TO INFORM YOU

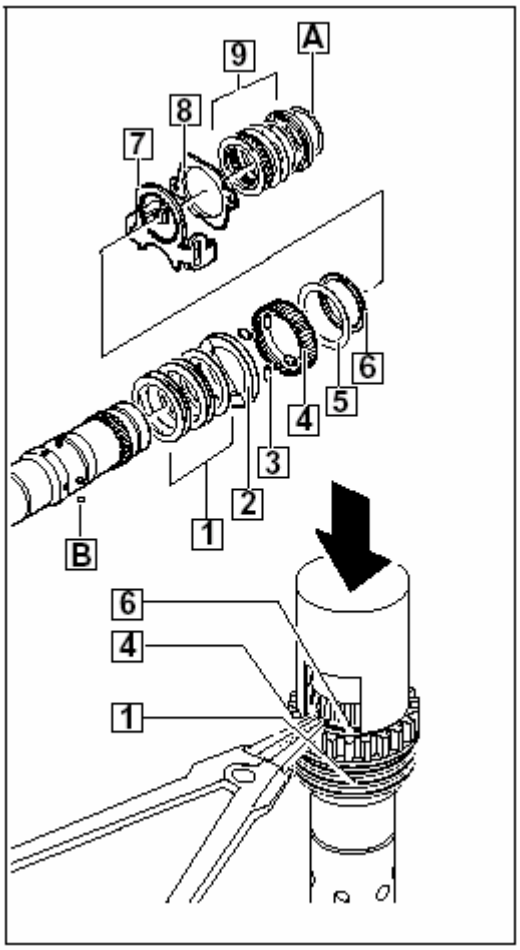
PRODUCT SUPPORT BULLETIN # 419

TO: AUTHORIZED *portable electric tool* SERVICE STATIONS
factory SERVICE / SALES SUPPORT BRANCH
SALES COMPANIES

DATE: April 2004

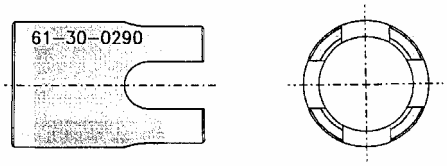
TOOL(S) \ PRODUCT(S) AFFECTED: **5359-21** & **5360-21** 1-1/8" SDS Rotary Hammer

SUBJECT: Service Notes – Disassembling the spindle – Assembling gear reduction shaft



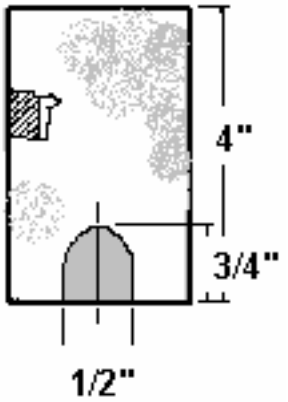
Disassembling the spindle

- 1) remove spiral retaining ring [A]
- 2) remove
  - washer, o-ring, two (2) thin washers, thrust bearing & thick washer assembly [9]
  - retaining plate [8]
  - shift ring [7]
- 3) remove spindle gear [4] with the aide of a 90º external snap ring pliers and 61-30-0290 press fixture *(see illustration & Product Support Bulletin #271 & #324)* - compress the spindle gear against the belleville spring washers [1] while removing retaining ring [6]



- 4) remove flat washer [5]
- 5) remove four roller pins [3] and stop washer [2]
- 6) remove the four (4) steel balls [B] – compress the five (5) belleville spring washers [1] using 'pipe' press fixture to compress the assembly which will allow for removal of steel balls with the help of a magnetized tip screwdriver - press fixture can be made from 1-3/8" pipe *(see illustration below) – failure to use press fixture can cause damage to top belleville spring washer or all belleville spring washers - requiring replacement before re-assembling*

Press Fixture for removal of steel balls made from 1-3/8" Black or Galvanized Pipe cutting four [4] notches 90º from each other.



This bulletin supersedes & replaces PRODUCT SUPPORT BULLETIN # 402, dated July, 2003

This bulletin is for informational purposes. PLEASE NOTE ON SERVICE PARTS LIST: 120V 54-24-5000, -5025

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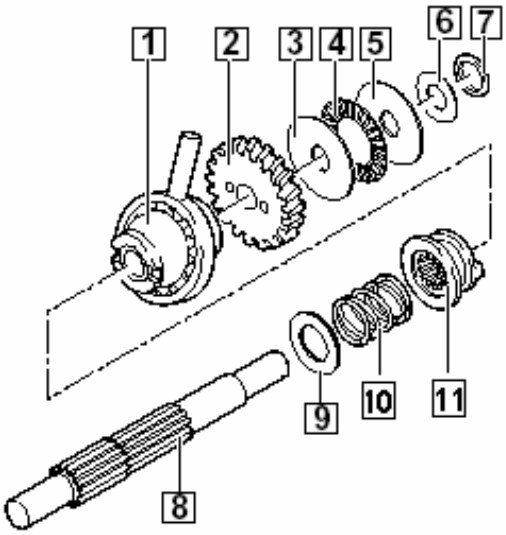
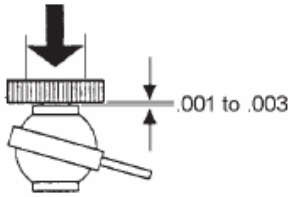
fig 6 is X1 control washer
see step 4 to determine if needed

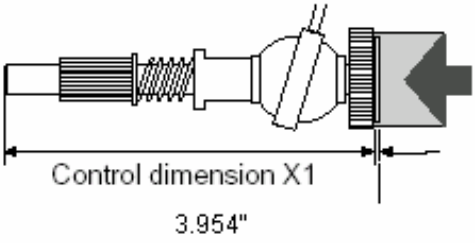


Assembling the reduction gear shaft

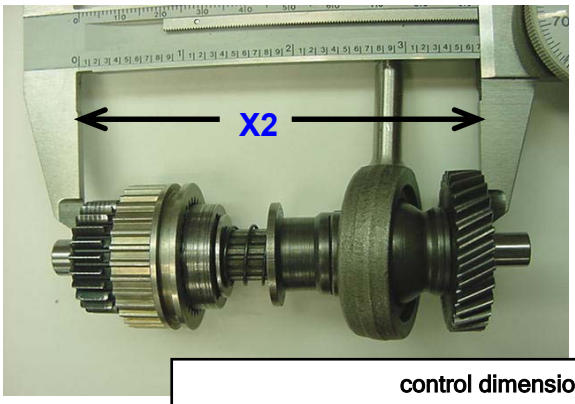
- 1) assemble the reduction gear shaft [8] with the following parts:
  - washer [9]
  - spring [10]
  - coupling sleeve [11]
  - wobble plate [1]
- 2) press reduction gear [2] onto reduction gear shaft [8] with the ground face toward wobble plate; a clearance of 0.001" to 0.003" must be maintained between the reduction gear [2] and inner race of the wobble plate [1]



- 3) lightly **grease entire length of reduction gear shaft** [8] and coupling sleeve [11] - lightly grease the thrust bearing assembly [3,4,&5] and place them onto the shaft



- 4) check for control dimension **X1** of 3.954" to 3.980", if < 3.953" **add a single 45-88-8825 0.020" washer** [6] to the assembly
- 5) place o-ring [7] on shaft, it serves to hold thrust bearing assembly *(and if needed the 0.020" washer)* in place
- 6) assemble internal gear [12], offset gear [13] and 45-88-1182 washer [14] and 45-88-1183 washer [15] onto wobble shaft assembly
- 7) recess of 45-88-1183 washer [15] must face needle bearing / front of gear case
- 8) check for control dimension **X2**, if it does not fall between 3.678" - 3.690" chose a suitable washer(s) according to chart and add it (them) to the reduction gear shaft assembly - if required place control washer(s) [16] in front of 45-88-1182 washer [14], sandwiching it (them) between 45-88-1182 washer [14] and 45-88-1183 washer [15]



control dimension X2 – 3.678" - 3.690"
measured between face of 45-88-1183 washer [15] & face of flat washer [5],
see illustration below
add washer(s) [16] to the assembly as needed to obtain X2 control dimension
most, if not all hammers will require control washer(s)

control dimension X2		control washer(s) [16] added to the assembly as listed		
		0.039" 45-88-1186	0.016" 45-88-1185	0.008" 45-88-1184
3.621	3.622	1	-	1
3.622	3.630	1	1	-
3.630	3.638	1	-	1
3.638	3.646	1	-	-
3.646	3.654	-	2	-
3.654	3.661	-	1	1
3.662	3.669	-	1	-
3.670	3.677	-	-	1
3.678	3.690	-	-	-

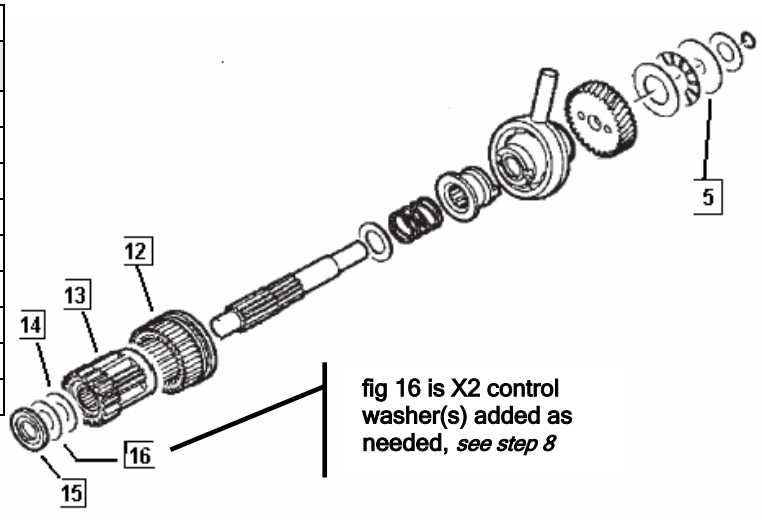


fig 16 is X2 control washer(s) added as needed, *see step 8*