

Kollmans Compass

PROFESSIONAL AIR TRAFFIC CONTROLLERS ORGANIZATION  
COLLECTION 86.45

SERIES TV  
SUB SERIES

IV 1 18

Telephone (603) 889-2500

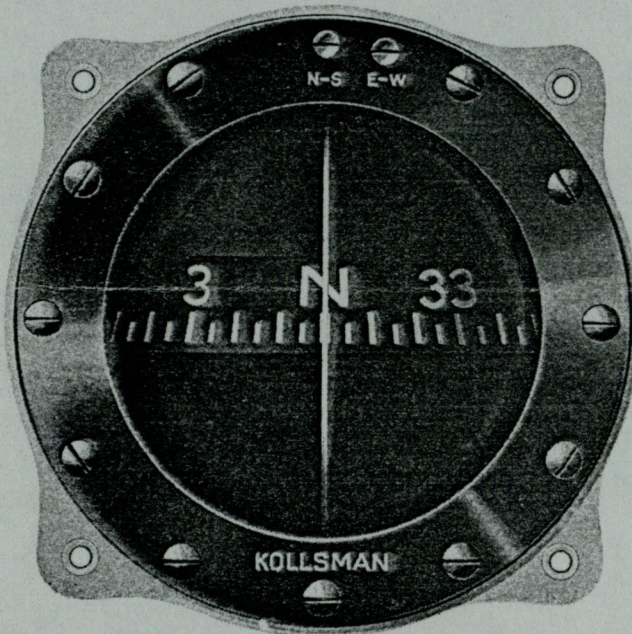
**TED WEISER**  
**MANAGER**  
**FIELD SERVICE AND**  
**TECHNICAL TRAINING**



**Sun Chemical Corporation**  
**Kollsman Instrument Company**

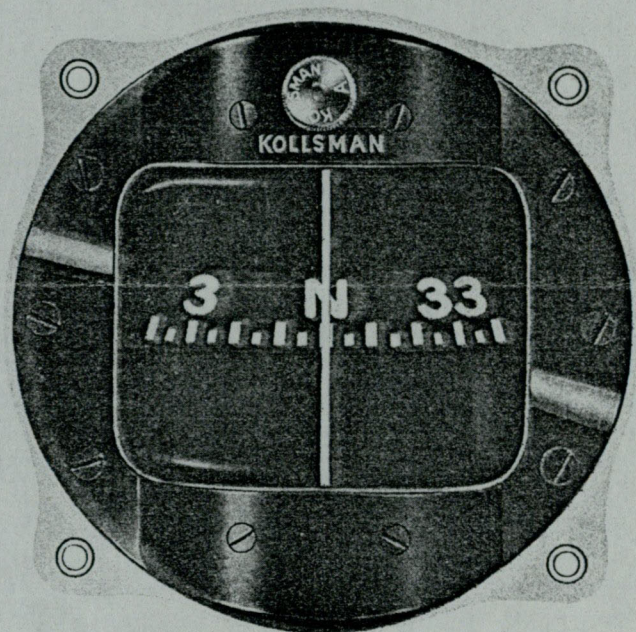
DANIEL WEBSTER HIGHWAY SOUTH, MERRIMACK, NEW HAMPSHIRE 03054

## AVIATION COMPASSES



Compass Type 132B

*Spherical lens, unlighted. Compensator screws top center.  
Actual size.*



Compass Type 58BL

*Cylindrical lens, interior lighting with lighting shield.  
Actual size.*

Standard KOLLSMAN AVIATION COMPASSES are magnetic compasses which indicate the direction the plane is heading with respect to Magnetic North by means of a rotatable graduated card read against a fixed lubber's line.

In operation the compass card is mounted on a directive magnetic element in a liquid filled bowl. The magnetic element has a hardened steel pivot which rests in a cup jewel supported at the center of the bowl.

Several types of Kollsman Aviation Compasses are available, each with its own particular features. Some of the general features which they have in common are described in the following paragraphs. Specific information on special types is included in the type listing.

### Shock Absorbing Construction

An internal shock absorbing spring and float combination enables the compass to perform as well on rigidly mounted panels as on shock absorbing mounts. This consists of a spring mount in the jewel support. This protects the pivot during sudden accelerations of the card assembly. A float attached to the magnetic element relieves the pivot of the major portion of the weight of the magnets.

### Performance

The period of the Kollsman Standard Compasses is relatively short. Overswing and swirl characteristics are well within the limits specified by the U. S. Army Air Corps.

### Magnifying Lens

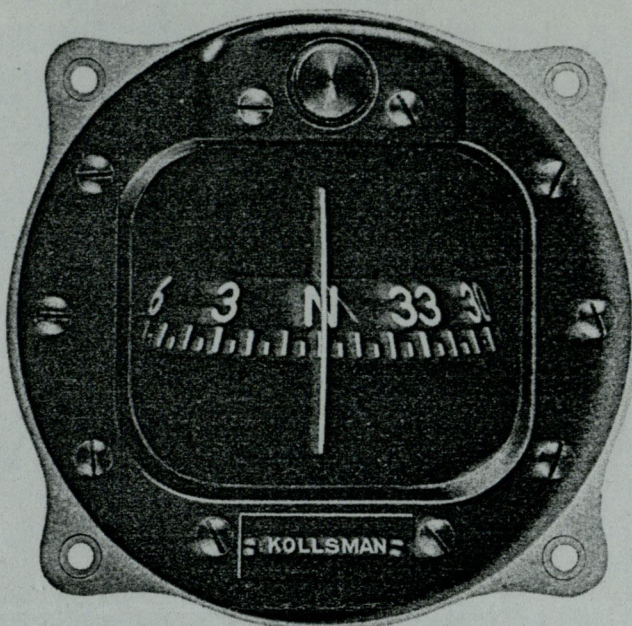
Easy reading of the card and lubber's line is facilitated by magnifying lenses. Three types of lenses are used: a spherical lens and both a curved and flat front cylindrical lens. The cylindrical lenses magnify in one direction only and permit easier reading. The flat front, a recent development, is designed to further decrease reflection in the lens and is preferred by some.

On types equipped with cards graduated in 5 degrees, readings can be estimated to within one degree. Types equipped with the large cards have cards which can be read to  $\frac{1}{2}$  a degree or even closer.

### Mounting

All Kollsman Standard Compasses are designed to fit the standard  $3\frac{1}{8}$ " mounting hole and are therefore completely interchangeable with other standard instruments.

On those with small diameter cards, the space required behind the instrument boards is no greater than



Compass Type 758

*With the new flat front cylindrical lens. Army Type B-16.  
Actual size.*

normally allotted to an instrument and close grouping of the flight instruments is therefore possible.

### Compensator

All types of Kollsman Standard Compasses are equipped with Poly-Plane Compensators for compensation for local magnetic interferences in the airplane. This compensator is of a modified type, in types 132B and 464.

In each case, setting is made by means of the slotted heads marked N-S and E-W. These can be seen on the unlighted types while on the lighted types they are concealed by the upper light shield. Settings can be made with a non-magnetic screwdriver.

### Assembly and Adjustment

To insure that Kollsman Compasses will be accurate to within one degree for readings at every point on the

card and to facilitate production, Kollsman has built a special non-magnetic building for compass assembly and adjustment.

### Correction Card & Holder

A correction card and holder to be mounted on the panel near the compass, is supplied with each compass. The compass should be periodically checked and corrections noted on this conveniently located card.

### Expansion Chamber

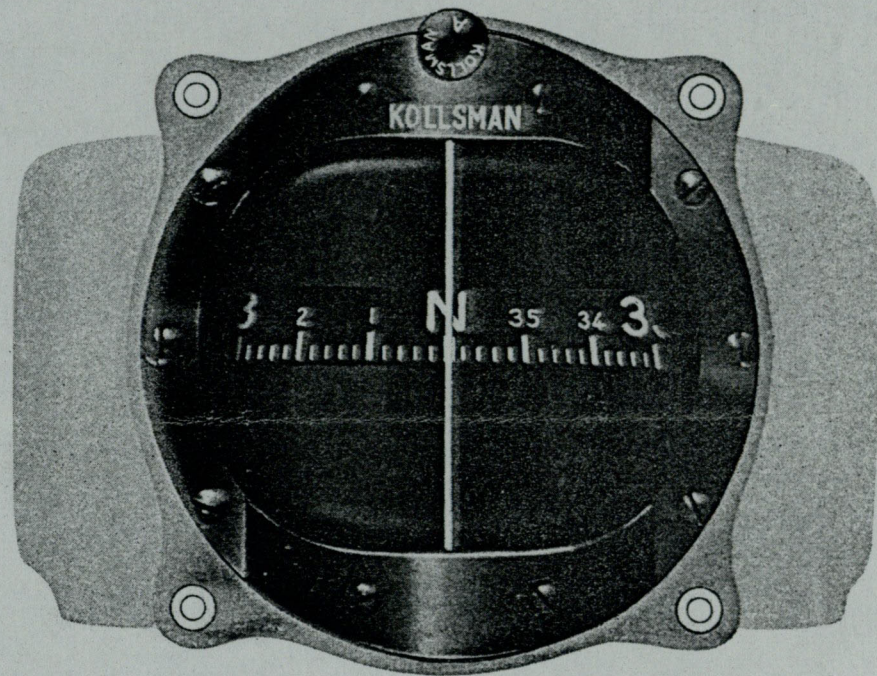
An expansion chamber of ample capacity permits the liquid volume to change due to temperature variation without materially increasing the pressure in the bowl.

### Lighting

**Luminous Markings** — The lubbers line, numerals and main graduations on the card of all Kollsman Compasses are radium coated. These markings also react to fluorescent lighting. The minor graduations on the card, not radium coated, can also be made to show up under fluorescent lighting by being treated with fluorescent lacquer when this is desirable. Fluorescent cards of this type are standard on type 106C and are available on special order for other types.

**Interior Lighting** — In the lighted types (see listing) lighting of the lubber's line and card is accomplished by means of the standard lamp used for Kollsman Self-Contained Lighting. In order to eliminate glare, light shields are provided, top and bottom. The lamps are easily accessible and can be replaced in flight, if necessary.

A resistor plug with two feet of shielded wire for connecting the light system to the normal 12 volt battery supply, is included with each lighted compass. Special plugs for use with 3 or 24 volt supplies are available on request.



**Compass Type 65BL**

*Large card with graduations 2 degrees. Spherical lens, interior lighting and light shield.*

## AVIATION COMPASSES

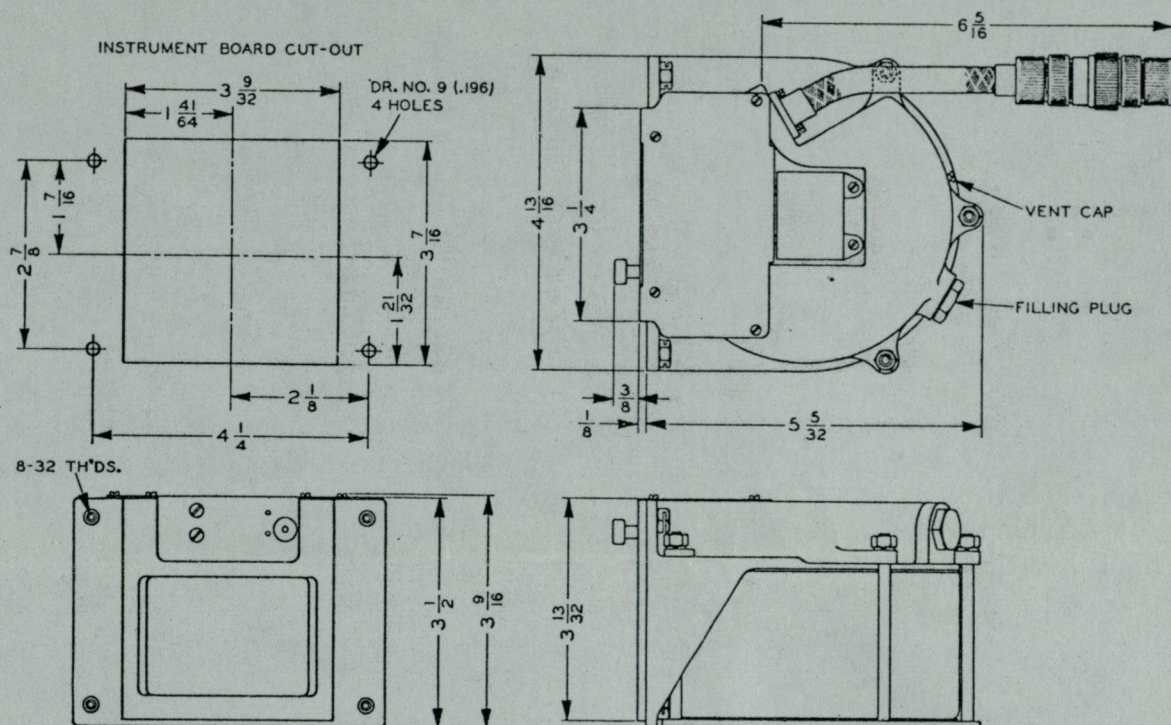
Type No.	Type Lens	Size Card	Card Graduations	Lighting	Weight
132B	Spherical	Small	5°	None	1 lb. 3 oz.
58BL	Cylindrical	Small	5°	Interior	1 lb. 6 oz.
★ 758	Flat Cylindrical	Small	5°	Interior	1 lb. 6 oz.
65BL	Cylindrical	Large	2°	Interior	2 lb. 14 oz.
★ 65A	Cylindrical	Large	2°	Interior	2 lb. 14 oz.
★ 106C	Cylindrical	Large	1°	Interior	2 lb. 14 oz.

### ★ ARMY and NAVY TYPES

Type	Equivalent to	Description
★ 758	Army type B-16	Army Plug, Single Wire, No Resistor. Equipped with new flat front cylindrical lens.
★ 65A	Army type B-17	Army Plug, Single Wire, No Resistor
★ 106C	Navy Mark IX	Standard A N Connecting Plug, Fluorescent luminous card and lubber's line.

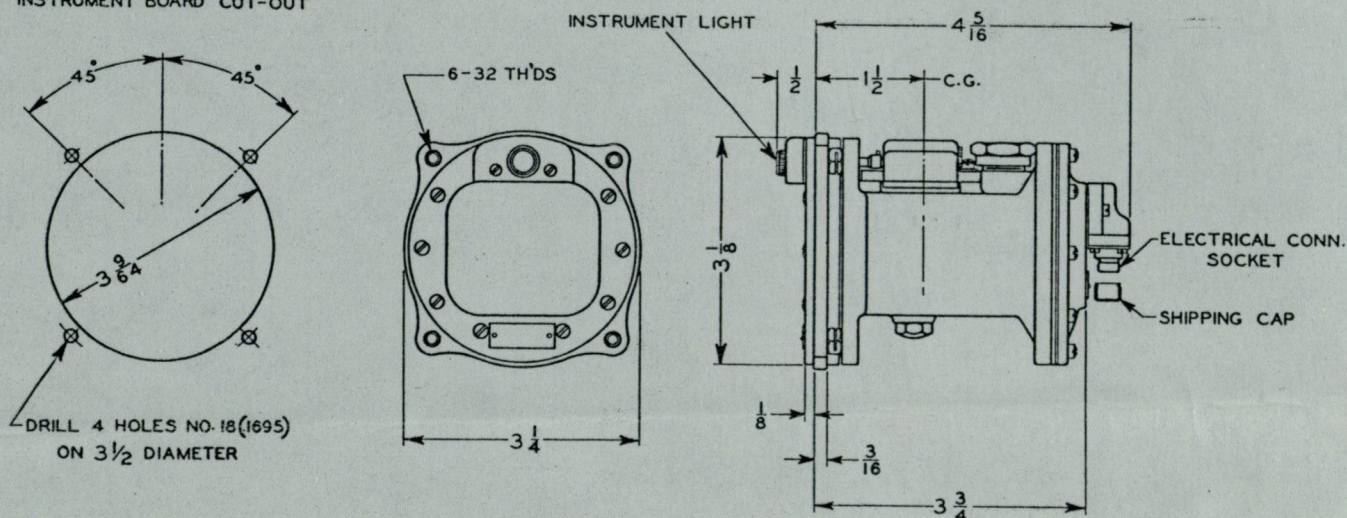
**KOLLSMAN PRECISION AIRCRAFT INSTRUMENTS**

## Type 106C - Compass



## Type 758 - Compass

INSTRUMENT BOARD CUT-OUT



KOLLSMAN PRECISION AIRCRAFT INSTRUMENTS