



# SPEED'S NEWS



**SPEED HOLMAN CHAPTER-54**  
ST. PAUL, MINNESOTA

MEETING: Monday, January 12, 1981, Sanborn Aviation, 7:30 PM  
President: Gerald Laundry - 647-0259  
Vice President: Sandy Lemire - 429-6422  
Secretary/Treasurer: Rosemary Frank - 451-8187  
Designees: Roger Westerberg - 458-0708  
Al Amsden - 484-4058

This is YOUR newsletter - any pertinent information you wish relayed - call ROSEMARY - 451-8187. And - ROSEMARY has calendars - \$2.50 each at the meeting or \$3.00 by mail.

Enclosed herewith is the third in our series of three - yup, the last one - articles JIM OLSON is sharing with Chapter 54 members. Be sure YOU read this very important article and be aware.

NOEL ALLARD, author and publisher of "Speed", the Biography of Charles W. Holman, has **FOR SALE**

1939 AERONCA CHIEF, 65C, rebuild project underway. Fuselage, engine tail feathers, interior, gear, controls (complete except wings, prop, and windshield.) This is one too many projects. Noel just finished getting a 1946 Aeronca Chief flying after four years of rebuilding. Price negotiable. Asking \$1700.

Complete set of J-3 tail feathers in very good condition. Price negotiable.

Pair of pretty good 1941 Aeronca T-series wings. Need work, but all parts there and mostly undamaged. Also lift and jury struts. Need \$375.00.

Pair of wing-damaged Cessna 140 wings. One good spar, tips good, lots of ribs, fuel tanks good, aileron bays OK. Make offer.

NOEL's book on Speed Holman has been SOLD OUT for about two years and he is now spending time as executive director of Minnesota Aviation Trades Association and newsletter editor of the Minnesota Antique Flyers Club.

Keep up the good work, Noel,  
and let us hear from you again!!

*Rosemary*

FLYING IN THE WINTER MONTHS in Minnesota is common place today. Runways are cleared of snow and ice, aircraft are warm in flight, and engine heaters are readily available. Winter flying poses some special problems, however, and it's best to review your cold weather procedures. Drain the sumps often, be ABSOLUTELY SURE there is no water in the tanks, if you fuel up from a tank that is close to empty, or that does not have a filter, take extra precautions. READ AGAIN the articles on icing in various aviation publications.

DON'T OVERLOOK SNOW OR ICE on the wings and elevators. Reports indicate some carelessness. A Nord 262 airliner crashed on takeoff at Boston last year, and a Bristol Britannia did the same thing about a year later. Both aircraft had been deiced with ethylene glycol based fluid, but wet snow accumulated. If in doubt, DON'T TAKE OFF!

SNOW IS PECULIAR. For instance, you can't see it at night, and as a result you can be in the falling snow, VFR lost, before you know it. Sometimes it's even hard to see in the daytime. A snow covered ground can blend with the falling snow, and again, VFR is lost. Snow on the runway may not look deep, but it can affect both takeoff and landing.

A FORCED LANDING in the wintertime is different, too. Don't land on a lake unless you can see ice houses, or automobiles. Land in the tracks if you can. Avoid dark spots, indicating thin ice. Landing on snow covered ground is tricky. Pick a spot where the snow is smooth and unrumpled. Stall in at as slow a speed as possible.

A CARBON MONOXIDE DETECTOR in your aircraft during the winter months is essential. They are usually available at your local airport. If you can't locate one, call the "Flyer" office, 612-869-7026 for information on how to order one by mail.

A.M. WEATHER, underwritten by Republic Airlines in the Twin Cities, is broadcast on KTCA-TV, Channel 2, at 6:45 AM, CDT, Monday through Friday.



IT MAKES SENSE TO . . . . .  
KNOW YOUR LIMITS  
USE A CHECKLIST  
PREPLAN YOUR FLIGHT  
PREFLIGHT YOUR AIRCRAFT  
KNOW YOUR AIRCRAFT SYSTEMS  
KNOW YOUR AIRCRAFT PERFORMANCE LIMITS

REMEMBER . . . . .  
SAFETY IS NO ACCIDENT"

# Aluminum Specification Code

Submitted by Rex Birby  
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2817 Shantar Dr.  
Costa Mesa, Calif. 92626

IN BUILDING or rebuilding racing aircraft and boats, the average home workshop builder makes use of surplus aluminum.

Finding the material for your job requires a basic guide that shows the meaning of such codes as:

Reynolds 500 QQ-A-327  
6051 T 651

or,

Kaiser AN 032 QQ-A-250/B  
5052-H32

Breaking these codes down, we know that Reynolds and Kaiser are the names of the manufacturers. The Q-Q-A means aluminum alloy and the digits which follow (327) (250/B), etc. specify the alloy formula. For the most part, we, the homebuilders, can disregard these numbers — we are mainly interested in the last two groups of numbers. These indicate the AMS (Aircraft Material Specification) number and the heat treating or tempering of the metal to produce strength.

## AMS Numbers for Aircraft Use

2011	2117
2014	6061
2024	7075

## AMS Numbers for Marine Use

5052	6061	7075
5083	6063	
5086	6262	

### H Numbers Indicate Hardness

H3	Strain hardened and stabilized. This is followed by numbers that show the degree of hardness.		
2	1/4 hard	4	1/2 hard
3	3/4 hard	5	Extra hard
0		6	Soft

### T Numbers Indicate Thermal Tempering

T1	Naturally aged at room temperature.
T2	Annealed material.
T3	Solution heat treated then cold worked.
T4	Solution H.T. then naturally aged.
T5	Artificially aged at high temperatures.
T6	Solution H.T. then artificially aged.
T7	Solution H.T. then stabilized.
T8	Sol. H.T., cold worked, artificially aged.
T9	Sol. H.T., artificially aged, cold worked.
T10	Artificially aged, then cold worked.

### Maximum (Ultimate) Strength

The point in lbs. per square inch where the metal fails.

### Yield Strength

The point in lbs. per square inch where the metal sets (bends) but does not fail.

### Tensile Strength Table

AMS #	T or H	Max.	Yield
2014	0	25M	10M
	T4	61M	37M
	T6	68M	60M
2024	0	27M	11M
	T3	70M	50M
	T4	65M	47M
5052	0	28M	13M
	H32	33M	26M
	H34	38M	31M
	H36	40M	35M
5083	H38	42M	37M
	0	44M	22M
	H112	45M	33M
5086	0	38M	17M
	H32	42M	30M
	H34	47M	37M
	H112	39M	19M
6061	0	15M	8M
T4 or T451		35M	21M
T6 or T651		45M	40M
7075*	0	30M	15M
	T6	83M	73M
	T651	82M	73M

M equals 1000 lbs./sq. in.  
\*7075 is essentially a zinc alloy. Care must be taken to avoid deep scratches and nicks which can start cracks. This is true of any extremely hardened metal.

For additional information write: Alliance Steel & Aluminum Co., Distributors—Kaiser Steel & Aluminum, 2537 E. 27th St., Los Angeles, Calif.

## Janox Reflector Landing System

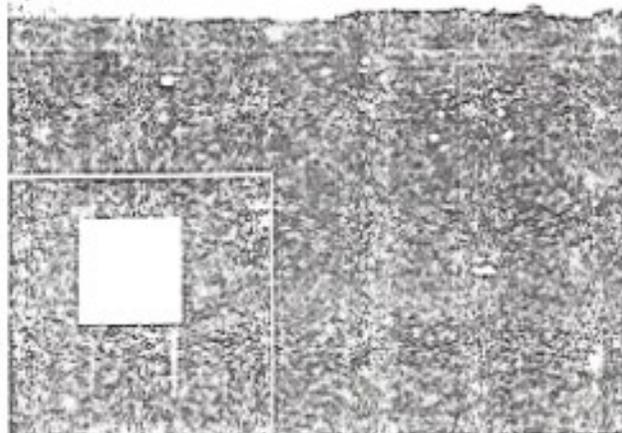
The new night landing system developed by Janox Corporation can be used as primary or secondary runway lighting. The system has been in use for over a year as primary lighting of runways at commercial and private airports. It is an ideal backup system for electric runway lights.

The reflector system is activated totally by aircraft landing lights. By using an airport beacon or other such identification to find the airport, all one has to do is extend the downwind pattern, turn final, and use landing lights to activate the reflectors. Range is three miles plus, with minimum landing light wattage, and it is effective in all types of weather. Maximum effect is reported at 6-7 miles with haze and smoke. The system is effective in visibility as low as one mile.

By photo comparison and pilot reports, the reflector system appears to be electrically operated runway lights from turning final to turning off the runway.

Each unit placed at 300 ft. intervals has a reflective area of one square ft. and provides day and night identification for all seasons of the year. Green and red boundary units are available for commercial service.

Cost of the system for a 2,000 ft. runway is \$261.72, and the reflectors carry a long-term warranty.



An untouched photo of the reflector landing system. From reflecting the plane's landing lights only, the runway appears to be electrically lit. Photo inset shows individual marker.