on each end of the black connector to unplug it. Set the Rev Limit and Advance Curve switches on the DYNA DSPT-1, plug the black connector in, and fasten it with the screws that held the stock module.

**\*\*IMPORTANT\*\*** On any electronic advance ignition such as the DYNA DSPT-1 or the stock Harley ignition, you must use carbon, graphite or spiral core type suppression spark plug wires with a resistance in the range of 300 to 4000 ohms per foot to reduce radio frequency interference. Use of metal core wires may cause malfunction of the ignition due to severe electrical noise generated at the spark plugs. The original wires supplied by Harley-Davidson are acceptable. Suppression wires are also available from DYNATEK.

**Recommended Coil:** Use any dual coil with a primary resistance of less than 1 ohm, such as the stock Harley coil, or Screamin' Eagle 31704-99 coil. For dual plug heads, use Dyna DC9-2. Do NOT use coils intended for CDI.

For custom applications, Dyna DC9-4, DC12-1, or DC11-1 may be used.

## CHOOSING AN ADVANCE CURVE

The advance curves are named in the attached curves. Which advance curve is most appropriate for your engine will depend on several factors. These may include: level of modification of the engine, weight of bike and rider, type of gasoline used, air temperature, altitude, etc. A good procedure would be to start with curve 36A which is similar to the curve used in the stock ignition module. If you experience any "pinging" at low to midrange RPM, try Group B curves, then Group C if necessary to get rid of the pinging. If your bike runs well on curve 36A, try more advance after several miles and find out if your motor likes more advance.

Generally, you should run the highest number curve in Group A that you can without causing any pinging. Curve Group B is designed to reduce midrange pinging in high torque motors that produce well over 1 ft. lb./cu. in. at about 2000 to 4000 RPM. Group C is designed for turbo and nitrous applications only. The actual curves are shown at the end of these instructions.

## CHOOSING THE REV LIMIT

The DYNA DSPT-1 ignition offers rev limits from 6250 RPM to 8500 RPM, in various RPM steps. The maximum RPM that a motor can be safely revved to depends on many factors, including camshaft design and valve spring selection.

## MAP SENSOR FUNCTION

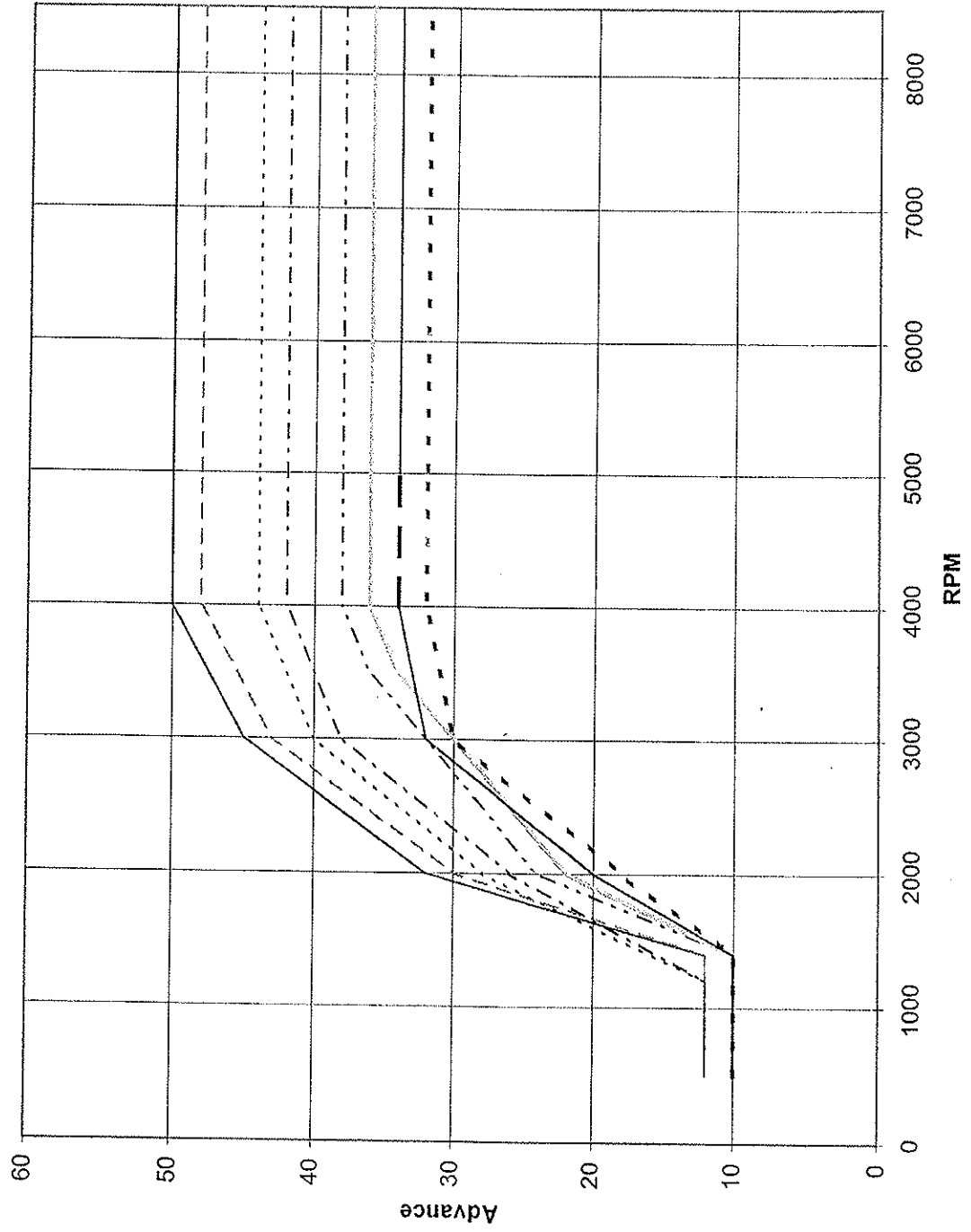
The DYNA DSPT-1 module reads the stock Manifold Air Pressure sensor at the bottom of each intake stroke, and varies the advance between the Wide Open Throttle and Part Throttle curves. Using this advance scheme, the DYNA TC88-3 always provides advance that is optimized for both part and full throttle operation. The actual advance curves are shown at the end of these instructions.

## SENSORS AND DEVICES

The DYNA DSPT-1 module interfaces directly with all stock sensors and devices including the Tachometer and Speedometer. The DYNA DSPT-1 module will allow the bike to run normally if the stock devices are removed.

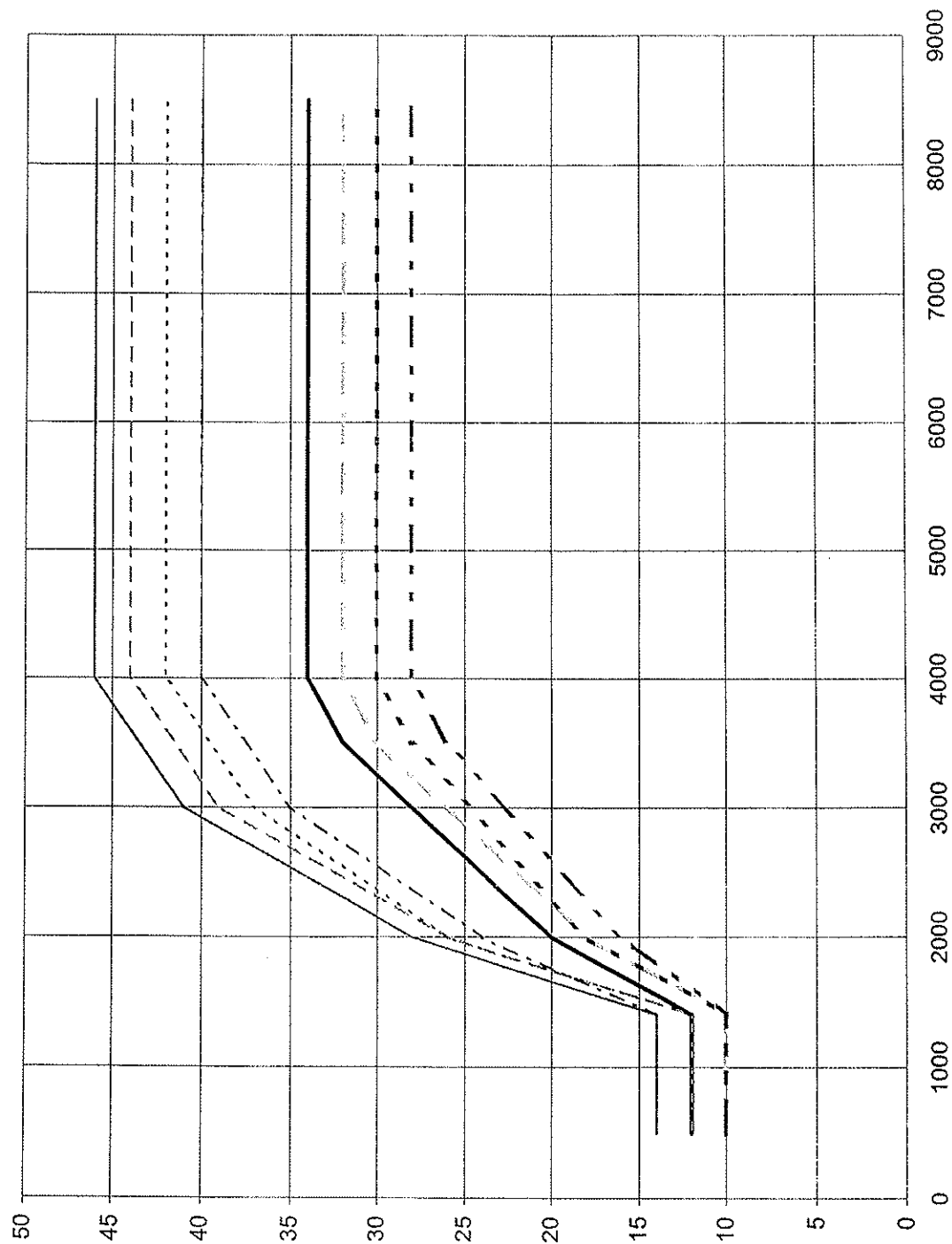
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# Group A Curves



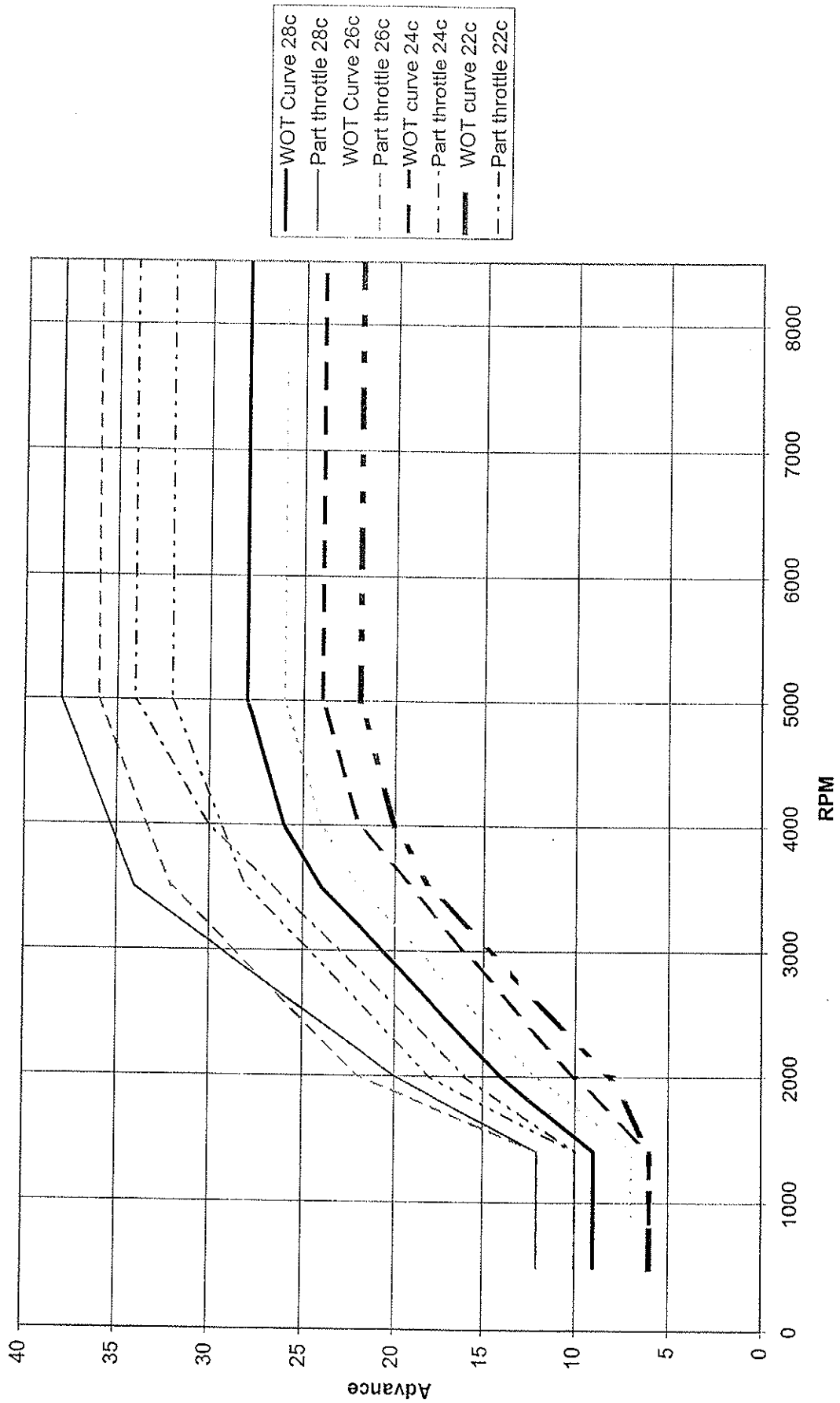
- WOT curve 38a
- Part throttle curve 38a
- WOT curve 36a
- Part throttle curve 36a
- WOT curve 34a
- Part throttle curve 34a
- WOT curve 32a
- Part throttle curve 32a

Group B Curves



- WOT curve 34b
- Part throttle curve 34b
- WOT curve 32b
- Part throttle curve 32b
- WOT curve 30b
- Part throttle curve 30b
- WOT curve 28b
- Part throttle curve 28b

Group C Curves



## Retard Curves

