

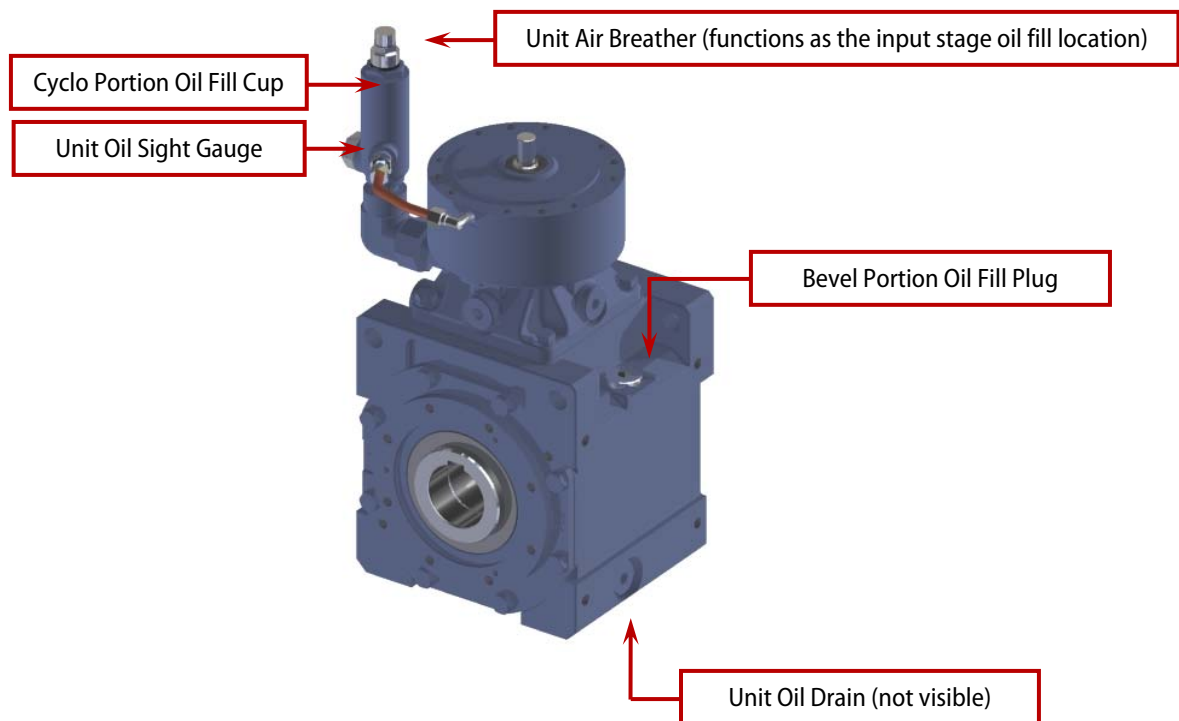
BBB4 & 5: Y2 Oil Fill & Drain Procedure

Affected Unit Sizes

This document is intended for all 4 and 5 Series Cyclo® BBB built for the Y2 mounting configuration. Images contained within the document show a single reduction input stage however the process remains the same for double and triple reduction product offerings.

General Unit Construction and Oil Volumes

The following picture provides details of the general construction of a Cyclo® Bevel Buddybox assembly for the Y2 mounting configuration:



BBB4 & 5: Y2 Oil Fill & Drain Procedure *(Continued)*

Required Oil Volumes for Cyclo BBB4 & 5 units built for Y2 Mounting Configuration

Table 1: 4-Series BBB Y2 Single Reduction Oil Quantity *

Bevel Gear Unit Size	Y2 Configuration Oil Quantity	
	gallon	liter
4A10	0.837	3.17
4A11	0.861	3.26
4A12	0.885	3.35
4A14	0.996	3.77
4B12	1.71	6.50
4B14	1.84	6.97
4B16	2.01	7.61
4C14	2.93	11.1
4C16	3.12	11.8

Bevel Gear Unit Size	Y2 Configuration Oil Quantity	
	gallon	liter
4C17	3.30	12.5
4D16	5.26	19.9
4D17	5.42	20.5
4D18	5.55	21.0
4E17	7.61	28.8
4E18	7.69	29.1
4E19	8.03	30.4
4F18	10.4	39.4
4F19	10.7	40.6

Table 2: 4-Series BBB Y2 Double Reduction Oil Quantity *

Bevel Gear Unit Size	Y2 Configuration Oil Quantity	
	gallon	liter
4A10DA	0.845	3.20
4A12DA	0.893	3.38
4A12DB	0.906	3.43
4B12DA	1.73	6.53
4B12DB	1.74	6.57
4B14DA	1.85	7.00
4B14DB	1.86	7.04
4C14DA	2.96	11.2
4C14DB	2.96	11.2
4C14DC	2.99	11.3

Bevel Gear Unit Size	Y2 Configuration Oil Quantity	
	gallon	liter
4C16DA	3.12	11.8
4C16DB	3.14	11.9
4C17DA	3.33	12.6
4D16DA	5.29	20.0
4D16DB	5.29	20.0
4D17DB	5.44	20.6
4D17DC	5.47	20.7
4E17DA	7.61	28.8
4E17DB	7.63	28.9
4E17DC	7.66	29.0

Table 3: 5-Series BBB Y2 Single Reduction Oil Quantity *

Bevel Gear Unit Size	Y2 Configuration Oil Quantity	
	gallon	liter
5Z10	0.417	1.58
5Z11	0.436	1.65
5Z12	0.473	1.79
5A11	0.806	3.05
5A12	0.853	3.23
5A14	0.946	3.58

Bevel Gear Unit Size	Y2 Configuration Oil Quantity	
	gallon	liter
5B12	1.37	5.17
5B14	1.46	5.52
5B16	1.63	6.17
5C14	2.84	10.7
5C16	3.07	11.6
5C17	3.20	12.1

Table 4: 5-Series BBB Y2 Double Reduction Oil Quantity *

Bevel Gear Unit Size	Y2 Configuration Oil Quantity	
	gallon	liter
5Z10DA	0.18	0.68
5Z12DA	0.18	0.70
5Z12DB	0.18	0.70
5A12DA	0.22	0.83
5A12DB	0.22	0.83
5B12DA	0.423	1.60
5B12DB	0.423	1.60

Bevel Gear Unit Size	Y2 Configuration Oil Quantity	
	gallon	liter
5B14DA	0.423	1.60
5B14DB	0.423	1.60
5C14DA	0.933	3.53
5C14DB	0.933	3.53
5C14DC	0.933	3.53
5C16DA	0.933	3.53
5C16DB	0.933	3.53

* - All Oil Quantities are estimates.

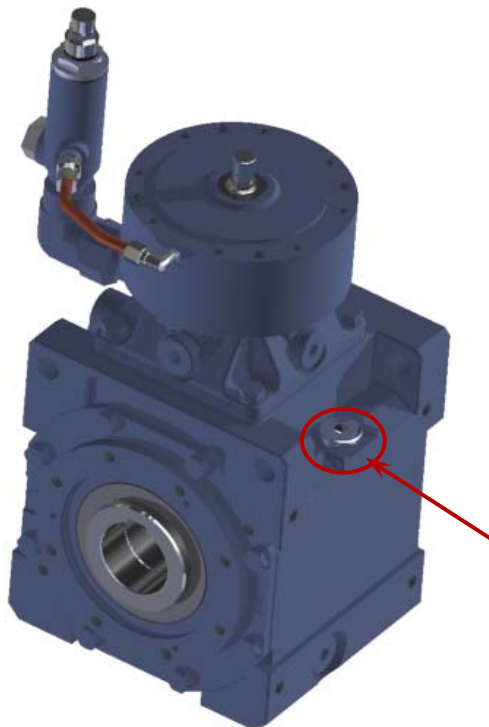
BBB4 & 5: Y2 Oil Fill & Drain Procedure *(Continued)*

Oil Fill Process

CAUTIONARY NOTES:

- Use only those lubricating oils approved by Sumitomo Drive Technologies for use in the Cyclo® Bevel Buddybox.
- Use the appropriate grade of lubricating oil based on ambient operating conditions of the application.
- Refer to the Sumitomo product catalog and/or Operating & Maintenance manual for a list of Sumitomo approved lubricating oils.
- Prior to beginning the fill process, ensure the Unit Drain Plug is in place and adequately tightened.

STEP 1



Identify the Bevel portion oil fill plug on the bevel gear housing.

Carefully remove the plug and put aside for reinsertion after oil fill is complete.

BBB4 & 5: Y2 Oil Fill & Drain Procedure *(Continued)*

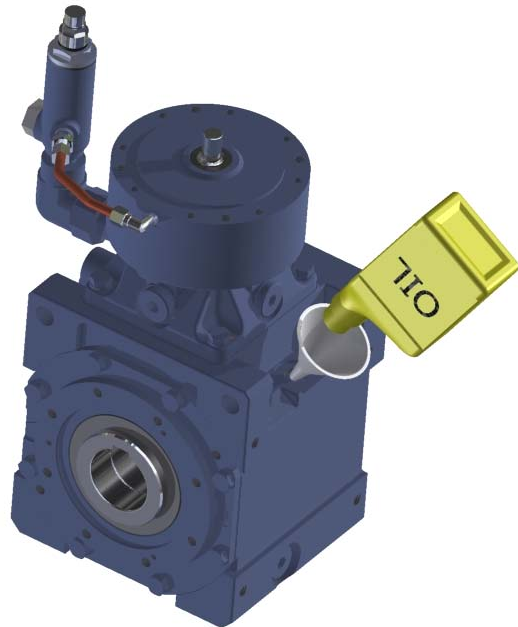
Oil Fill Process *(Continued)*

STEP 2

Fill the bevel portion with the appropriate type and grade of oil.

The bevel portion is considered full when the oil level reaches the oil fill port.

Once fill is complete, re-install and tighten the oil plug into the fill port location.



STEP 3



Carefully remove the unit Air Breather assembly and put aside for reinsertion after oil fill process is complete.

BBB4 & 5: Y2 Oil Fill & Drain Procedure *(Continued)*

Oil Fill Process *(Continued)*

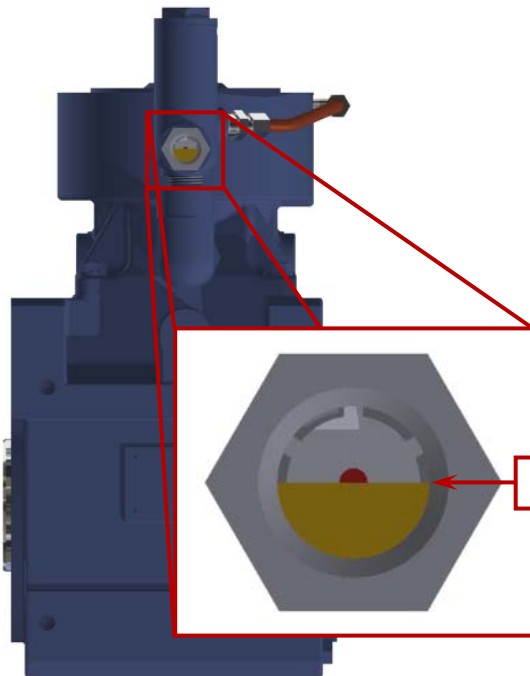
STEP 4

Slowly fill the Cyclo (input) portion with the correct type and grade of oil as used in STEP #2 of this process.

NOTE: The oil fill cup may immediately become full during the process. In such an event, stop the fill process and allow the oil to drain from the cup into the reducer.



STEP 5



The input portion is considered full when the oil level stabilizes in the middle of the oil sight gauge (as depicted on the left).

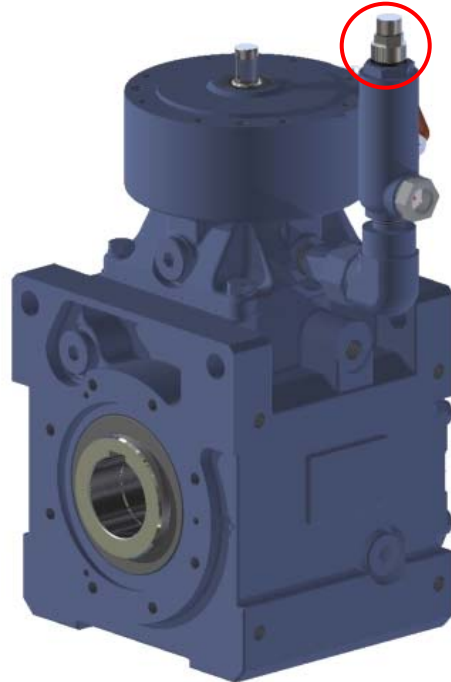
Correct oil level

BBB4 & 5: Y2 Oil Fill & Drain Procedure *(Continued)*

Oil Fill Process (Continued)

STEP 6

Once the input portion of the unit is filled to the correct level with lubricant, carefully reinsert the air breather assembly into the oil fill cup.



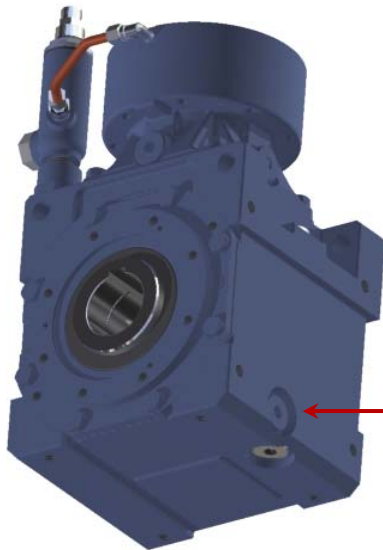
BBB4 & 5: Y2 Oil Fill & Drain Procedure (Continued)

Oil Drain Process

CAUTIONARY NOTES:

- Exercise extreme caution when draining the lubricating oil from the Cyclo® Bevel Buddybox as it may be hot.
- Follow all corporate, local, state and federal government regulations in disposing of the used lubricating oil.

STEP 1



Identify the oil drain plug on the bevel gear housing.

Carefully remove the plug and put aside for reinsertion after the oil draining process is complete.

In the event that the lower plug is covered with a bolt on foot, this plug may be used as a drain.

STEP 2

Carefully remove the unit Air Breather assembly and put aside for reinsertion after oil fill process is complete.

Allow used oil to freely flow into an approved lubricant container.

Once the unit is completely drained of oil, reinstall the drain plug and tighten.

