

RESTRICTOR VALVES

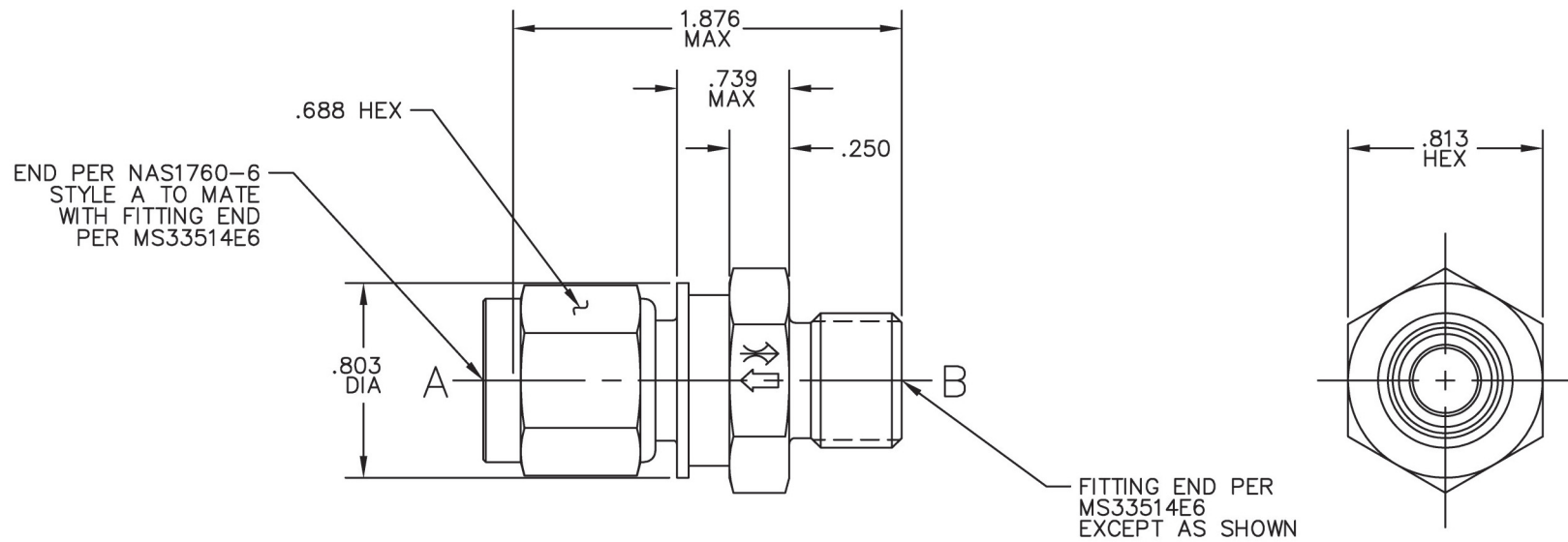
Crissair Inc. designs and manufactures a variety of One-Way and 2-Way Restrictor Valves and configurations which enable system designers to control/reduce the flow through certain circuits. Both groups may be packaged as inline configurations to connect directly to tubing or cartridge configurations that can go into manifolds.

- One-Way Restrictor Valves offer restricted flow in one direction and relatively unrestricted flow in the other direction. Higher restriction restrictors may utilize filters or screens to protect sensitive orifices from damage and contamination.
- 2-Way Restrictor Valves offer restricted flow in both directions, although not always of the same restriction value. High/Low 2-Way Restrictor Valves offer unique restriction values for each direction. Higher restriction restrictors may utilize filters or screens to protect sensitive orifices from damage and contamination.





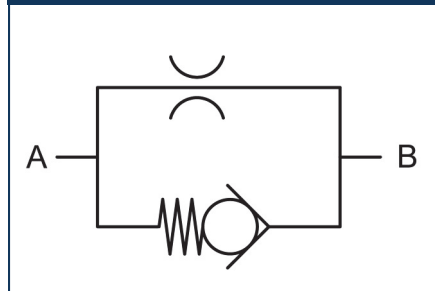
PART NUMBER: 9R3512 RESTRICTOR VALVE, ONE-WAY, UNFILTERED



PERFORMANCE SPECIFICATIONS:

FLUIDS: ANY AIRCRAFT HYDRAULIC FLUID
 MATERIAL: BODY 17-4PH CRES
 POPPET 440C CRES
 SWIVEL NUT 6AL-4V TI
 TEMPERATURE RANGE: -65°F TO 275°F
 OPERATING PRESSURE: 4000 PSIG
 PROOF PRESSURE: 8000 PSIG
 RESTRICTED FLOW: SEE TAB BLOCK
 FREE FLOW: 1.2 GPM AT 15 PSID MAX
 WEIGHT: 0.143 LBS MAX

HYDRAULIC SCHEMATIC

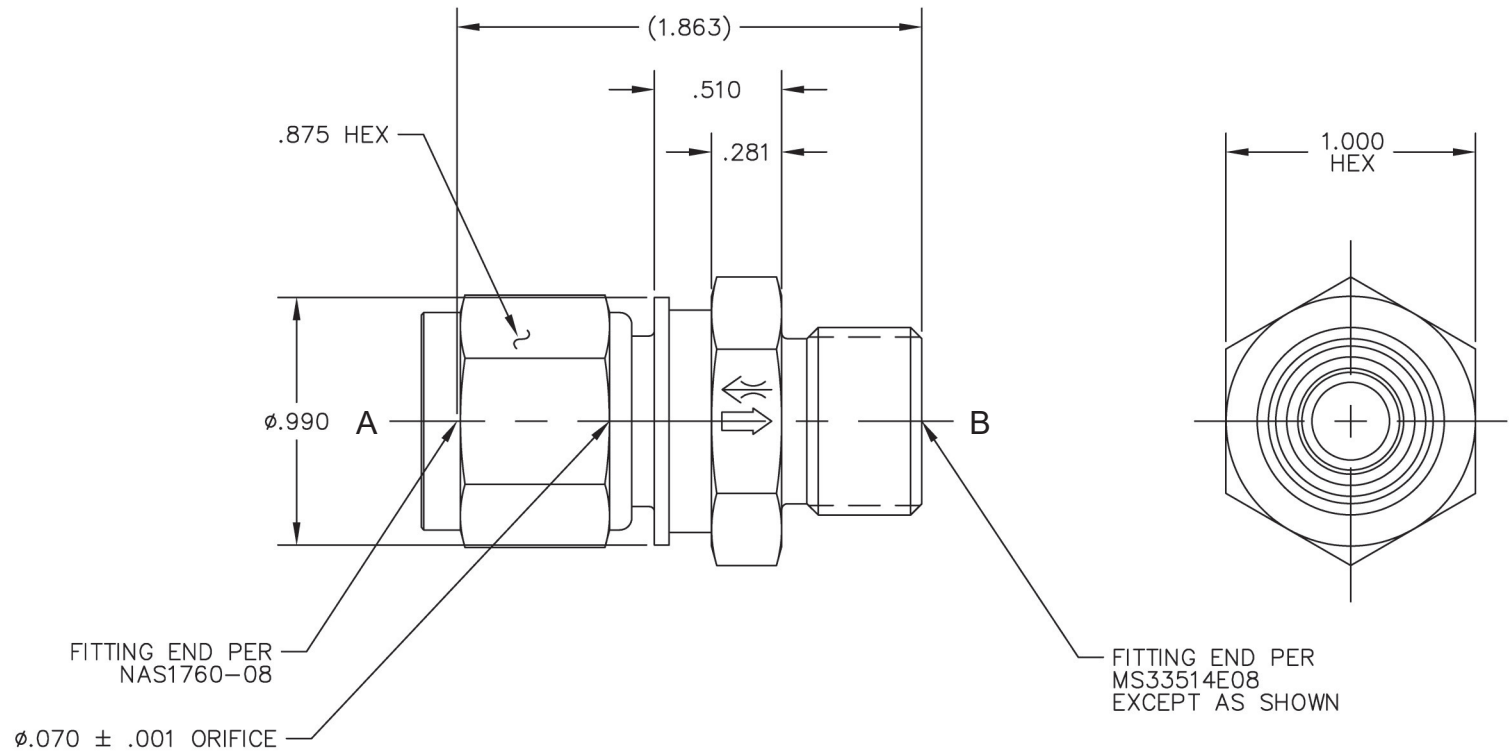


CRISSAIR PART NO.	FLOW RATE (GPM)	ORIFICE SIZE (REF)
9R3512-040	2.2	.040
9R3512-045	2.8	.045
9R3512-050	3.4	.050
9R3512-055	4.2	.055
9R3512-060	5.0	.060

CATEGORY 3: ONE-WAY RESTRICTOR VALVES UNFILTERED



PART NUMBER: 9R3690 RESTRICTOR VALVE, ONE-WAY, UNFILTERED



PERFORMANCE SPECIFICATIONS:

FLUIDS: ANY AIRCRAFT HYDRAULIC FLUID

MATERIAL: BODY 15-5PH CRES

POPPET 440C CRES

SWIVEL NUT 304 CRES

TEMPERATURE RANGE: -65°F TO 275°F

OPERATING PRESSURE: 4000 PSIG

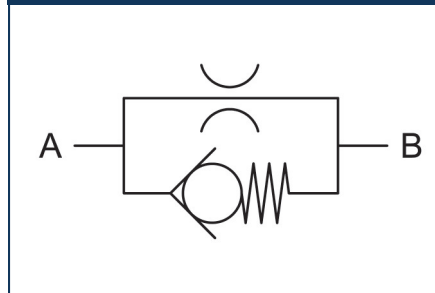
PROOF PRESSURE: 6000 PSIG

RESTRICTED FLOW: 0.070 ± 0.001 ORIFICE

FREE FLOW: 6 GPM AT 15 PSID MAX

WEIGHT: 0.256 LBS MAX

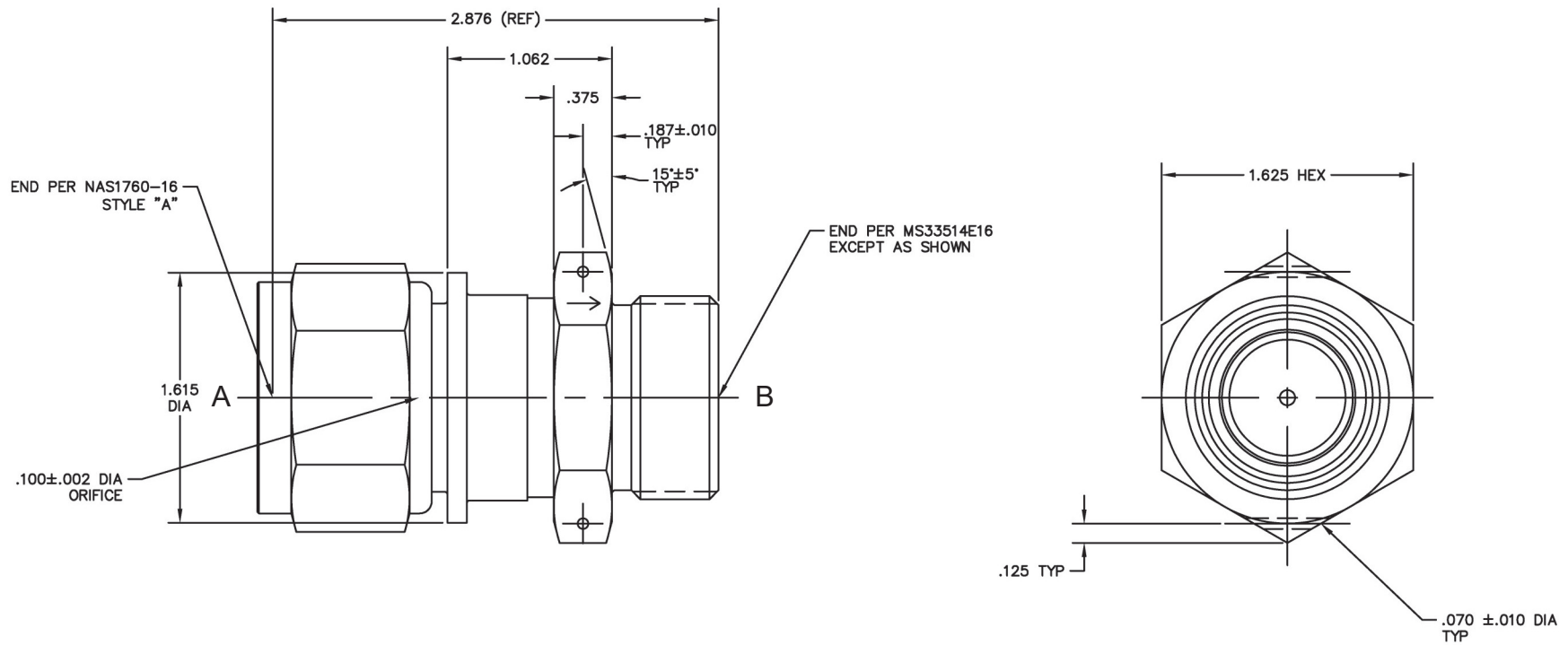
HYDRAULIC SCHEMATIC



CATEGORY 3: ONE-WAY RESTRICTOR VALVES UNFILTERED



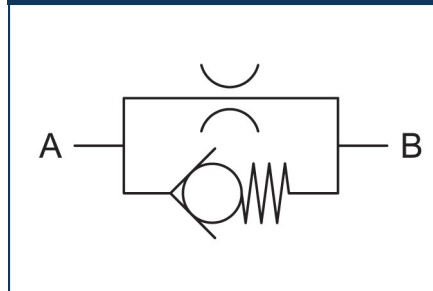
PART NUMBER: 9R3396 RESTRICTOR VALVE, ONE-WAY, UNFILTERED



PERFORMANCE SPECIFICATIONS:

FLUIDS: ANY AIRCRAFT HYDRAULIC FLUID
MATERIAL: BODY 304 CRES
POPPET 440C CRES
SWIVEL NUT 304 CRES
TEMPERATURE RANGE: -65°F TO 275°F
OPERATING PRESSURE: 3000 PSIG
PROOF PRESSURE: 4500 PSIG
RESTRICTED FLOW: 0.100 ± 0.002 DIA ORIFICE
FREE FLOW: 29 GPM AT 40 PSID MAX

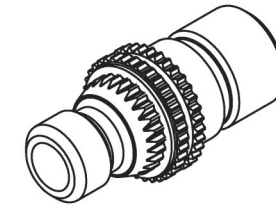
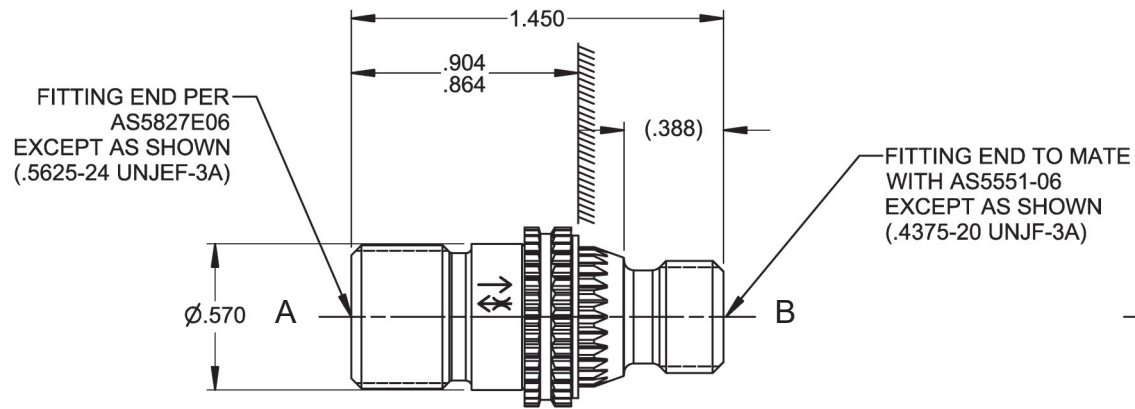
HYDRAULIC SCHEMATIC



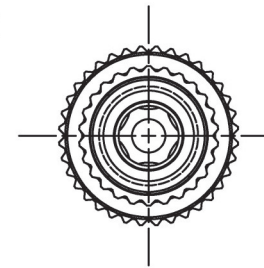
CATEGORY 3: ONE-WAY RESTRICTOR VALVES UNFILTERED



PART NUMBER: 9R4186-X RESTRICTOR VALVE, ONE-WAY, UNFILTERED



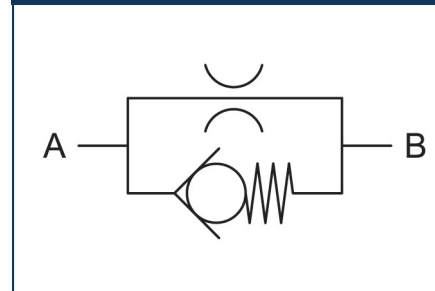
ISOMETRIC VIEW FOR REFERENCE ONLY



PERFORMANCE SPECIFICATIONS:

FLUIDS: ANY AIRCRAFT HYDRAULIC FLUID
 MATERIAL: BODY 6AL-4V TI
 POPPET 440C CRES
 LOCKRING A-286 CRES
 TEMPERATURE RANGE: -40°F TO 201°F
 OPERATING PRESSURE: 5075 PSIG
 PROOF PRESSURE: 9990.5 PSIG
 RESTRICTED FLOW: SEE TAB BLOCK AT 5000 PSID
 FREE FLOW: 3.1 GPM AT 25 PSID MAX
 WEIGHT: 0.045 LBS MAX

HYDRAULIC SCHEMATIC

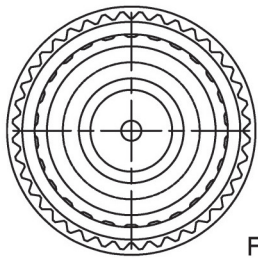


DASH NO.	LOHM (REF)	FLOW (GPM)	ORIFICE (REF)
-1	60	23.9	$\phi .131$
-2	70	20.5	$\phi .121$
-3	80	17.7	$\phi .113$
-4	95	14.9	$\phi .104$
-5	110	12.85	$\phi .096$
-6	130	11.00	$\phi .089$
-7	150	9.43	$\phi .082$

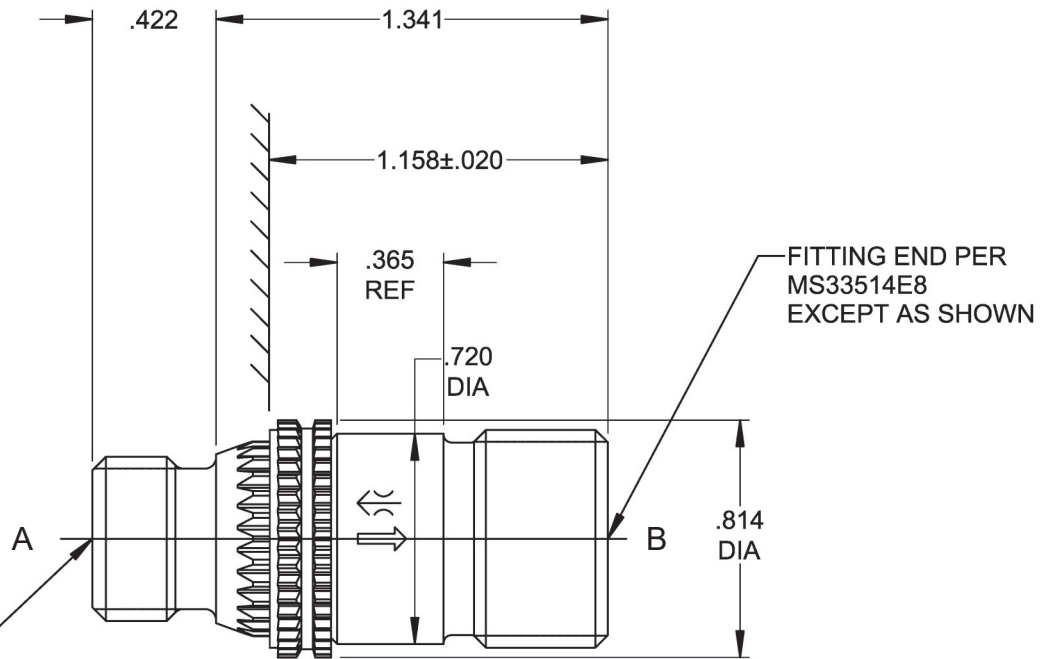
CATEGORY 3: ONE-WAY RESTRICTOR VALVES UNFILTERED



PART NUMBER: 9R3454 RESTRICTOR VALVE, ONE-WAY, UNFILTERED



FITTING END TO MATE WITH BOSS PER AS1300-08



PERFORMANCE SPECIFICATIONS:

FLUIDS: ANY AIRCRAFT HYDRAULIC FLUID

MATERIAL: BODY 6AL-4V TI

POPPET 440C CRES

LOCKRING A-286 CRES

TEMPERATURE RANGE: -65°F TO 275°F

OPERATING PRESSURE: 4000 PSIG

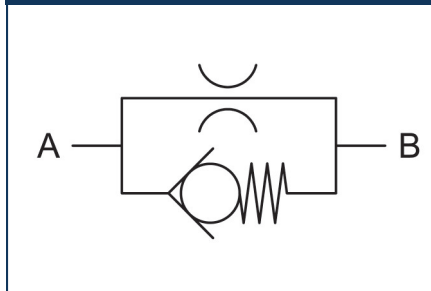
PROOF PRESSURE: 5000 PSIG

RESTRICTED FLOW: 5.6 ± 10% GPM AT 3000 PSID MAX (0.070 DIA ORIFICE REF)

FREE FLOW: 6.0 ± 10% GPM AT 15 PSID MAX

WEIGHT: 0.126 LBS MAX

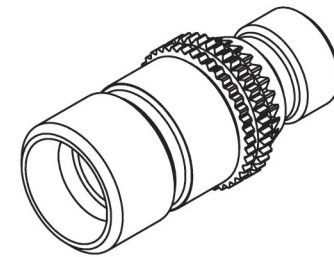
HYDRAULIC SCHEMATIC



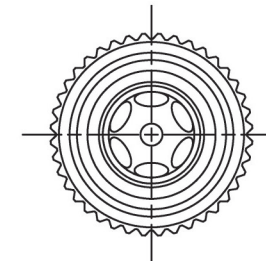
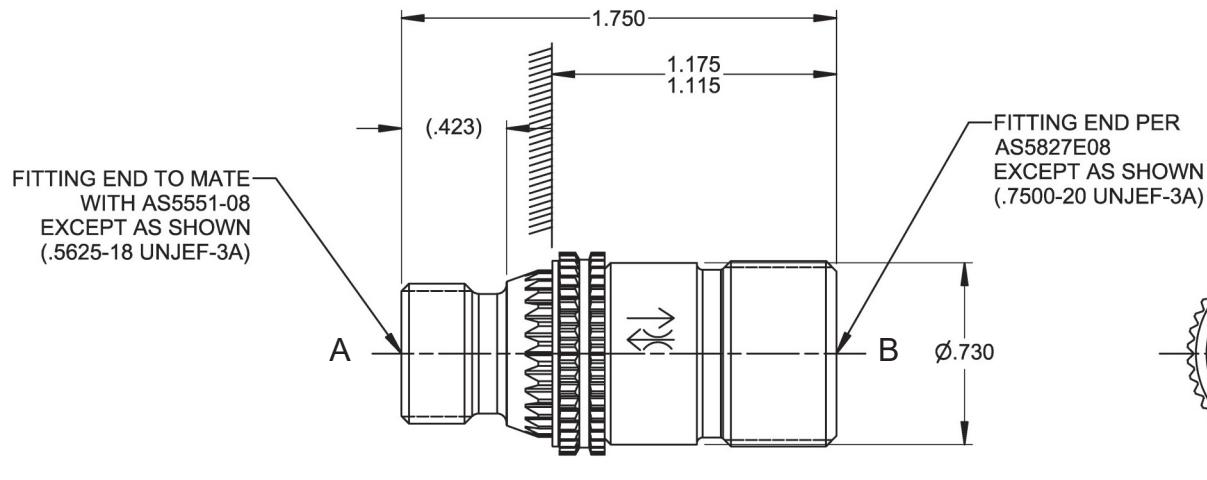
CATEGORY 3: ONE-WAY RESTRICTOR VALVES UNFILTERED



PART NUMBER: 9R4152-X RESTRICTOR VALVE, ONE-WAY, UNFILTERED



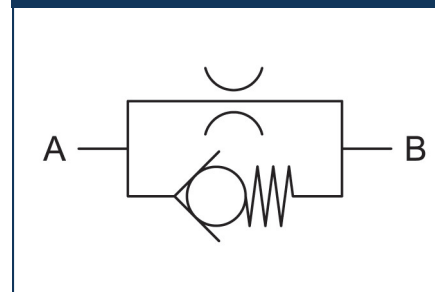
ISOMETRIC VIEW
FOR REFERENCE ONLY



PERFORMANCE SPECIFICATIONS:

FLUIDS: ANY AIRCRAFT HYDRAULIC FLUID
 MATERIAL: BODY 6AL-4V T1
 POPPET 440C CRES
 LOCKRING A-286 CRES
 TEMPERATURE RANGE: -40°F TO 201°F
 OPERATING PRESSURE: 5075 PSIG
 PROOF PRESSURE: 9990.5 PSIG
 RESTRICTED FLOW: SEE TAB BLOCK AT 5000 PSID
 FREE FLOW: 6 GPM AT 20 PSID MAX
 WEIGHT: 0.082 LBS MAX

HYDRAULIC SCHEMATIC

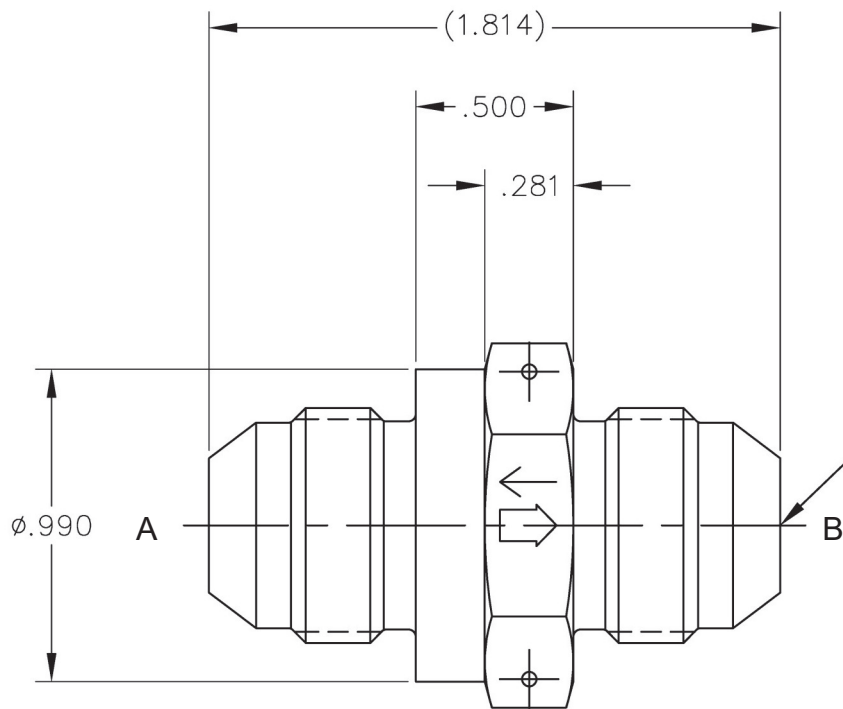


DASH NO.	LOHM (REF)	FLOW (GPM)	ORIFICE (REF)
-1	150	9.43	$\phi .082$
-2	110	12.85	$\phi .096$
-3	95	14.90	$\phi .104$
-4	130	11.00	$\phi .089$

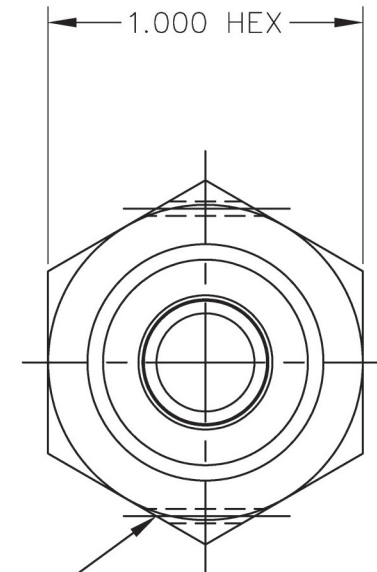
CATEGORY 3: ONE-WAY RESTRICTOR VALVES UNFILTERED



PART NUMBER: 9R3928 RESTRICTOR VALVE, ONE-WAY, UNFILTERED



BOTH FITTING ENDS
PER MS33656E8
EXCEPT AS SHOWN

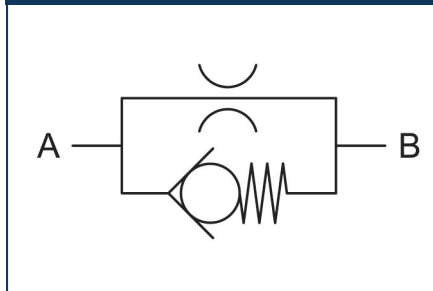


$\phi.046$ THRU
2 PLCS

PERFORMANCE SPECIFICATIONS:

FLUIDS: ANY AIRCRAFT HYDRAULIC FLUID
MATERIAL: BODY 2024-T351 AL
POPPET 440C CRES
TEMPERATURE RANGE: -65°F TO 275°F
OPERATING PRESSURE: 1500 PSIG
PROOF PRESSURE: 3750 PSIG
RESTRICTED FLOW: 1.6 ± 10% GPM AT 350 PSID MAX (0.066 DIA ORIFICE REF)
FREE FLOW: 2 GPM AT 15 PSID MAX
WEIGHT: 0.077 LBS MAX

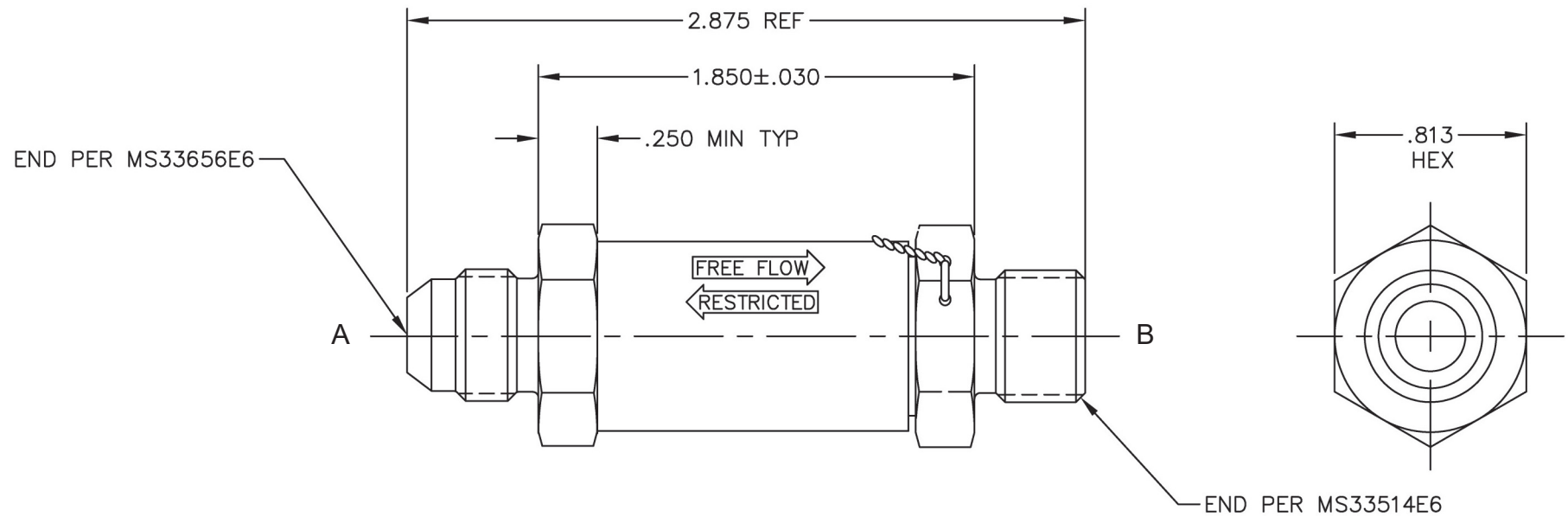
HYDRAULIC SCHEMATIC



CATEGORY 3: ONE-WAY RESTRICTOR VALVES UNFILTERED



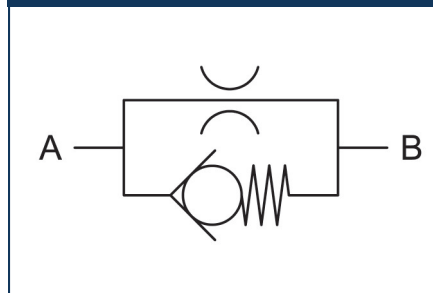
PART NUMBER: 6F3068 RESTRICTOR VALVE, ONE-WAY, UNFILTERED



PERFORMANCE SPECIFICATIONS:

FLUIDS: ANY AIRCRAFT HYDRAULIC FLUID
MATERIAL: BODY 17-4PH CRES
 POPPET 440C CRES
TEMPERATURE RANGE: -40°F TO 275°F
OPERATING PRESSURE: 3000 PSIG
PROOF PRESSURE: 4500 PSIG
RESTRICTED FLOW: 6.5 ± .5% GPM AT 1050 PSID MAX (0.098 DIA ORIFICE REF)
FREE FLOW: 1.2 GPM AT 10 PSID MAX
WEIGHT: 0.30 LBS MAX

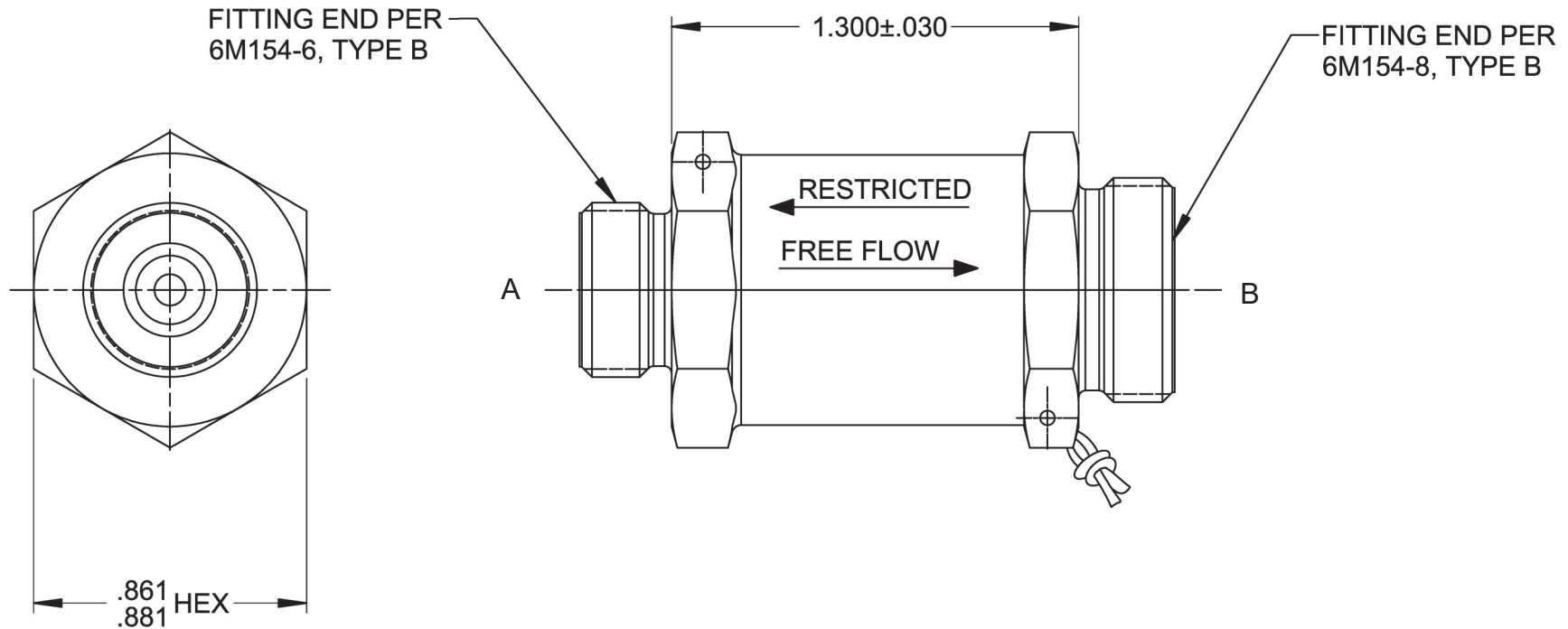
HYDRAULIC SCHEMATIC



CATEGORY 3: ONE-WAY RESTRICTOR VALVES UNFILTERED



PART NUMBER: 9R3300 RESTRICTOR VALVE, ONE-WAY, UNFILTERED



PERFORMANCE SPECIFICATIONS:

FLUIDS: ANY AIRCRAFT HYDRAULIC FLUID

MATERIAL: BODY 17-4PH CRES

POPPET 440C CRES

TEMPERATURE RANGE: -65°F TO 275°F

OPERATING PRESSURE: 3000 PSIG

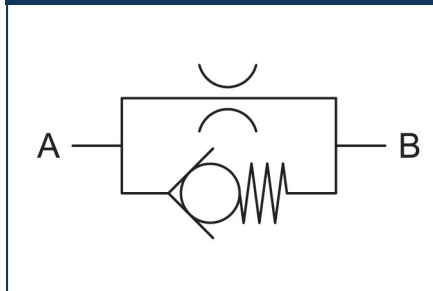
PROOF PRESSURE: 4500 PSIG

RESTRICTED FLOW: 12 ± 10% GPM AT 3000 PSID MAX

FREE FLOW: 10 GPM AT 20 PSID MAX

WEIGHT: 0.21 LBS MAX

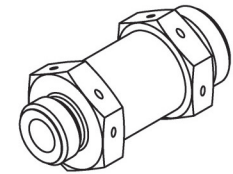
HYDRAULIC SCHEMATIC



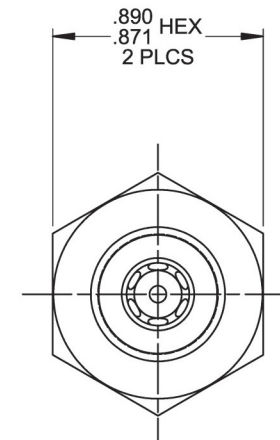
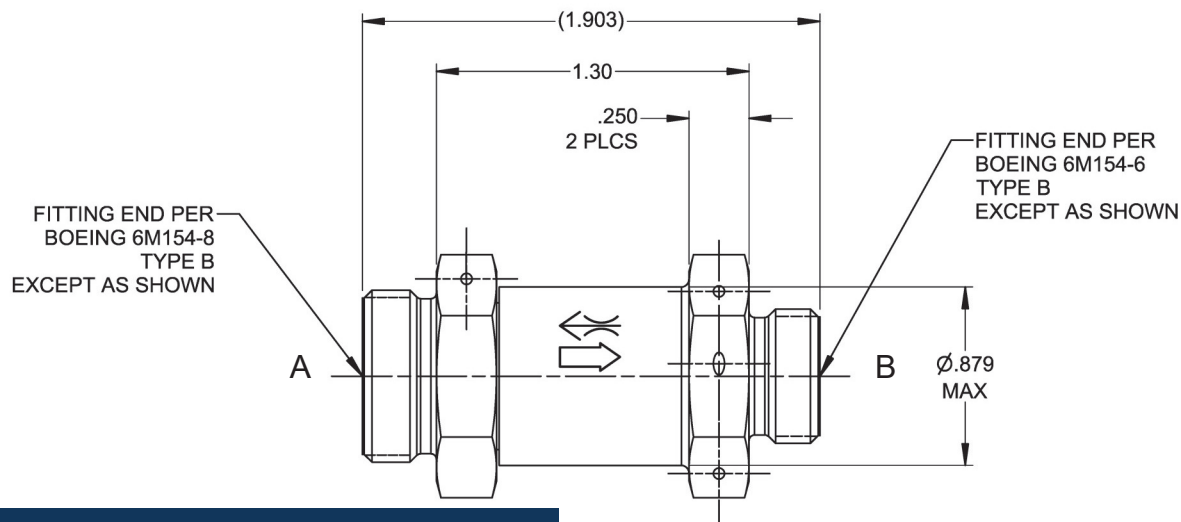
CATEGORY 3: ONE-WAY RESTRICTOR VALVES UNFILTERED



PART NUMBER: 9R4260 RESTRICTOR VALVE, ONE-WAY, UNFILTERED



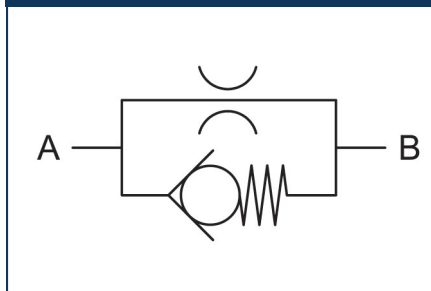
ISOMETRIC VIEW
FOR REFERENCE ONLY



PERFORMANCE SPECIFICATIONS:

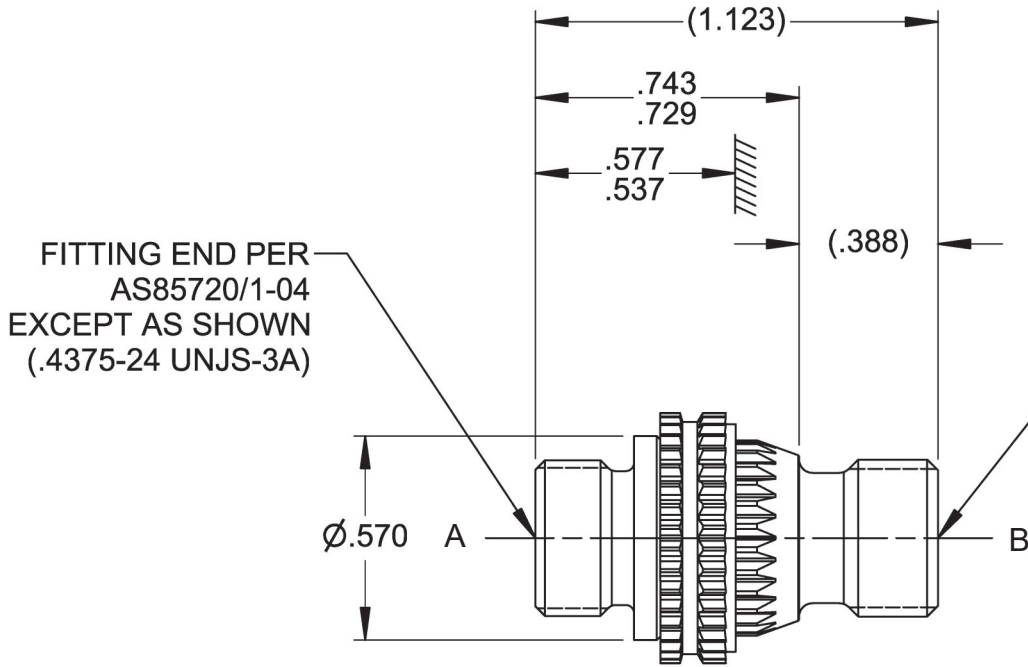
FLUIDS: ANY AIRCRAFT HYDRAULIC FLUID
MATERIAL: BODY 17-4PH CRES
POPPET 440C CRES
TEMPERATURE RANGE: -40°F TO 275°F
OPERATING PRESSURE: 3000 PSIG
PROOF PRESSURE: 4500 PSIG
RESTRICTED FLOW: 6.25 ± 0.25% GPM AT 3000 PSID MAX ($\phi .071$ ORIFICE)
FREE FLOW: 3.5 GPM AT 15 PSID MAX
WEIGHT: 0.21 LBS MAX

HYDRAULIC SCHEMATIC



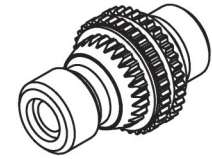
CATEGORY 3: ONE-WAY RESTRICTOR VALVES UNFILTERED

PART NUMBER: 9R4052 RESTRICTOR VALVE, ONE-WAY, UNFILTERED

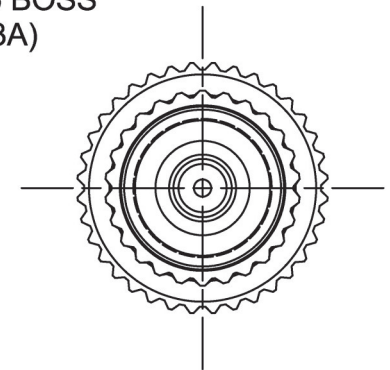


FITTING END PER
AS85720/1-04
EXCEPT AS SHOWN
(.4375-24 UNJS-3A)

FITTING END TO MATE
WITH AS1300-06 BOSS
(.4375-20 UNJF-3A)



ISOMETRIC VIEW
FOR REFERENCE ONLY



PERFORMANCE SPECIFICATIONS:

FLUIDS: ANY AIRCRAFT HYDRAULIC FLUID

MATERIAL: BODY 15-5PH CRES

POPPET 440C CRES

LOCKRING A-286 CRES

TEMPERATURE RANGE: -65°F TO 275°F

OPERATING PRESSURE: 4000 PSIG

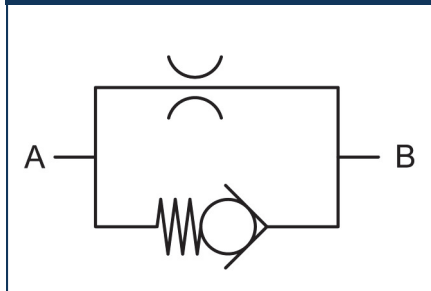
PROOF PRESSURE: 8000 PSIG

FLOW: A TO B 1.6 ± 0.1 GPM AT 1000 PSID MAX (Ø.049 ORIFICE)

B TO A 11.9 TO 15.9 GPM AT 1000 PSID MAX (Ø.134 ORIFICE)

WEIGHT: 0.056 LBS MAX

HYDRAULIC SCHEMATIC



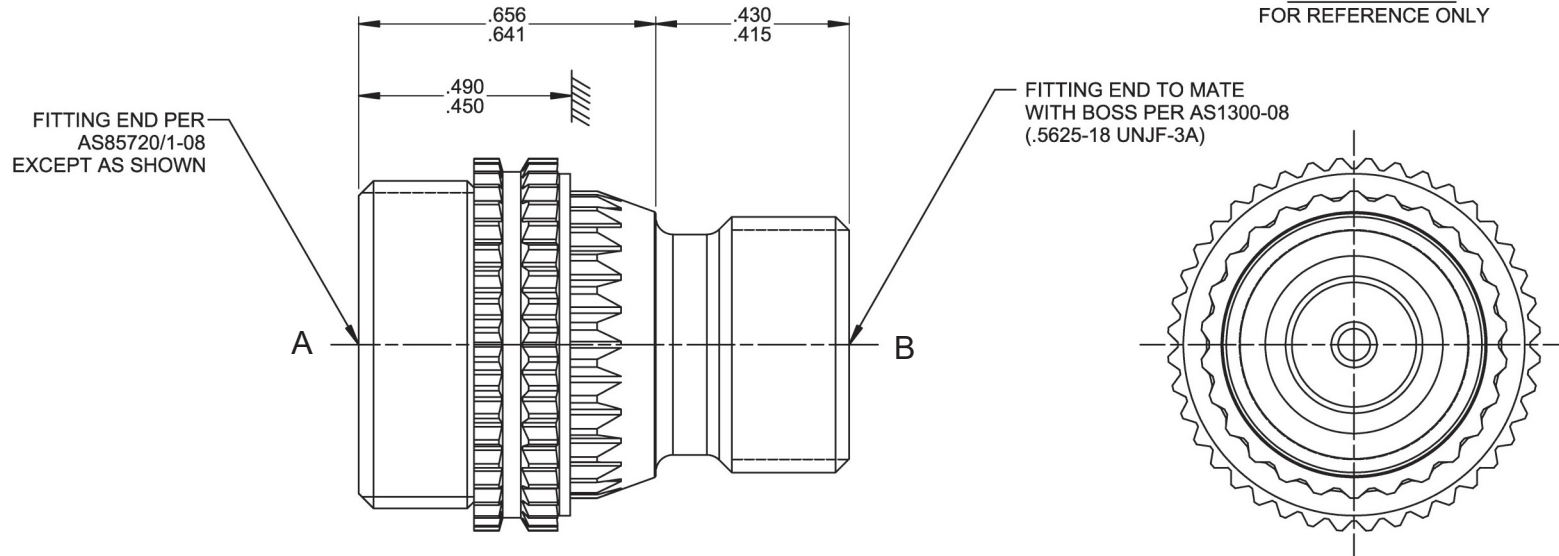
CATEGORY 3: ONE-WAY RESTRICTOR VALVES UNFILTERED



PART NUMBER: 9R4170 RESTRICTOR VALVE, ONE-WAY, UNFILTERED



ISOMETRIC VIEW
FOR REFERENCE ONLY



PERFORMANCE SPECIFICATIONS:

FLUIDS: ANY AIRCRAFT HYDRAULIC FLUID

MATERIAL: BODY 6AL-4V TI

POPPET 440C CRES

LOCKRING A-286 CRES

TEMPERATURE RANGE: -40°F TO 275°F

OPERATING PRESSURE: 4000 PSIG

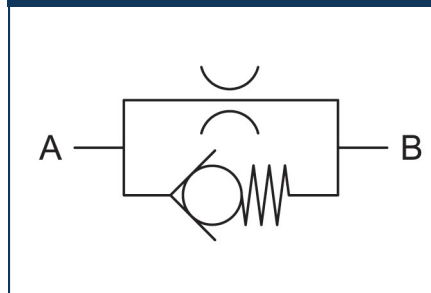
PROOF PRESSURE: 8600 PSIG

FLOW: A TO B 6.00 ± .12 GPM AT 1000 PSID MAX (Ø.100 ORIFICE)

B TO A 2.95 ± .06 GPM AT 1000 PSID MAX (Ø.070 ORIFICE)

WEIGHT: 0.056 LBS MAX

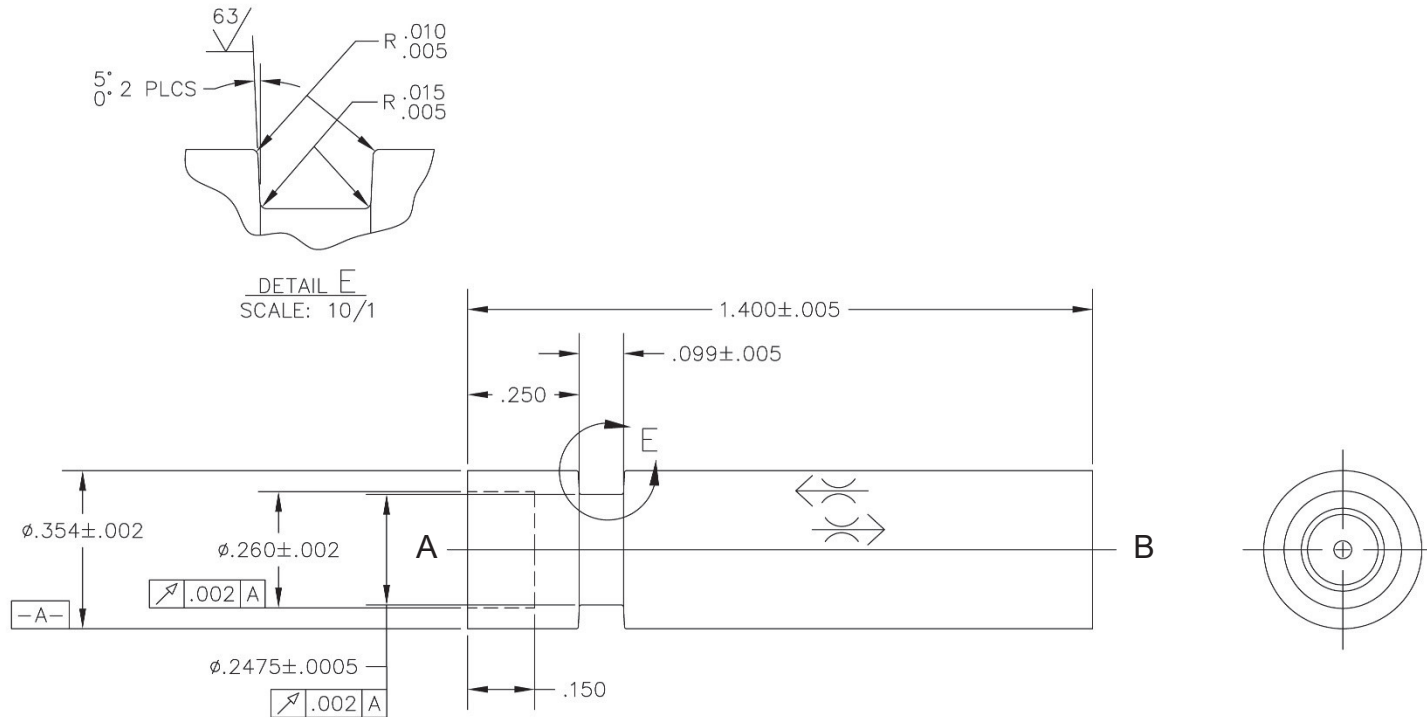
HYDRAULIC SCHEMATIC



CATEGORY 3: ONE-WAY RESTRICTOR VALVES UNFILTERED



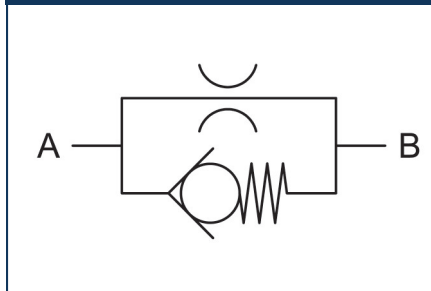
PART NUMBER: 9R3838 RESTRICTOR VALVE, ONE-WAY, UNFILTERED



PERFORMANCE SPECIFICATIONS:

FLUIDS: AIR
 MATERIAL: BODY 17-4PH CRES
 POPPET 440C CRES
 TEMPERATURE RANGE: -65°F TO 400°F
 OPERATING PRESSURE: 100 PSIG
 PROOF PRESSURE: 250 PSIG
 FLOW: SEE TAB BLOCK
 WEIGHT: 0.03 LBS MAX

HYDRAULIC SCHEMATIC



CRISSAIR PART NO.	REST. ORIFICE $\pm .0005$	FREE FLOW ORIFICE $\pm .0005$
9R3838-1	.0180	.040
9R3838-2	.0200	.040
9R3838-3	.0220	.040
9R3838-4	.0240	.040
9R3838-5	.0145	.040

CATEGORY 3: ONE-WAY RESTRICTOR VALVES UNFILTERED



CRISSAIR HAS VARIOUS OTHER RESTRICTOR VALVES NOT LISTED IN THE CATALOG WITH DIFFERENT MATERIALS, FITTINGS, AND SIZE CONFIGURATIONS.

CONTACT CRISSAIR FOR ADDITIONAL INFORMATION/DRAWINGS AT

(661) 367-3300 OR SALES@CRISSAIR.COM.

YOU CAN ALSO VISIT WWW.CRISSAIR.COM.