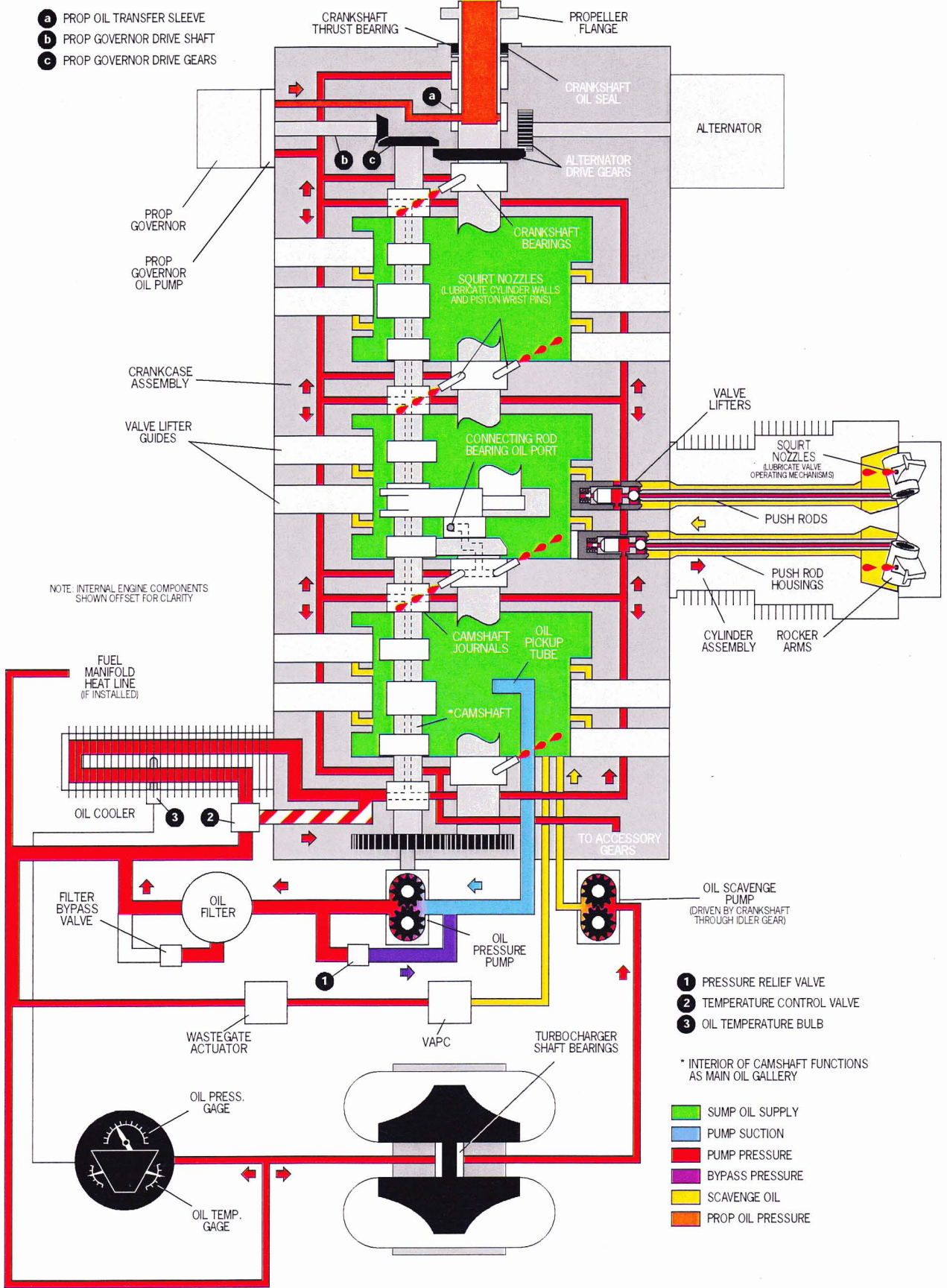


- a PROP OIL TRANSFER SLEEVE
- b PROP GOVERNOR DRIVE SHAFT
- c PROP GOVERNOR DRIVE GEARS



NOTE: INTERNAL ENGINE COMPONENTS SHOWN OFFSET FOR CLARITY

FUEL MANIFOLD HEAT LINE (IF INSTALLED)

OIL COOLER

FILTER BYPASS VALVE

OIL FILTER

OIL PRESSURE PUMP

OIL SCAVENGE PUMP (DRIVEN BY CRANKSHAFT THROUGH IDLER GEAR)

WASTEGATE ACTUATOR

VAPC

TURBOCHARGER SHAFT BEARINGS

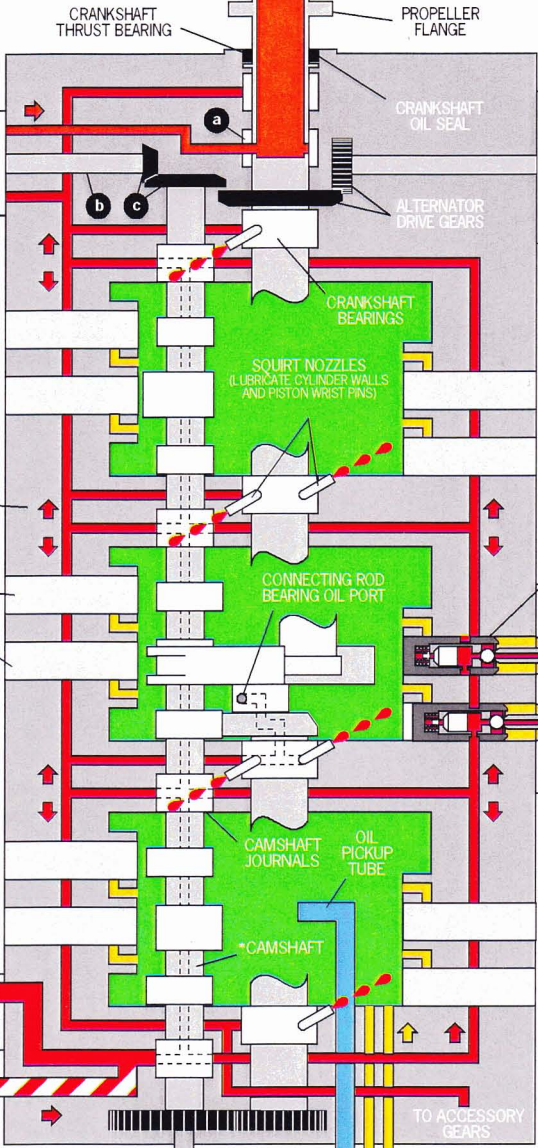
OIL PRESS. GAGE

OIL TEMP. GAGE

- 1 PRESSURE RELIEF VALVE
- 2 TEMPERATURE CONTROL VALVE
- 3 OIL TEMPERATURE BULB

\* INTERIOR OF CAMSHAFT FUNCTIONS AS MAIN OIL GALLERY

- SUMP OIL SUPPLY
- PUMP SUCTION
- PUMP PRESSURE
- BYPASS PRESSURE
- SCAVENGE OIL
- PROP OIL PRESSURE



PROP GOVERNOR  
PROP GOVERNOR OIL PUMP

CRANKCASE ASSEMBLY  
VALVE LIFTER GUIDES

VALVE LIFTERS

SQUIRT NOZZLES (LUBRICATE VALVE OPERATING MECHANISMS)

PUSH RODS

PUSH ROD HOUSINGS

CYLINDER ASSEMBLY

ROCKER ARMS

CAMSHAFT JOURNALS

OIL PICKUP TUBE

CAMSHAFT

PROPELLER FLANGE

CRANKSHAFT THRUST BEARING

CRANKSHAFT OIL SEAL

ALTERNATOR

ALTERNATOR DRIVE GEARS

CRANKSHAFT BEARINGS

SQUIRT NOZZLES (LUBRICATE CYLINDER WALLS AND PISTON WRIST PINS)

VALVE LIFTERS

SQUIRT NOZZLES (LUBRICATE VALVE OPERATING MECHANISMS)

PUSH RODS

PUSH ROD HOUSINGS

CYLINDER ASSEMBLY

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CAMSHAFT JOURNALS

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SQUIRT NOZZLES (LUBRICATE VALVE OPERATING MECHANISMS)

PUSH RODS

PUSH ROD HOUSINGS

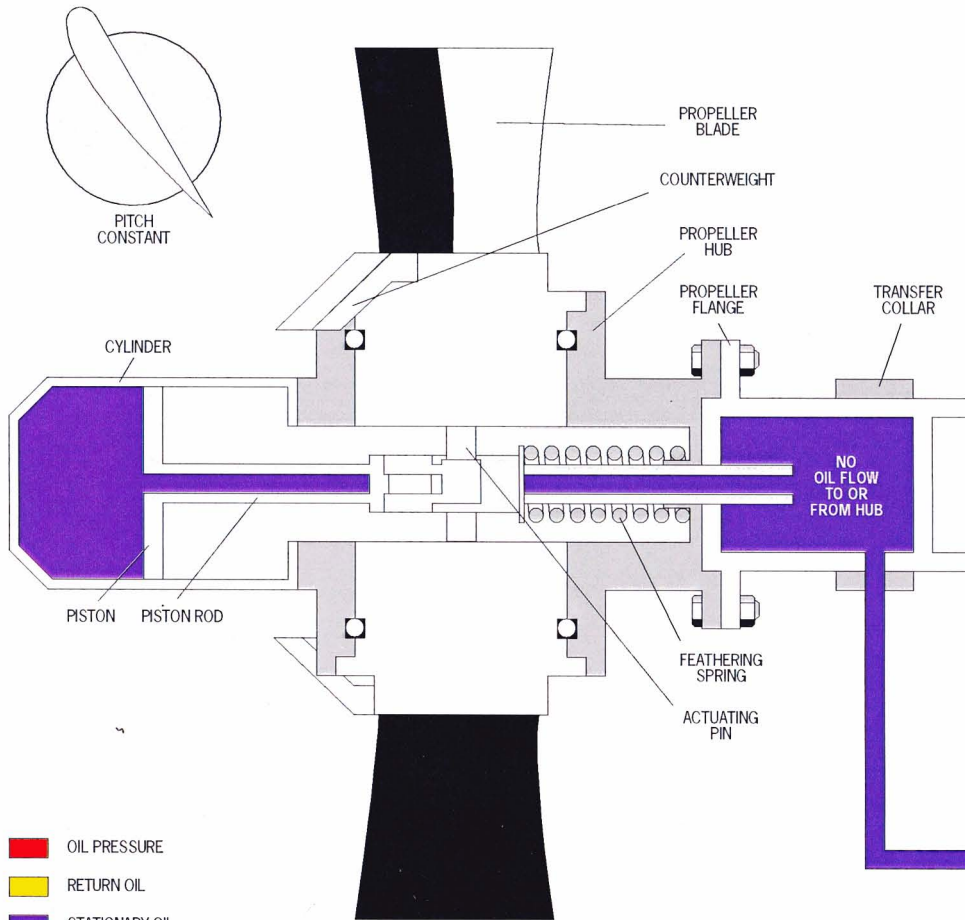
CYLINDER ASSEMBLY

ROCKER ARMS

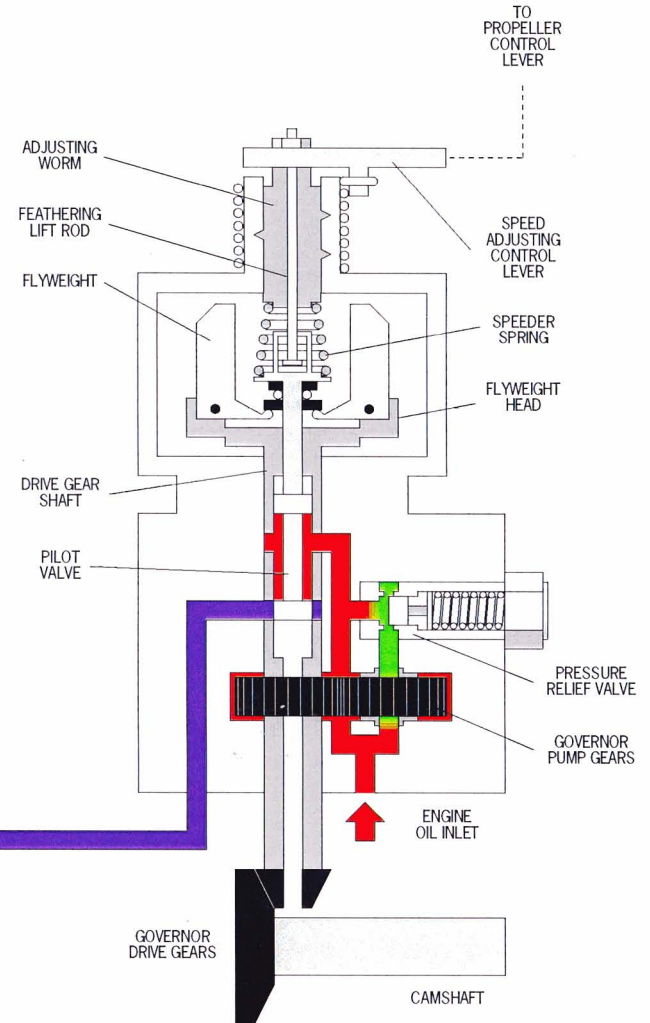
CAMSHAFT JOURNALS

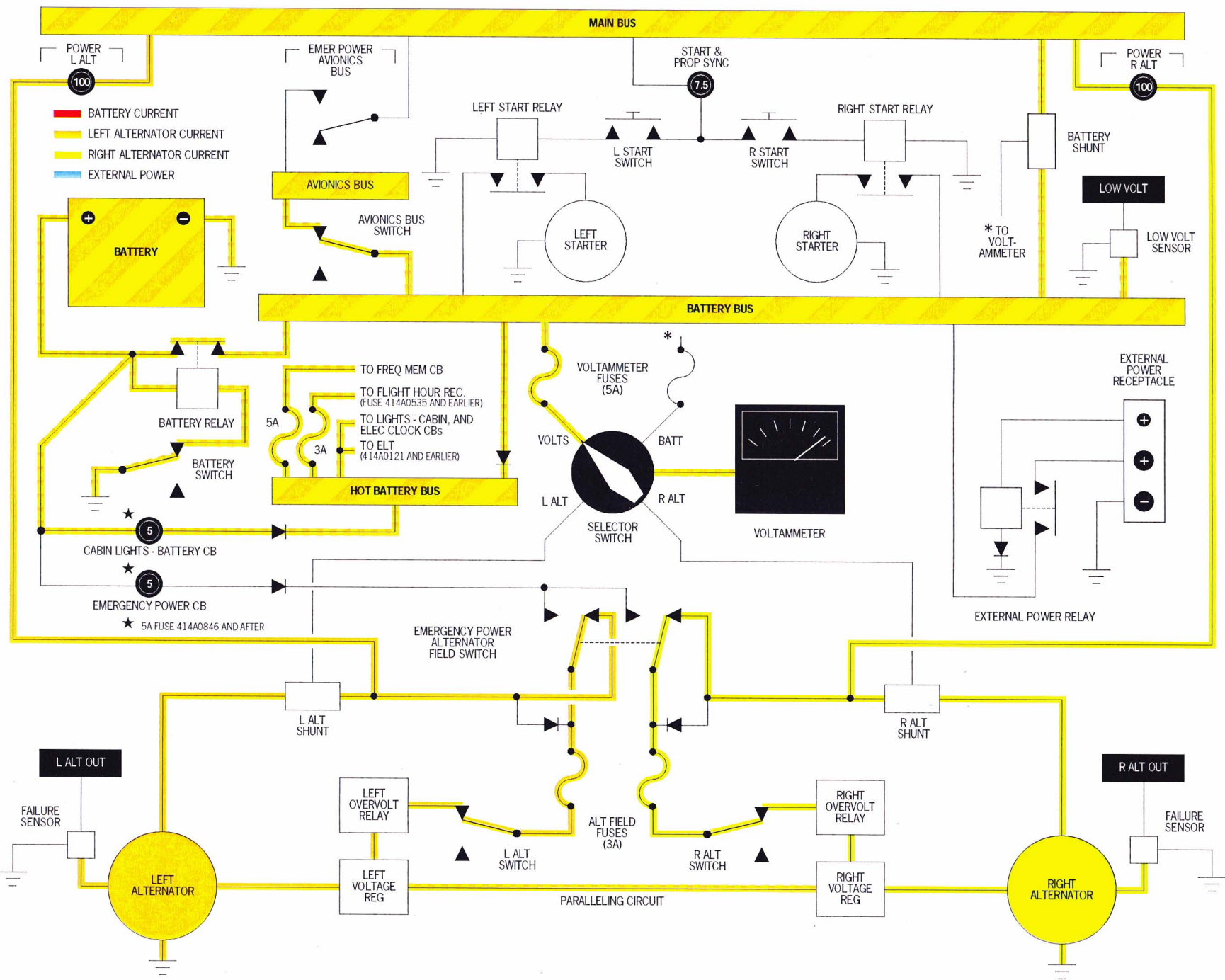
OIL PICKUP TUBE

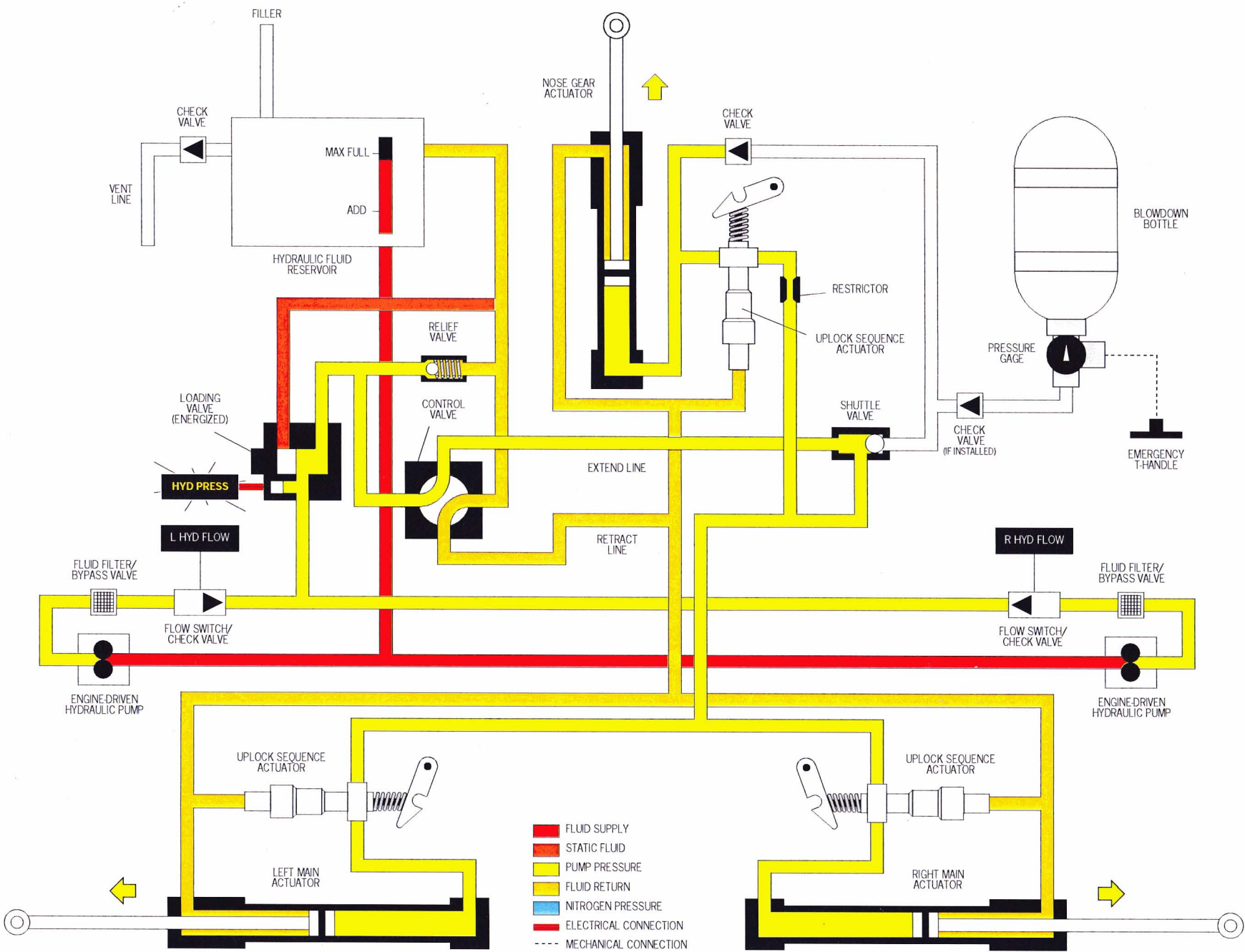
CAMSHAFT

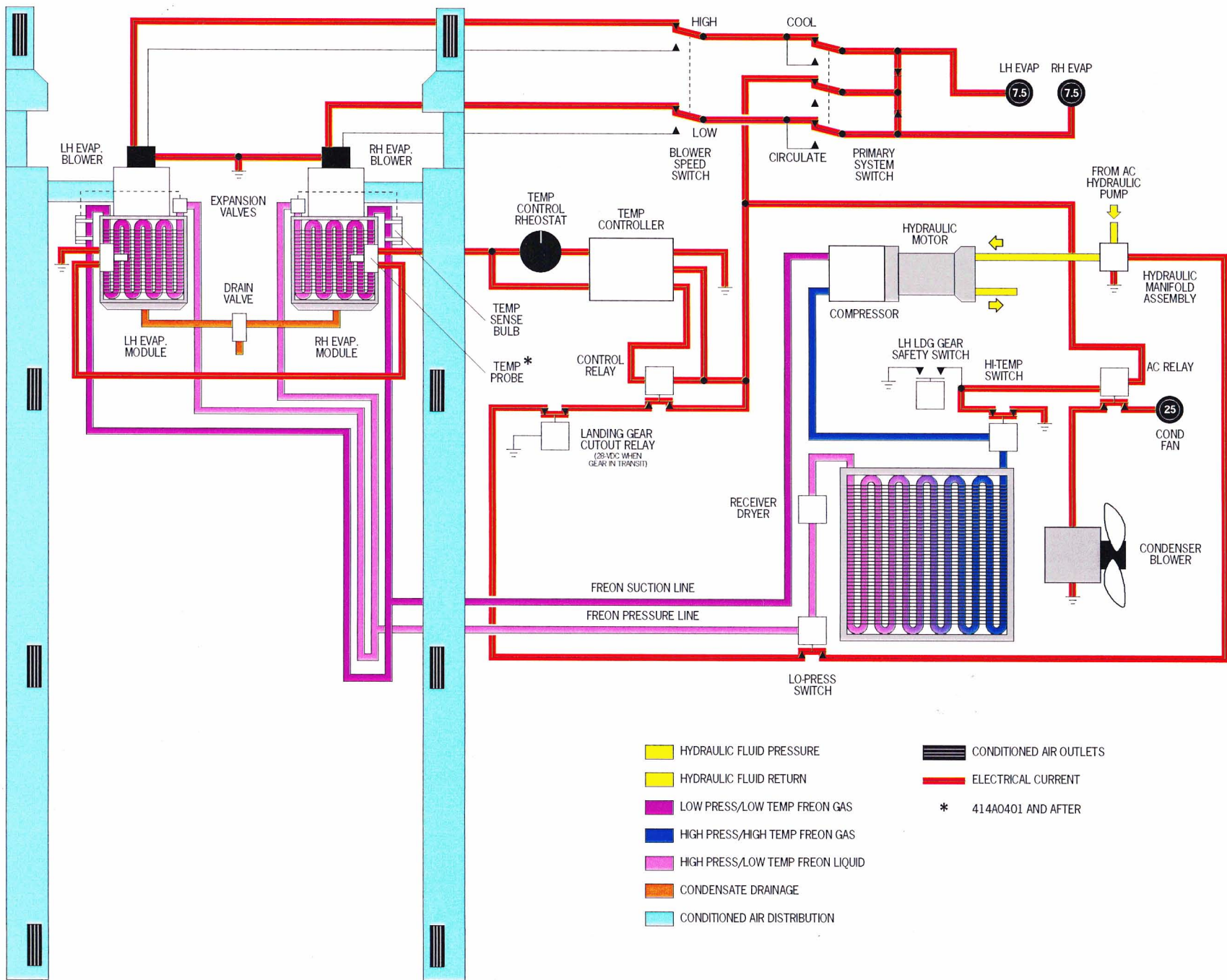


- OIL PRESSURE
- RETURN OIL
- STATIONARY OIL
- RELIEF VALVE RETURN
- MECHANICAL LINKAGE



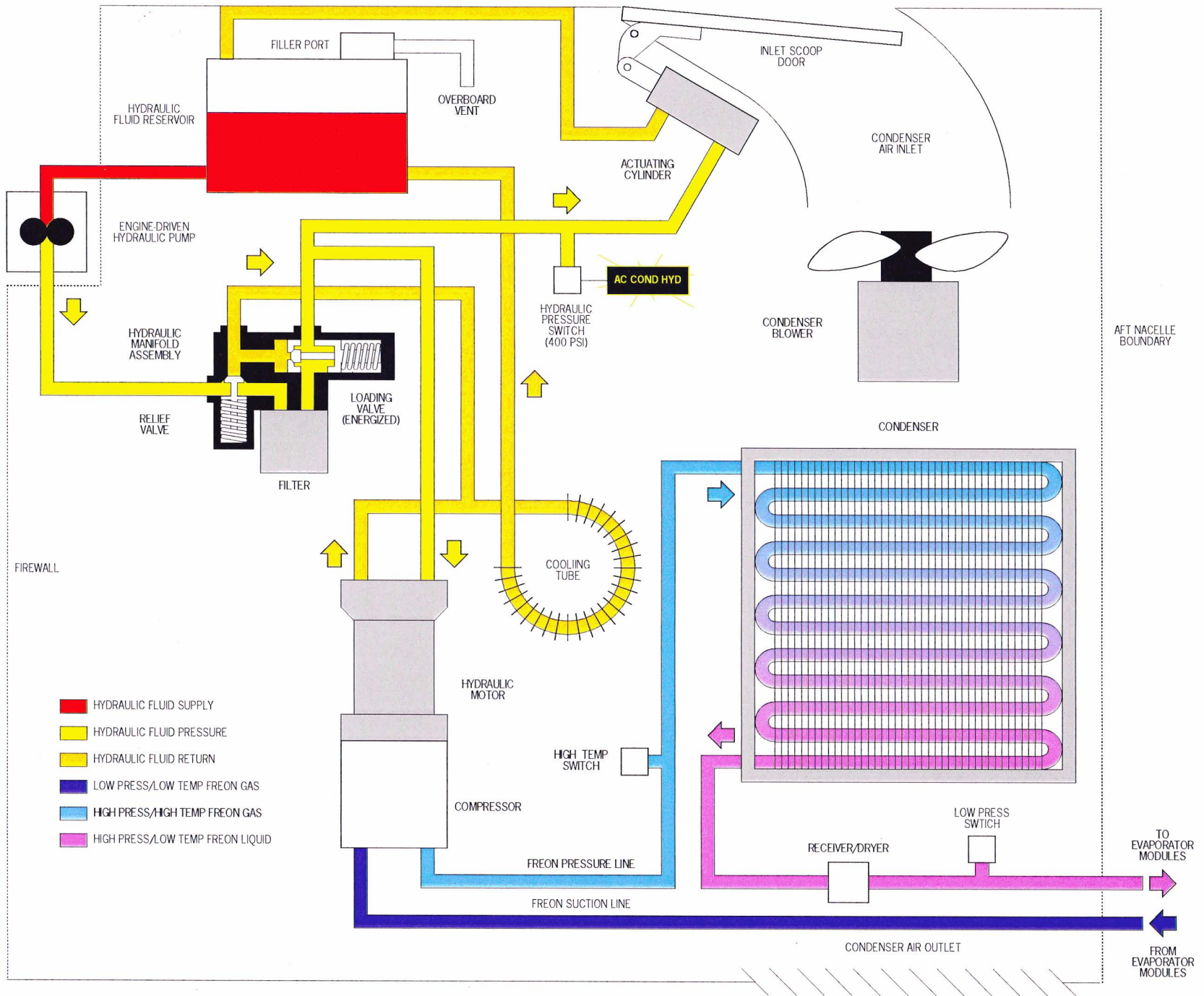




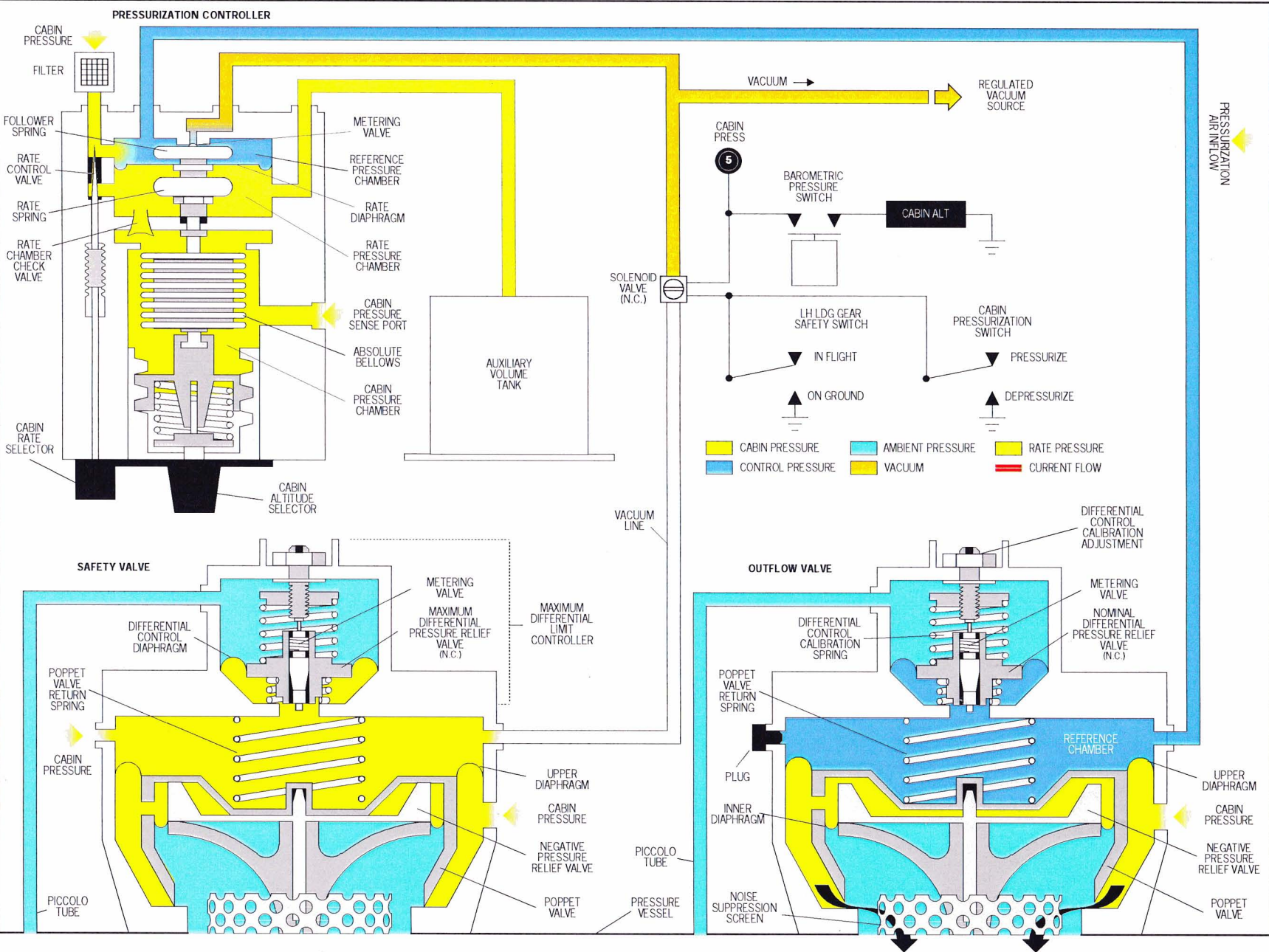


- HYDRAULIC FLUID PRESSURE
- HYDRAULIC FLUID RETURN
- LOW PRESS/LOW TEMP FREON GAS
- HIGH PRESS/HIGH TEMP FREON GAS
- HIGH PRESS/LOW TEMP FREON LIQUID
- CONDENSATE DRAINAGE
- CONDITIONED AIR DISTRIBUTION

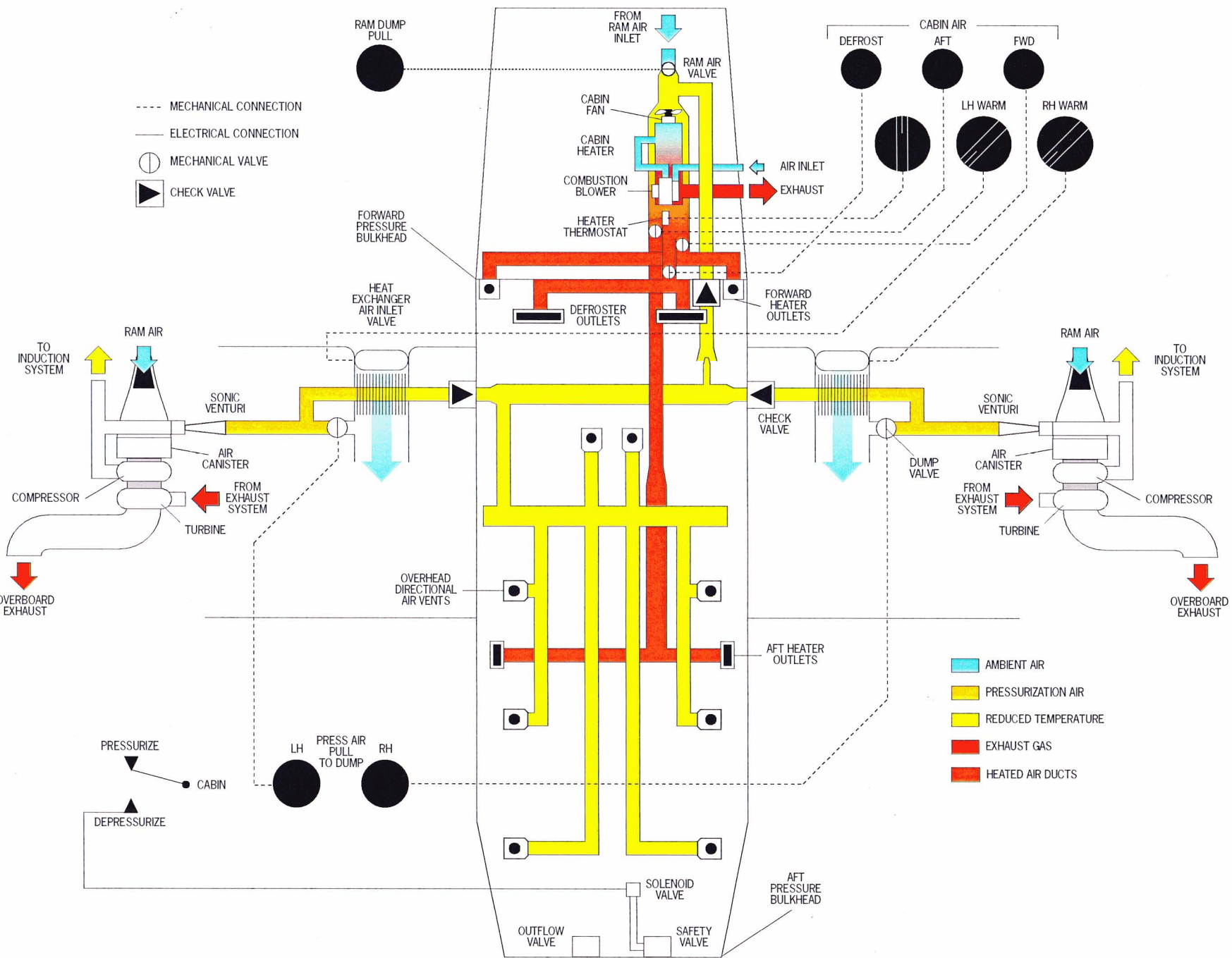
- CONDITIONED AIR OUTLETS
- ELECTRICAL CURRENT
- \* 414A0401 AND AFTER



PRESSURIZATION AIR FLOW







## LANDING GEAR SYSTEM

The electrically operated landing gear is fully retractable and incorporates a steerable nosewheel. To help prevent accidental retraction, an automatic safety switch on the LEFT shock strut prevents retraction as long as the weight of the aircraft is sufficient to compress the strut. The landing gear is operated by a switch, which is identified by a wheel-shaped knob. The switch positions are UP, OFF (center) and DOWN. To operate the gear, pull out the switch knob and move to the desired position.

## LANDING GEAR POSITION LIGHTS

There are four landing gear position indicator lights contained in two modules located beneath the radio control panel just left of the center of the instrument panel. One module contains three of these lights (one for each gear) which are green and will illuminate when each landing gear is fully extended and locked. The other light module is red and will illuminate when any or all the gears are unlocked (intermediate position). When the gear unlocked light and gear down lights are not illuminated, the landing gear is in the UP and locked position. The gear down (green) light module can be dimmed by turning on the MASTER PANEL switch and utilizing the compass rheostat.

## LANDING GEAR WARNING HORN

The landing gear warning horn is controlled by the throttles and the flap preselect handle. The warning horn will sound an intermittent note if either throttle is retarded below approximately 15 inches Hg. manifold pressure with the landing gear retracted or if the flap handle is lowered past the 15° position with the landing gear in any position except extended and locked. The warning horn can be activated by either the flap handle or by throttle position as each functions independently of the other. The warning horn is also connected to the UP position of the landing gear switch and will sound if the switch is placed in the UP position while the aircraft is on the ground.

### NOTE

Do not pull landing gear warning circuit breaker to silence horn as this also turns off the landing gear indicator lights and landing gear control relay, thus the landing gear cannot be raised.

## LANDING GEAR HANDCRANK

A landing gear handcrank, Figure 2-8, for manually lowering the landing gear, is located just below the right front edge of the pilot's seat. Normally, the crank is folded and stowed in a clip beside the seat. To use the crank, tilt pilot's seat aft (standard), or raise pilot's seat (optional), pull crank out from its storage clip and unfold it until it locks in operating position. The procedure for manually lowering the landing gear is given in Section III. To stow the crank, push the lock release button on the crank handle, fold the handle and insert it in the storage clip.

### NOTE

The handcrank handle must be stowed in its clip before the gear will operate electrically. When the handle is placed in the operating position, it disengages the landing gear motor from the actuator gear.



Figure 2-8