WISCONSIN EARLY MUSTANGERS

PRESERVATION

RESTORATION

ENJOYMENT

**" A Few to Preserve the Best "**

**From the Prez :** **April 26, 1993**

OK, I have a question ! Just where in the world has this year gone too ? No sooner does January roll around and it's already SHOW TIME. Everything looks good for the show and hopefully the weather will be too. I know that I am looking forward to seeing everyone and their vehicles join us at the show. As usual it will be a fun time for all. I would like to add that we are still looking for help setting up on the 22nd and help the day of the show. Remember, it's your show and we need all the support and help we can to make it run smoothly. So if you can spare some time on Saturday or Sunday, let me know and we'll find a spot for you.

I take it that everyone has had enough RAIN to last us for a while. I know Tammy and I have. My sump pump has been running for three and a half weeks straight. It just takes a licking and keeps on running. I was pleased to see that the weather man was wrong the day of the Annual Ice Breaker Brunch Run. The sun was out and the weather was beautiful. We had a very nice turn out, 37 people. It was great to see the cars on the road again after a long winter of hibernation. Dick Coyle did a super job as usual and the food was terrific. I hope to see more of you out at this next year because it is a great way to spend a Sunday morning with your friends.

The world of Racing and the City of Greenfield lost one of it's own this past month, Alan Kulwicki. I don't know of one person who didn't feel the pain and loss of such a wonderful person. We will all miss you Alan and you'll always be in our thoughts.

That's all for now. I look forward to seeing you all at the show on the 23rd. Until then . . . Keep on Stangin !

Scott

# FROM YOUR EDITOR


### *Car of the Month*

I have received numerous requests to reinstate the Car of the Month feature in our monthly newsletter. A few years back I published a picture along with a story of a particular members Mustang. At that time I was able to get the photo reproduced which allowed for a clear copy for the newsletter. I have since lost that source. To have this done at a local printer would be too costly. With out this process a regular snapshot will not reproduce clearly enough to do justice to the photo. Because of this I discontinued the article. I would be receptive to resurrecting the article one again. I would do this without pictures, unless someone out there can assist me in getting the photos adjusted to allow for a better final print.

If interested in having your car featured in the newsletter please send me a few paragraphs about your Mustang. The information should include the particulars about the car, restoration efforts, history of the auto, and any additional facts that describes the character of the car and owner. I will be waiting to hear from you ! !

### *Mustang Restoration*

Each year I receive 8 to 10 calls asking about restoring a Mustang. Most of the inquiries are "where can I go to have it done". My pat response is to look at the cover sheet of our newsletter and patronize the advertisers. I will direct them to either Petes Auto Body or Marks Auto Body if Body work is needed. I direct them to Doria's Performance engineering if a mechanical upgrading is required. I have dealt with all three during the course of restoring my convertible and have been more than satisfied. I might point out, to the novice, that restoration work does not come cheep. In most cases what you may think is a simple procedure may develop into a costly undertaking . This is generally due to the fact that most owners don't look beyond the project they are undertaking. What appears to be a very minor patch panel replacement may lead to corresponding structural parts needing replacing. This is generally the rule not the exception. I can personally attest to the accuracy of that statement, as I lived through it during my 15 years of restoration. In order to take the sting out of the cost of restoring a Mustang it is necessary to look at what you are doing as an investment. Any restoration work will appreciate the value of your original investment. If you look at the investment market today you can plainly see that interest rates are barely over 3%. Various Mustang price guides have shown that most vintage collector cars increase in value at an average of 8% or better. So don't be scared off by the price of restoring as it will ultimately lead to increased value.

Until Next Month,
Fraternally Yours
Bob Zimmermann

# 1993 CLUB CALENDAR

| | | |
|---|---|---|
| 5/22/93 | | Saturday set up for car show at Schwister Ford. 9:00 AM |
| 5/23/93 | | The W.E.M. 11th Annual Show and Swap at Schwister Ford. |
| 5/24/93 | | Monthly Club Meeting. 7:30PM Wauwatosa S&L Meeting room. One week earlier than |
| 6/12/93 | 6/13/93 | Mustang Over the Road Trip. Destination to be announced. |
| 6/20/93 | | "Fathers Day" Rod, Custom, and Classis car show. Borchard Speed Automotive |
| 6/26/93 | | W.E.M day trip. Destination to be announced. |
| 6/28/93 | | Monthly Club Meeting. 7:30PM Wauwatosa S&L Meeting room. |
| 7/9/93 | 7/11/93 | Iola Old Car Show & Swap. Iola WI |
| 7/16/93 | 7/17/93 | Nostalgia Days held in Zion Illinois. Contact Kathy Lerner for details. |
| 7/18/93 | | Super 60's Ford show held at Sorens Ford. |
| 7/26/93 | | Monthly Club Meeting. 7:30PM Wauwatosa S&L Meeting room. |
| 7/30/93 | 7/31/93 | Hot Summer Nights held in Lafayette Indiana. |
| 8/1/93 | | Elkorn Summer Little Carlisle. Walworth County Fairgrounds |
| 8/8/93 | | Super 60's Ford show held at Towne Ford. |
| 8/15/93 | | Annual Club picnic and reunion. |
| 8/22/93 | | Midwest Ford show in Antioch Illinois. |
| 8/28/93 | 8/29/93 | W.E.M. Over the Road Weekender. Wisconsin Dells Car Show. |
| 8/30/93 | | Monthly Club Meeting. 7:30PM Wauwatosa S&L Meeting room. |
| 9/11/93 | | W.E.M Day trip. Destination to be Announced. |
| 9/23/93 | 9/26/93 | Joint OTR trip with the Midwest Ford Club. Destination Dearborn Michigan. |
| 9/25/93 | 9/26/93 | Jefferson Fall Little Carlisle. Jefferson Fairgrounds. |
| 9/25/93 | 9/26/93 | Lake Geneva Classic Car Rally, Poker Tour. Benefit childhood cancer. |
| 9/27/93 | | Monthly Club Meeting. 7:30PM Wauwatosa S&L Meeting room. |
| 10/8/93 | 10/10/93 | Annual OTR Trip to Door County. |
| 10/25/93 | | Monthly Club Meeting. 7:30PM Wauwatosa S&L Meeting room. |
| 10/30/93 | | Halloween Ralley. |
| 11/29/93 | | Monthly Club Meeting. 7:30PM Wauwatosa S&L Meeting room. |

# Shop tips

*Reprinted from technical and service bulletins published by Ford Motor Company, Autolite division.*

## SPEEDOMETER SYSTEM DIAGNOSIS

(All Mustangs)

A systematic diagnosis procedure can save you valuable time and avoid unnecessary disassembly or replacement of speedometer components. Most problems usually fall into one of the following categories:

1. AUDIO - Noises such as clicking sounds.
2. AUDIO AND VISUAL - Distracting noise and function such as a clicking, and oscillating pointer.
3. VISUAL - Distracting function such as oscillating pointer.
4. FUNCTIONAL - Usually not readily noticeable, such as a high or low reading.

### THE MOST PROBABLY CAUSES FOR AUDIO AND/OR VISUAL PROBLEMS ARE:

A. Defective cable core (kinked, bent tip, etc.).
B. Defective outer casing (severe bends due to improper routing, etc.).
C. Defective driven gear at cable input (transmission) due to nicks on teeth, etc.
D. Defective speedometer assembly.
E. Loose cable attaching nut.

### THE MOST PROBABLE CAUSE FOR FUNCTIONAL PROBLEMS ARE:

A. Incorrect driven gear at cable input (transmission).
B. Defective speedometer head assembly.

When resolving noise problems, the following procedure should be followed prior to the replacement of any parts.

A. Check the cable attaching nut and ferrule for tightness to the speedometer head. If loose, an altered wrench such as shown in Fig. 1, makes a handy tool to quickly and easily tighten the nut.

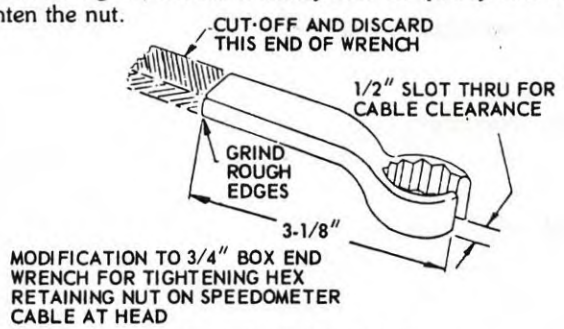



*Fig. 1—Speedometer Wrench*

B. Inspect the entire cable routing for severe bends, kinks, proper clip retention, or other damage.

C. Remove the cable from the transmission and inspect the driven gear for nicks or abnormal wear patterns.

D. Carefully remove the cable core. While holding one end in each hand (below the square ends), and with the core hanging in approximately a 9-12 inch diamter loop, rotate the core and check for torque uniformity. The cable core should rotate smoothly. Inspect for bent core tips.

## WATER LEAKS ALONG THE BOTTOM OF THE COURTESY LAMP HOUSING AND THE DOOR INNER PANEL

(1965 Mustang — with Deluxe Trim)

Water leaking from between the courtesy lamp housing and door inner panel can be corrected by adding a bead of sealer around the sides and bottom of the door courtesy lamp housing between the seal and door inner panel. This problem was corrected in production on April 29, 1965.

## HEATER CORE AND HEATER HOSE REPLACEMENT

Damage to a newly installed or reinstalled heater core can occur when forcing a dry heater hose on a dry heater core tube. The excessive force required to install the hose may result in a break in the solder connection at the tube.

Heater hose installation force can be reduced significantly by applying a soap solution to the heater core tubes and the ends of the heater hose. The reduced installation force will greatly reduce the possibility of damaging the heater core solder connections.

Don't forget to install the hose clamps.

## ELECTRICAL FEEDBACK DURING EMERGENCY WARNING FLASHER OPERATION

(1966 Mustang)

An electrical feedback phenomenon through the turn signal switch will occur on 1966 Mustangs when the following three situations are present simultaneously:

- The emergency warning light switch is in the "on" position.
- The ignition switch is in the "off" position.
- The turn signal switch is in either the left or right turn positions.

The electrical feedback will enable the driver to operate any of the electrical accessories which operate from the accessory terminal of the ignition switch such as, the radio without the ignition key. The operation of the accessories, however, will be intermittent. For instance the radio will emit an intermittent "bleeping" noise.

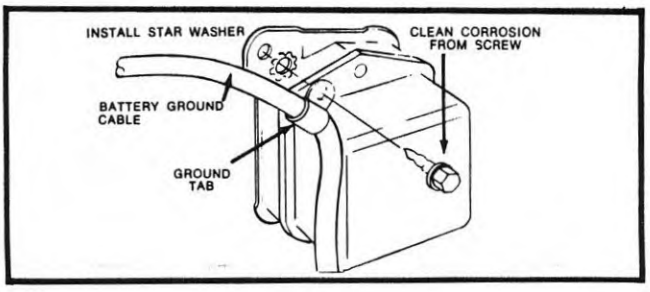
Owners should be instructed not to operate the emergency warning lights and the turn signals simultaneously. They should also be advised that no damage can occur to any of the electrical components because of the feedback.

## HIGH READING INSTRUMENT GAUGES

(1970 Mustangs)

Excessively high readings of the temperature and/or oil gauges on 1970 Mustangs, especially with the headlamps or air conditioning turned on, may be caused by a loose or corroded body ground at the alternator regular base.

To correct this condition on the above cars listed, remove and clean the grounding tab contact surfaces and the sheet metal screw. Then install a star washer between the negative cable grounding tab and the alternator regulator base as shown in the illustration below.



*How To Identify Ford's Nodular Iron Rear End*

# STRENGTH TO THE "NTH" DEGREE

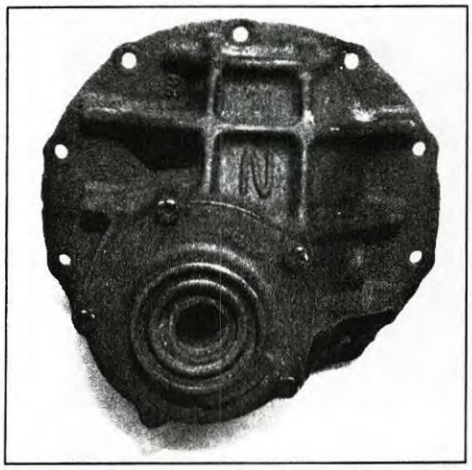
photo by Michael Thorn

*by Dr. John Craft*

Nearly everyone who has been around the world of high performance Mustangs has heard about the nodular iron, or "N" case, rear end. Unfortunately, that's about as far as their familiarity goes, which leaves the novice junk-yard or swap denizen in the dark about why N-case rear ends are so desirable and how to identify them.

Ford produced the nodular iron center section to combat frequent rear end breakage that was encountered by big-block racing Fords in the early sixties. The "gray metal" center sections, or "pumpkins," that were installed in nine-inch differentials of that era could not withstand the tremendous amount of torque generated by the big Ford engines. Their weakness was usually displayed in a most disconcerting way, usually by the center section shrapnelling into pieces at the most inopportune time (like on the starting line).

The culprit was the brittle center section case, so Ford developed a new case made from nodular iron. The increased nodularity of the N-cases allowed them to flex under tremendous loads instead of shattering. A

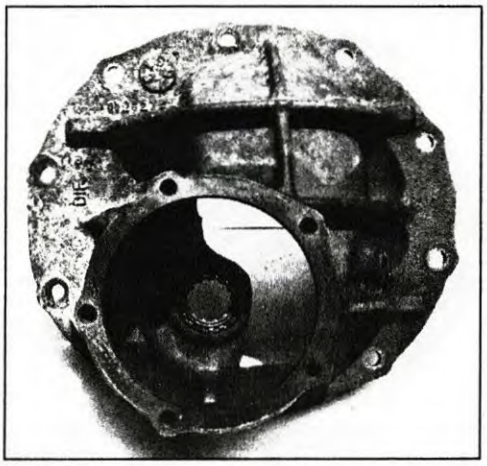


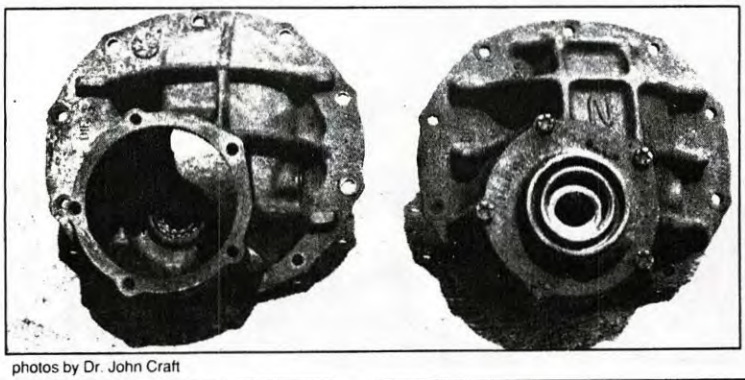
*(Left). Most nodular iron rear end housings can be identified by the large "N" cast between the double ribs.*

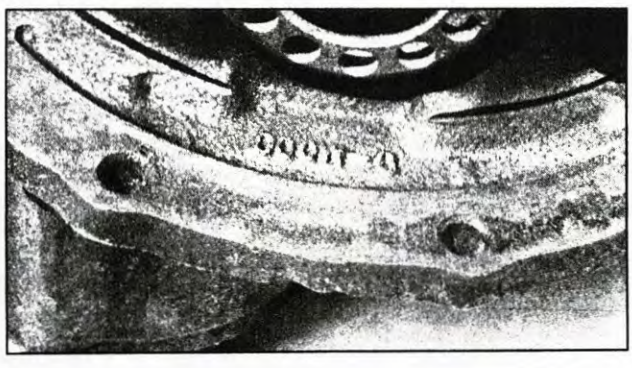
*(Right). Most non-nodular housings can be identified by their single vertical rib on the front of the case.*

*(Below, left). Here's a side-by-side comparison of a conventional case (left) and an "N" case (right). Notice the double ribs and the cast "N" on the nodular iron housing.*

*(Below, right). Casting numbers, located inside the case, are a sure-fire way of verifying a nodular housing. This is a nodular D00W-B case. Other nodular casting numbers are D00Z-B and C4AW-B. Not all nodular housings have the "N" on the outside, but they will have one of these casting numbers.*







photos by Dr. John Craft

good rap with a hammer will simply leave a dent in the nodular iron case, while such a procedure on a "gray metal" rear can often cause the cap or case to fracture into pieces.

It was the ability of the nodular rear end to absorb punishment that led Ford to install the N-cases in the more muscular of the Mustang breed. Bosses, Cobra Jets, GT-500s and other high performance ponies came factory-equipped with the rugged heavy-duty rear end.

Now that we know what they're made of, let's look at ways to identify the nodular housings. Of course, most Mustangers know about the big "N" casting on the housing, but be advised that some nodular cases do not have this handy casting identification.

In addition to the molecular changes already noted, the N-cases also differ structurally from their less sturdy brethren. Nodular cases, whether they're marked by the "N" or not, can usually be identified by two vertical support ribs cast into the front of the housing. Be careful though, because the mere presence of the two ribs does not guarantee a nodular make-up because some brittle gray metal cases also have them.

The sure way to spot a nodular rear end is to check the casting number on the inside of the housing. Over the years, nodular cases were produced in two configurations, with either large side bearings or small side bearings. The large bearing cases were introduced first and carry the casting code "C4AW-B" next to the side bearing cap mounting surface. Later small bearing units carry either "D00W-B" or "D00Z-B" in the same location. There seems to be a bit of controversy surrounding these two types of cases. Many racers feel that the large bearing units are superior due to their potentially greater load bearing ability, while others feel that the small bearing cases are stronger because the main caps on the "D00" cases are thicker. Perhaps Ford knows something because the new SVO cases carry the "D00Z-B" casting number.

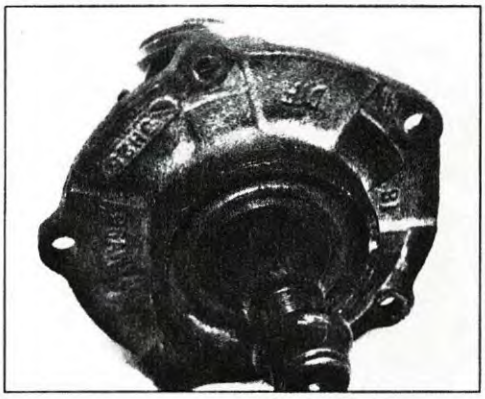
If, in your swap meet search, you come across a prospective case that carries the code "WAR" next to the bearing stand, avoid it like the plaque because it's definitely one of the early gray metal cases.

Once you've determined that you've found a real N-case, your quest is still not finished. It is possible that the unboltable parts could become separated from the main case. Heavy-duty front bearing retainers are easy to spot since they differ significantly from the lighter duty pieces in appearance. In the photos, you can see that the heavy-duty retainers are cast from thicker metal than the standard retainers and the area around the bolt holes is level with the rest of the unit. Light duty retainers have bolt holes that are drilled into raised bosses that rise above the rest of the retainer. Identifying disassembled bearing caps is a little trickier but still possible. The first thing to look for is any trace of red oxide primer. If any of this primer is found on the bearing caps, it usually identifies them as gray metal units. Needless to say, steer clear of painted caps.

Beyond the visual test, you can also take a whack at suspect caps with a hammer and punch, as described earlier, if the owner will agree. Finally, since the caps are tapped for threads when assembled on their case, it's fairly easy to match separated caps and cases.

One last myth that should be dispelled about Ford rear ends is the belief that the sixties' and seventies' single rib cases (non-WAR) are weak units. According to our information source, Dave Euga from Seminole Auto Specialties in DeBerry, Florida, they're not as beefy (smaller bosses, lighter retainers, etc.) as the N-cases, but their molecular structure is the same as the nodular case. That's right, all non-WAR cases are nodular iron! If you don't think these units are tough, just peek under a NASCAR stock car equipped with a Ford nine-inch rear end and you'll be sure to spot one of these so-called weak cases just waiting to go 200 miles-per-hour on the track.

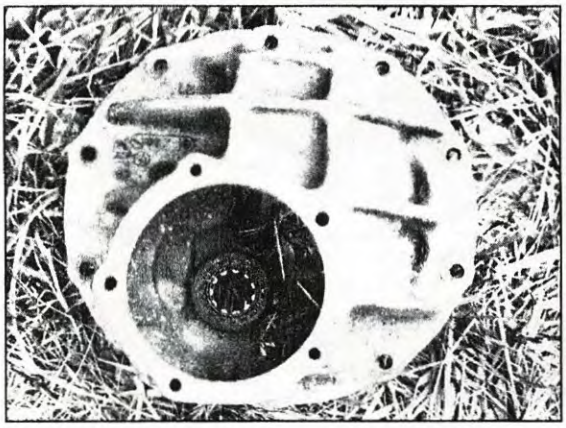
N-case rear ends are truly one of Ford's better ideas for high performance Mustangs. They're so desirable today that their prices are rising daily due to the demand for them by Ford racers and restorers. Indeed, a few of the Brand X brigade have found the secret to a bullet-proof rear end by sliding a Ford nodular iron rear end under their Chevrolet.

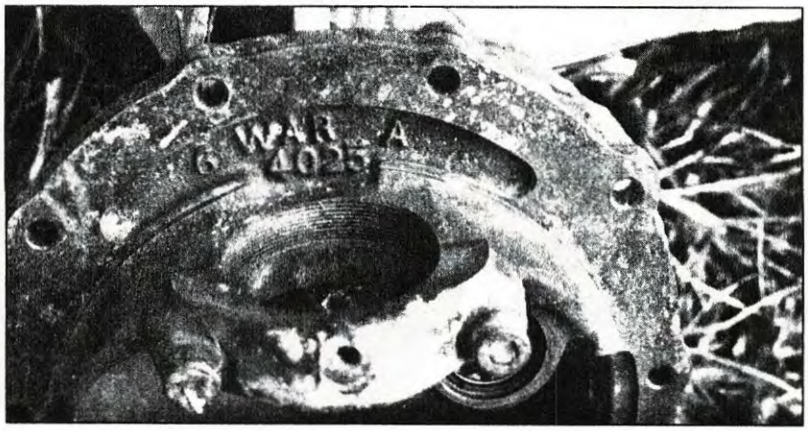


*(Left). All parts of the nodular cases are different from the conventional cases, including the front covers. Regular front covers have "towers" around the bolt holes.*

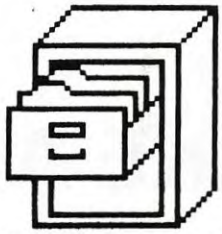
*(Right). "N" case front covers are smooth and level around the bolt holes.*

*(Below). This is the dreaded WAR case, which has the two vertical support ribs like most nodular iron housings. Avoid the WAR cases like the plaque. Notice the "WAR" casting.*





# CLASSIFIED



FOR SALE: 3 Speed top loader with original Hurst Shifter $265. '69 Chrome Styled Steel wheels with chrome trim and caps $400. '65-'66 hood, no rust $100. 351W headers $65.
CALL JOHN
644-6620 (NIGHTS)

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FOR SALE: Block and heads for a Pontiac 400. Block has cracked cylinder, heads are rebuilt and are cast "16". Includes an Edlebrock Performer Aluminum Intake Manifold. $150 OBO.
Early '70s Ford 360. Complete but disassembled. Asking $150 OBO.
CALL FRITZ
268-0147

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FOR SALE: 1970 Mustang Coupe. Texas body, no rust. 351 Windsor. Sell as is or will restore $2500. 1969 Mach 1. 351 2V. Automatic. Power steering and brakes. New dual exhaust. Restoration started. Texas car. As is or restore.
1973 Mustang convertible. Project car. 351 2V Power steering and brakes. Needs total restoration. Make offer. 9" Posi rearends 2.79, 3.25, 3.7, 5.13.
CALL PETE
529-2299

FOR SALE: I still have a few restorable bodies to replace that "rust bucket of yours. The best of them are being bought up so make a decision soon to not put another patch on your Mustang.
WRITE JIM FEARS
3451 BANNING ST
DALLAS TX 75233

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FOR SALE: 1971 Mach 1. 351C, 3SPD,. Needs restoration. $750. Front tub complete no rust for 1971-73 $100. NOS Mach 1 style hood $400, includes freight to Milwaukee. Fenders, doors, glass.
CALL FRANK
414-263-7892

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FOR SALE: 1982 Mustang 5.0 GT Black. Average condition. Air, Cruise, Tilt, V-8, 4 SPD, 3:08 TracLoc, AM/FM Stereo, 205-70-14 Euro T/A's on factory rims. All new hoses, Brakes. In storage. 70,000 miles. Asking $3200.
1979 Indy Pace Car. V-8, 4 SPD, 3:08 rearend, tinted windows, sunroof, AM/FM cassette, New TRX tires, Original paint & decals, Mint interior, Needs 2 Saturdays of detailing, New hoses, brakes, original shocks, struts and wires. Absolutely no winters. 50,000 miles. $5500.
CALL RON
548-0017

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WANTED: Help replacing a 1968 Mustang floorpan
CALL JENNY
424-2970 WEEKDAYS
786-7999 WEEKENDS

SEND YOUR ADS TO:
BOB ZIMMERMANN
2307 W CARRINGTON AVE
OAK CREEK, WI 53154

If ad is received by the club meeting it will appear in the next edition

# TAKE A BREAK

## "OO IN THE MIDDLE"

| J | R | I | O | N | S | R | G | D | I | E | M | O | O | L |
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| BOOR | BOOS | BOOT |
| COOK | COOL | COOM |
| COON | COOP | DOOM |
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| FOOT | GOOD | GOOF |
| GOOK | GOOP | HOOD |
| HOOK | HOOP | HOOT |
| KOOK | LOOF | LOOK |
| LOON | LOOP | LOOT |
| MOON | MOOR | MOOS |
| MOOT | NOOK | POOF |

### *Ever Notice . . .*

. . . that people who say they want to tell you something for your own good never have anything good to say?

—Quoted by James Dent in Charleston, W.Va., *Gazette*

. . . that a dropped penny always lands at your feet, but when you drop a quarter, it rolls 20 yards? —Jay Trachman in *One to On*

. . . that people who are wrong seem to talk louder than anyone else? —Andy Rooney

. . . that the latest model of anything is the one that becomes available right after you've bought the previous one? —Frank A. Clark

### *You Know You're Getting Old When...*

... resisting temptation is not as hard as recognizing it.

—Doug Larson, United Feature Syndicate

... you know your way around, but you don't feel like going.

—Dick Wilson, quoted by Sid Ascher

... you go into a record store and expect to see records. —*Rich's Current Humor*

... you're 17 around the neck, 38 around the waist and 126 around the golf course. —*The Jim Murray Collection* (Taylor)


*"After deducting the coupons, we owe her $104."*


*"This is as close as I get to life in the fast lane."*