Spark Plugs for N-Series Tractors by Tim Daley (MI)

Here's a quick identifier for which spark plug to use in your N-Series Tractor. The original Ford Operator's Manuals all call for the Champion 14mm H10 spark plug, which is still made and works fine. However, many Nowners prefer the hotter burning Champion H12 plug or the AUTOLITE 437 plug nowadays and they both also work fine. The Champion H12 plug is also listed as part number 512. There are probably a few other plugs out there that'll work, but these seem to all work without flaw. The Ford Spark Plug wrenches pictured show the very early 9N wrench (used in first month of tractor production) 81A-17017 with a Champion H10 plug; the replacement wrench, 01A-17017 with an AutoLite 437 plug; and the next generation replacement wrench, a Ford 01A-17017-B tool with a Champion H12 plug. I'd like to offer my advice when doing a tune-up and replacing your plugs. Get your air compressor fired up and blow off the top of the (cold) engine head where the plugs screw in to be sure all debris is cleared out before you unscrew the plugs. You don't need excess dirt and crud falling inside if you can help it. 14mm refers to the thread size and pitch of the plug. It is a METRIC thread so do not try a 1/2-20 tap or anything else other than a 14 millimeter by 1.25 (pitch) if you need to chase the threads in the head.

Your Choice -



Original Ford Tractor Spark Plug Wrenches Shown -



6	Chapter	I—Description	and	Specifications
U				

c. Engine.	4 cylinder "L" head
c. Engine.	1500 and 2000 R.P.M.
Type	400 R.P.M.
Rated speedIdle speed	3.188 in.
Idle speed	3.75 in.
Cylinder boreStroke	119.7 cu. in.
Stroke	the ft at 1500 R.P.M.
Torque	Dry type
Compression ratio	Cast steel
Sleeves	
Rings:	2
Rings: Compression	1
Compression	Full floating
Oil	Replaceable shell-type
Piston pin	Penlaceable shell-type
Rod bearings.	ic and dynamic balanced
Main bearings Cast steel, stat	level) 90 lbs. minimum
Crankshaft	a levely. So los
d. Ignition System.	Bettery
uB	Battery
Type	
Туре	1-2-4-3
Type	1-2-4-3
Type	Directly by camshaft
Type Distributor: Firing order Drive	
Type	
Type. Distributor: Firing order. Drive. Automatic spark advance. Initial timing (degrees of crankshaft).	Directly by camshaft Centrifugal governor Top dead center
Type Distributor: Firing order Drive Automatic spark advance Initial timing (degrees of crankshaft) Maximum advance (degrees of crankshaft)	
Type Distributor: Firing order Drive Automatic spark advance Initial timing (degrees of crankshaft) Maximum advance (degrees of crankshaft) Distributor breaker cam	
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Type Distributor: Firing order Drive Automatic spark advance Initial timing (degrees of crankshaft) Maximum advance (degrees of crankshaft) Distributor breaker cam Breaker contacts Breaker contacts Breaker contact spacing	Directly by camshaft Centrifugal governor Top dead center aft) 4 lobe 1 set 0.015 in.
Type Distributor: Firing order Drive Automatic spark advance Initial timing (degrees of crankshaft) Maximum advance (degrees of crankshaft) Distributor breaker cam Breaker contacts Breaker contact spacing Spark plugs:	Directly by camshaft Centrifugal governor Top dead center aft) 4 lobe 1 set 0.015 in. Marked H-10
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From the Original Ford 9N Product Information Manual -

12. What is the correct spark plug?

14mm. H10 Champion.

13. Does the ignition system have an automatic spark advance?

Yes.

It is controlled by a small governor on the inside of the distributor base.

14. Is there a manual adjustment to advance and retard the spark?

Yes.

This adjustment is made by loosening the screw at the left hand side of the distributor base and moving this screw up to retard the spark and down to advance it.

15. What is the proper procedure for cleaning carburetor?

- (1) Remove carburetor from the manifold.
- (2) Remove the fuel needle valve. (The fuel needle valve is set at an angle and should be removed first to prevent damage.)
- (3) Disassemble carburetor bowl.
- (4) Remove the float, float valve, gasket, venturi tube, drain plug and elbow strainer.
- (5) After carburetor is disassembled use compressed air to blow out each individual part.

CAUTION—Never attempt to blow out a carburetor by connecting an air line to the fuel inlet.

16. How many turns should the fuel needle be opened for average conditions?

One full turn.

Heavy work such as grinding, threshing or other similar work usually requires an additional quarter turn.

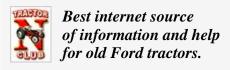
17. What will be the result of air leaks occurring between the air filter and carburetor?

Dirt will be taken into the motor and rapid wear will result.

It is very important that a good hose connection be maintained between the pipe running from the air cleaner and the carburetor.

From the Original Ford NAA Operator's Manual -

Model NAA General Description and Specifications Section 1 C. ENGINE (Con't) Rated speeds 1500 R. P. M. with P. T. O. driven implements so as to obtain 545 R. P. M. at P. T. O. 1750 R. P. M. without P. T. O. driven implements 450-475 R. P. M. Idle speed Cylinder bore 3. 44 in. 3.60 in. Stroke 134 cu, in, Piston displacement 110 ft. lbs. at 1400 R. P. M. -Torque Engine without accessories 6.6 to 1 Compression ratio Centrifugally cast alloy iron, Sleeves dry type Autothermic, cam ground, Piston aluminum alloy Rings: Compression 2 - cast iron - top, chrome plated 1 - cast iron Oil Piston pins Floating Replaceable steel backed inserts Rod Bearings Replaceable steel backed inserts Main Bearings Precision moulded alloy iron, Crankshaft statically & dynamically balanced, Compression pressure at (sea level) 120-125 P.S.I. at cranking speed (Minimum) cranking speed D. IGNITION SYSTEM Battery Distributor: 1-2-4-3 Firing order Helical gear off camshaft Drive Automatic spark advance Centrifugal Initial timing (degrees of crankshaft) 80 BTDC at 475 R. P. M. Maximum advance (degrees of crankshaft) 240 Distributor breaker 4 lobe cam Breaker contacts 1 set Breaker contact .024 to .026 spacings Spark Plugs: H-10 Type



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